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SAFETY DATA SHEET	Revision Date: 05/18/2017
	Print Date: 9/24/2019
	SDS Number: 000000035091
Valvoline Professional Series™ Manual Transmission Fluid ™ Trademark, Valvoline or its subsidiaries, registered in various countries 508216	Version: 1.2

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline Professional Series™ Manual Transmission Fluid

™ Trademark, Valvoline or its subsidiaries, registered in various countries

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL Product Information 1-800-TEAMVAL

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

GHS label elements

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	Asp. Tox. 1; H304	79.4422
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Pr)	68909-93-3	Skin Irrit. 2; H315	1.0581



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esters, zinc salts

Eye Irrit. 2A; H319

SECTION 4. FIRST AID MEASURES

- General advice : No hazards which require special first aid measures.
- If inhaled : If breathed in, move person into fresh air.
 If unconscious, place in recovery position and seek medical advice.
 If symptoms persist, call a physician.
- In case of skin contact : Remove contaminated clothing. If irritation develops, get medical attention.
 If on skin, rinse well with water.
 Wash contaminated clothing before re-use.
- In case of eye contact : Flush eyes with water as a precaution.
 Remove contact lenses.
 Protect unharmed eye.
 If eye irritation persists, consult a specialist.
- If swallowed : Do not give milk or alcoholic beverages.
 Never give anything by mouth to an unconscious person.
 If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.
 Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:
 acne
 stomach or intestinal upset (nausea, vomiting, diarrhea)
 irritation (nose, throat, airways)
- Notes to physician : No hazards which require special first aid measures.

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SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
Carbon dioxide (CO₂)
Dry chemical
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : carbon dioxide and carbon monoxide
Hydrocarbons
Aldehydes
- Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.
- Further information : Standard procedure for chemical fires.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.
- Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

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Advice on safe handling : Avoid contact with skin and eyes.
 Smoking, eating and drinking should be prohibited in the
 application area.
 For personal protection see section 8.
 Dispose of rinse water in accordance with local and national
 regulations.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated
 place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Hazardous components without workplace control parameters

Components	CAS-No.
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso- Pr) esters, zinc salts	68909-93-3

Engineering measures : Provide sufficient mechanical (general and/or local exhaust)
 ventilation to maintain exposure below exposure guidelines (if
 applicable) or below levels that cause known, suspected or
 apparent adverse effects.

Personal protective equipment

Respiratory protection : Respiratory protection is not required under normal conditions
 of use.

Hand protection

Remarks : The suitability for a specific workplace should be discussed

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with the producers of the protective gloves.

- Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.
- Skin and body protection : Wear as appropriate:
 Impervious clothing
 Safety shoes
 Choose body protection according to the amount and concentration of the dangerous substance at the work place.
 Wear resistant gloves (consult your safety equipment supplier).
- Hygiene measures : Wash hands before breaks and at the end of workday.
 When using do not eat or drink.
 When using do not smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state : liquid
- Odour : No data available
- Odour Threshold : No data available
- pH : No data available
- Melting point/freezing point : No data available
- Boiling point/boiling range : No data available
- Flash point : > 390 °F / > 199 °C
 Method: Cleveland open cup
- Evaporation rate : No data available
- Flammability (solid, gas) : No data available
- Upper explosion limit : No data available
- Lower explosion limit : No data available
- Vapour pressure : 0.0133333 hPa (21.11 °C)
 Calculated Vapor Pressure
- Relative vapour density : No data available

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Relative density : No data available

Density : 0.860 g/cm³ (15.6 °C)

Solubility(ies)

Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Thermal decomposition : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : 73 mm²/s (40 °C)

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : excessive heat

Incompatible materials : Oxidizing agents

Hazardous decomposition products : carbon dioxide and carbon monoxide
Hydrocarbons

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation
Skin contact
Eye Contact
Ingestion

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Acute toxicity

Not classified based on available information.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Pr) esters, zinc salts:

Acute oral toxicity : LD50 Oral (Rat, male): 3,600 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 2 mg/l

Exposure time: 1 h

Test atmosphere: dust/mist

Assessment: Not classified as acutely toxic by inhalation
 under GHS.

Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rabbit): 13,800 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Product:

Result: Repeated exposure may cause skin dryness or cracking.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Result: Slight, transient irritation

Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Pr) esters, zinc salts:

Species: Rabbit

Result: Irritating to skin.

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Result: No eye irritation

Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Pr) esters, zinc salts:

Species: Rabbit

Result: Irritation to eyes, reversing after 7 to 21 days

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

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Respiratory sensitisation: Not classified based on available information.

Components:

Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Pr) esters, zinc salts:

Test Type: Maximisation Test

Species: Guinea pig

Assessment: Does not cause skin sensitisation.

Method: OECD Test Guideline 406

Germ cell mutagenicity

Not classified based on available information.

Components:

Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Pr) esters, zinc salts:

Genotoxicity in vitro : Test Type: Ames test

Test species: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Result: negative

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

May be fatal if swallowed and enters airways.

Further information**Product:**

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Ecotoxicology Assessment

Acute aquatic toxicity : Not classified based on available information.

Chronic aquatic toxicity : Not classified based on available information.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

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Toxicity to fish : LL50 (Fish): > 100 mg/l

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Pr) esters, zinc salts:

Toxicity to fish : LC50 (Cyprinodon variegatus (sheepshead minnow)): 46 mg/l
Exposure time: 96 h
Test Type: static test
Remarks: Information given is based on data obtained from similar substances.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 5.4 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): 2.1 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Test substance: WAF

NOEC (Selenastrum capricornutum (green algae)): 1 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Test substance: WAF

Persistence and degradability
Components:

Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Pr) esters, zinc salts:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 1.5 %
Exposure time: 28 d
Remarks: Information given is based on data obtained from similar substances.

No data available

Bioaccumulative potential
Components:

Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Pr) esters, zinc salts:

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Partition coefficient: n- : log Pow: 0.84
octanol/water

No data available

Mobility in soil**Components:**

No data available

Other adverse effects

No data available

Product:

Additional ecological : No data available
information

Components:**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods****General advice**

- : Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with
chemical or used container.
Send to a licensed waste management company.
- Dispose of in accordance with all applicable local, state and
federal regulations.

Contaminated packaging

- : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste
handling site for recycling or disposal.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION**International transport regulations****REGULATION**

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

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U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TDG ROAD C

Not dangerous goods

TDG RAIL C

Not dangerous goods

TDG INWT C

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MX DG

Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant

no

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)

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TOLUENE	108-88-3	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards**SARA 313**

Phosphorodithioic acid,
mixed O,O-bis(2-
ethylhexyl and iso-Pr)
esters, zinc salts

68909-93-3 1.05 %

California Prop 65

Proposition 65 warnings are not required for this product
based on the results of a risk assessment.

The components of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

TSCA : On TSCA Inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL
(Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION**Further information**

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NFPA:	HMIS III:

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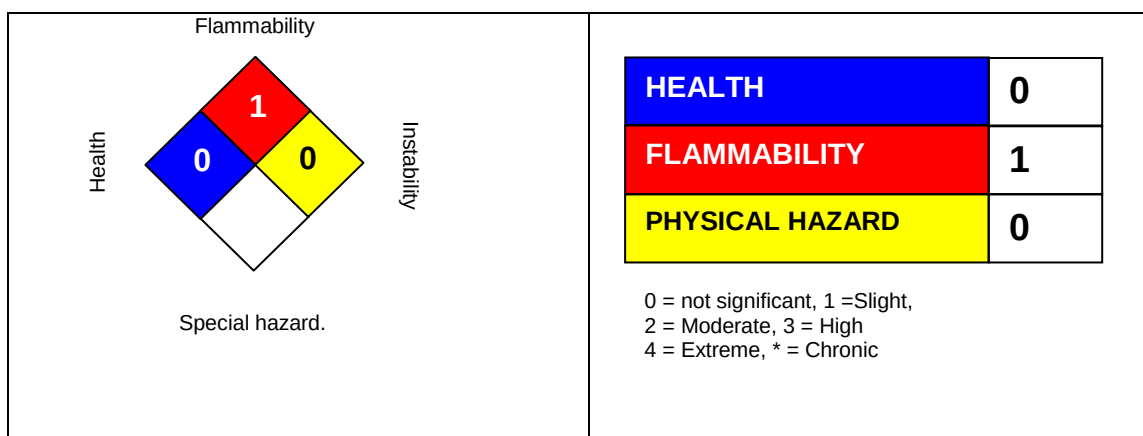
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NFPA Flammable and Combustible Liquids Classification
 Combustible Liquid Class IIIB

Full text of H-Statements

- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

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IATA-DGR : Dangerous Goods Regulation by the “International Air Transport Association” (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the “International Civil Aviation Organization”

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System

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Valvoline Professional Series™ Complete Fuel System Treatment ™ Trademark, Valvoline or its subsidiaries, registered in various countries 679741	Version: 1.4

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline Professional Series™ Complete Fuel System Treatment

™ Trademark, Valvoline or its subsidiaries, registered in various countries

Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Industrial chemical

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL (1-800-832-6825)	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL (1-800-832-6825) Product Information 1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids : Category 3

Skin irritation : Category 2

Eye irritation : Category 2A

Carcinogenicity (Inhalation) : Category 2

Aspiration hazard : Category 1

GHS label elements

Hazard pictograms :





Signal Word : Danger

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- Hazard Statements** : Flammable liquid and vapor.
May be fatal if swallowed and enters airways.
Causes skin irritation.
Causes serious eye irritation.
Suspected of causing cancer if inhaled.
- Precautionary Statements** : **Prevention:**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ ventilating/ lighting/ equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash skin thoroughly after handling.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
IF SWALLOWED: Immediately call a POISON CENTER/doctor.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/ attention.
Do NOT induce vomiting.
If skin irritation occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
Storage:
Store in a well-ventilated place. Keep cool.
Store locked up.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards

Static-accumulating flammable liquid.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

- Substance / Mixture : Mixture
- Chemical nature : Defatter

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Chemical nature : Static Accumulator

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics		Flam. Liq. 4; H227 Asp. Tox. 1; H304	42.2786
POLY[OXY(1,2-PROPANEDIYL)], ALPHA, -(3-AMINOPROPYL)-, OMEGA.-HYDROXY-, C12-C15 ALKYL ETHERS		Skin Irrit. 2; H315 Eye Dam. 1; H318	30.5928
Distillates (petroleum), hydrotreated middle	64742-46-7	Flam. Liq. 3; H226 Acute Tox. 4; H332 Skin Irrit. 2; H315 Asp. Tox. 1; H304	16.9114
NAPHTHA (PETROLEUM), HYDROTREATED HEAVY	64742-48-9	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 STOT SE 3; H335 Asp. Tox. 1; H304	15.4147
Poly[oxy(1,2-propanediyl)].alpha.-propyl-.omega.-hydroxy-C12-15 alkyl ethers		Skin Irrit. 2; H315 Eye Dam. 1; H318	2.5367
HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE		Flam. Liq. 4; H227 STOT SE 3; H336 Asp. Tox. 1; H304	2.1139
NAPHTHALENE	91-20-3	Acute Tox. 4; H302	0.1691



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Carc. 2; H351

SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
 Call a POISON CENTRE or doctor/physician if exposed or you feel unwell.
 Show this safety data sheet to the doctor in attendance.
 Symptoms of poisoning may appear several hours later.
 Do not leave the victim unattended.
- If inhaled : Move to fresh air.
 If breathed in, move person into fresh air.
 If unconscious, place in recovery position and seek medical advice.
 If symptoms persist, call a physician.
- In case of skin contact : Remove contaminated clothing. If irritation develops, get medical attention.
 If on skin, rinse well with water.
 Wash contaminated clothing before re-use.
 If on clothes, remove clothes.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
 Remove contact lenses.
 Protect unharmed eye.
- If swallowed : Obtain medical attention.
 Do NOT induce vomiting.
 Do not give milk or alcoholic beverages.
 Never give anything by mouth to an unconscious person.
 If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:
 stomach or intestinal upset (nausea, vomiting, diarrhea)
 irritation (nose, throat, airways)
 Headache
 Dizziness
 May be fatal if swallowed and enters airways.
 Causes skin irritation.
 Causes serious eye irritation.
 Suspected of causing cancer if inhaled.
- Notes to physician : No hazards which require special first aid measures.

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SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
 Water spray
 Foam
 Alcohol-resistant foam
 Carbon dioxide (CO₂)
 Dry chemical
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.
 Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
 Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : carbon dioxide and carbon monoxide
 carbon
- Specific extinguishing methods :

 Product is compatible with standard fire-fighting agents.
- Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
 Use a water spray to cool fully closed containers.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Evacuate personnel to safe areas.
 Remove all sources of ignition.
 Use personal protective equipment.
 Ensure adequate ventilation.
 Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
 Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

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- Environmental precautions : Prevent product from entering drains.
 Prevent further leakage or spillage if safe to do so.
 If the product contaminates rivers and lakes or drains inform
 respective authorities.
- Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible
 absorbent material, (e.g. sand, earth, diatomaceous earth,
 vermiculite) and place in container for disposal according to
 local / national regulations (see section 13).
- Other information : Comply with all applicable federal, state, and local regulations.
 Suppress (knock down) gases/vapours/mists with a water
 spray jet.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Open drum carefully as content may be under pressure.
 Avoid formation of aerosol.
 Provide sufficient air exchange and/or exhaust in work rooms.
 Do not breathe vapours/dust.
 Do not smoke.
 Container hazardous when empty.
 Take precautionary measures against static discharges.
 Avoid exposure - obtain special instructions before use.
 Avoid contact with skin and eyes.
 Smoking, eating and drinking should be prohibited in the
 application area.
 For personal protection see section 8.
 Dispose of rinse water in accordance with local and national
 regulations.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated
 place.
 Containers which are opened must be carefully resealed and
 kept upright to prevent leakage.
 Observe label precautions.
 No smoking.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible	Basis

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			concentration	
Distillates (petroleum), hydrotreated middle	64742-46-7	REL	5 mg/m3 Mist.	NIOSH/GUID E
		STEL	10 mg/m3 Mist.	NIOSH/GUID E
				NIOSH/GUID E
		PEL	5 mg/m3 Mist.	OSHA_TRA NS
				OSHA_TRA NS
		TWA	5 mg/m3 Mist.	ACGIH
		STEL	10 mg/m3 Mist.	ACGIH
				ACGIH
		TWA	0.2 mg/m3 Inhalable fraction.	ACGIHLIS_P
				ACGIHLIS_P
				ACGIHLIS_P
				ACGIHLIS_P
NAPHTHA (PETROLEUM), HYDROTREATED HEAVY	64742-48-9	TWA	100 ppm	SUPLR EXP
HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE		TWA	200 mg/m3 (total hydrocarbon vapor)	ACGIH
NAPHTHALENE	91-20-3	TWA	10 ppm	ACGIH
		TWA	10 ppm 50 mg/m3	NIOSH REL
		ST	15 ppm 75 mg/m3	NIOSH REL
		TWA	10 ppm 50 mg/m3	OSHA Z-1
		TWA	10 ppm 50 mg/m3	OSHA P0
		STEL	15 ppm 75 mg/m3	OSHA P0
		PEL	0.1 ppm 0.5 mg/m3	CAL PEL

Engineering measures

: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection

: In the case of vapour formation use a respirator with an approved filter.

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- Hand protection
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Eye protection : Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.
- Skin and body protection : Wear as appropriate:
Impervious clothing
Safety shoes
Flame-resistant clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Discard gloves that show tears, pinholes, or signs of wear.
Wear resistant gloves (consult your safety equipment supplier).
- Hygiene measures : Wash hands before breaks and at the end of workday.
When using do not eat or drink.
When using do not smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state : liquid
- Odour : No data available
- Odour Threshold : No data available
- pH : No data available
- Melting point/freezing point : No data available
- Boiling point/boiling range : 365 °F / 185 °C
Calculated Phase Transition Liquid/Gas
- Flash point : 108.0 °F / 42.2 °C
Calculated Flash Point
- Evaporation rate : No data available
- Flammability (solid, gas) :

No data available
- Flammability (liquids) : Static-accumulating flammable liquid.
- Flammability (liquids) :
Upper explosion limit : No data available
- Lower explosion limit : No data available

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Vapour pressure : 1.131 hPaCalculated Vapor Pressure

Relative vapour density : No data available

Relative density : No data available

Density : 0.870 g/cm³ (20 °C)

Solubility(ies)

Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Thermal decomposition : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Vapours may form explosive mixture with air.

Conditions to avoid : Heat, flames and sparks.
excessive heat

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : carbon dioxide and carbon monoxide

SECTION 11. TOXICOLOGICAL INFORMATION

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Information on likely routes of exposure : Inhalation
 Skin contact
 Eye Contact
 Ingestion

Acute toxicity

Not classified based on available information.

Components:

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5 mg/l
 Exposure time: 8 h
 Test atmosphere: vapour
 Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

Distillates (petroleum), hydrotreated middle:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 : estimated 11 mg/l
 Exposure time: 4 h
 Test atmosphere: vapour

NAPHTHALENE:

Acute oral toxicity : LD50 (Mouse, male): 533 mg/kg
 Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): > 0.4 mg/l
 Exposure time: 4 h
 Test atmosphere: vapour
 Assessment: Not classified as acutely toxic by inhalation under GHS.

Acute dermal toxicity : LD50 (Rabbit): > 2.0 g/kg
 LD50 (Rat, male and female): > 2,500 mg/kg
 Assessment: Not classified as acutely toxic by dermal absorption under GHS.

Acute toxicity (other routes of administration) : LD50 (Mouse, female): 710 mg/kg
 Application Route: Gavage

LD50 (Mouse): 150 mg/kg
 Application Route: Intraperitoneal

LD50 (Mouse, male): 533 mg/kg

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Application Route: Gavage

Skin corrosion/irritation

Causes skin irritation.

Product:

Remarks: May cause skin irritation and/or dermatitis.

Result: Repeated exposure may cause skin dryness or cracking.

Components:

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Result: No skin irritation

POLY[OXY(1,2-PROPANEDIYL)], ALPHA, -(3-AMINOPROPYL)-, OMEGA-HYDROXY-, C12-C15
ALKYL ETHERS:

Result: Irritating to skin.

Distillates (petroleum), hydrotreated middle:

Result: Irritating to skin.

NAPHTHA (PETROLEUM), HYDROTREATED HEAVY:

Result: Irritating to skin.

Poly[oxy(1,2-propanediyl)].alpha.-propyl.-omega.-hydroxy-C12-15 alkyl ethers:

Result: Irritating to skin.

HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE:

Result: Slight, transient irritation

NAPHTHALENE:

Result: Slight, transient irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Result: Irritating to eyes.

Remarks: Expected based on components.

Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin., Causes serious eye irritation.

Components:

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Result: Slight, transient irritation

POLY[OXY(1,2-PROPANEDIYL)], ALPHA, -(3-AMINOPROPYL)-, OMEGA-HYDROXY-, C12-C15
ALKYL ETHERS:

Result: Risk of serious damage to eyes.

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NAPHTHA (PETROLEUM), HYDROTREATED HEAVY:

Result: Irritating to eyes.

Poly[oxy(1,2-propanediyl)].alpha.-propyl-.omega.-hydroxy-C12-15 alkyl ethers:

Result: Risk of serious damage to eyes.

HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE:

Result: Slight, transient irritation

NAPHTHALENE:

Result: Slight, transient irritation

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

Components:

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Assessment: Did not cause sensitisation on laboratory animals.

Method: OECD Test Guideline 406

POLY[OXY(1,2-PROPANEDIYL)], ALPHA, -(3-AMINOPROPYL)-, OMEGA.-HYDROXY-, C12-C15

ALKYL ETHERS:

Assessment: Does not cause skin sensitisation.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Suspected of causing cancer if inhaled.

Components:

NAPHTHALENE:

Carcinogenicity - : Limited evidence of carcinogenicity in inhalation studies with animals.
Assessment

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

Components:

NAPHTHA (PETROLEUM), HYDROTREATED HEAVY:

Assessment: May cause respiratory irritation.

HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE:

Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

May be fatal if swallowed and enters airways.

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Components:

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics:
 May be fatal if swallowed and enters airways.

Distillates (petroleum), hydrotreated middle:
 May be fatal if swallowed and enters airways.

NAPHTHA (PETROLEUM), HYDROTREATED HEAVY:
 May be fatal if swallowed and enters airways.

HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE:
 May be fatal if swallowed and enters airways.

Further information
Product:

Remarks: Solvents may degrease the skin.

Carcinogenicity:
IARC

Group 2B: Possibly carcinogenic to humans

NAPHTHALENE 91-20-3

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

Reasonably anticipated to be a human carcinogen

NAPHTHALENE 91-20-3

SECTION 12. ECOLOGICAL INFORMATION
Ecotoxicity
Product:

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Acute aquatic toxicity Category 1; Very toxic to aquatic life.

Long-term (chronic) aquatic hazard : Chronic aquatic toxicity Category 1; Very toxic to aquatic life with long lasting effects.

Components:

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 1,000 mg/l
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 1,000 mg/l
 Exposure time: 48 h

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Toxicity to algae : EL50 (Pseudokirchneriella subcapitata (green algae)): > 1,000
 mg/l
 Exposure time: 72 h

POLY[OXY(1,2-PROPANEDIYL)], ALPHA, -(3-AMINOPROPYL)-, OMEGA.-HYDROXY-, C12-C15
 ALKYL ETHERS:

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Very toxic to aquatic life.

Long-term (chronic) aquatic hazard : Very toxic to aquatic life with long lasting effects.

Distillates (petroleum), hydrotreated middle:

Ecotoxicology Assessment

Long-term (chronic) aquatic hazard : Toxic to aquatic life with long lasting effects.

HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 2 - 5 mg/l
 Exposure time: 96 h
 Test Type: semi-static test
 Test substance: WAF
 Method: OECD Test Guideline 203
 Remarks: Information given is based on data obtained from similar substances.

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 10 mg/l
 Exposure time: 48 h
 Test Type: static test
 Test substance: WAF
 Method: OECD Test Guideline 202
 Remarks: Information given is based on data obtained from similar substances.

Toxicity to algae : EL50 (Pseudokirchneriella subcapitata (green algae)): > 1 - 3
 mg/l
 End point: Growth inhibition
 Exposure time: 72 h
 Test Type: static test
 Test substance: WAF
 Method: OECD Test Guideline 201
 Remarks: Information given is based on data obtained from similar substances.

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Toxic to aquatic life.

Long-term (chronic) aquatic : Toxic to aquatic life with long lasting effects.

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hazard

NAPHTHALENE:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.91 - 2.82 mg/l
 Exposure time: 96 h
 Test Type: static test

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 1.09 - 3.4 mg/l
 aquatic invertebrates
 Exposure time: 48 h
 Test Type: static test

Persistence and degradability
Components:

NAPHTHA (PETROLEUM), HYDROTREATED HEAVY:

Biodegradability : Remarks: Not readily biodegradable.

HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE:

Biodegradability : Result: Inherently biodegradable

NAPHTHALENE:

Biodegradability : Result: Not readily biodegradable.

No data available

Bioaccumulative potential
Components:

NAPHTHALENE:

Partition coefficient: n- : log Pow: 3.30
 octanol/water

No data available

Mobility in soil
Components:

No data available

Other adverse effects

No data available

Product:

Additional ecological : An environmental hazard cannot be excluded in the event of
 information : unprofessional handling or disposal., Very toxic to aquatic life
 with long lasting effects.

Components:
SECTION 13. DISPOSAL CONSIDERATIONS
Disposal methods

General advice : The product should not be allowed to enter drains, water
 courses or the soil.
 Do not contaminate ponds, waterways or ditches with
 chemical or used container.
 Send to a licensed waste management company.


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Dispose of in accordance with all applicable local, state and
 federal regulations.

Contaminated packaging : Empty remaining contents.
 Dispose of as unused product.
 Empty containers should be taken to an approved waste
 handling site for recycling or disposal.
 Do not re-use empty containers.
 Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION
International transport regulations
REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

TDG_INWT_C

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

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UN	1993	FLAMMABLE LIQUID, N.O.S. (HYDROTREATED HEAVY NAPHTHA)	3	III	MARINE POLLUTANT:(POLYETHER AMINE)LIMITE D QUANTITY

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN	1993	FLAMMABLE LIQUID, N.O.S. (HYDROTREATED HEAVY NAPHTHA)	3	III

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

UN	1993	FLAMMABLE LIQUID, N.O.S. (HYDROTREATED HEAVY NAPHTHA)	3	III

MX DG

UN	1993	FLAMMABLE LIQUID, N.O.S. (HYDROTREATED HEAVY NAPHTHA)	3	III

*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Marine pollutant	yes

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act
CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
NAPHTHALENE	91-20-3	100	59137

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard
Chronic Health Hazard



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SARA 313

NAPHTHALENE

91-20-3

0.16 %

California Prop 65

This product does not contain any chemicals known to State
 of California to cause cancer, birth defects, or any other
 reproductive harm.

The components of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

ENCS : Not in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

TSCA : On TSCA Inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL
 (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

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NFPA:	HMIS III:						
Flammability Health Instability Special hazard.	<table border="1"> <tr> <td>HEALTH</td><td>3*</td></tr> <tr> <td>FLAMMABILITY</td><td>2</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	3*	FLAMMABILITY	2	PHYSICAL HAZARD	0
HEALTH	3*						
FLAMMABILITY	2						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class II

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Full text of H-Statements

H226	Flammable liquid and vapor.
H227	Combustible liquid.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer if inhaled.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

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ICxx : Inhibitory Concentration for xx of a substance
Ecxx : Effective Concentration of xx
N.O.S.: Not Otherwise Specified
OECD : Organization for Economic Co-operation and Development
OEL : Occupational Exposure Limit
P-Statement : Precautionary Statement
PBT : Persistent , Bioaccumulative and Toxic
PPE : Personal Protective Equipment
STEL : Short-term exposure limit
STOT : Specific Target Organ Toxicity
TLV : Threshold Limit Value
TWA : Time-weighted average
vPvB : Very Persistent and Very Bioaccumulative
WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
DOT : Department of Transportation
FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
HMIRC : Hazardous Materials Information Review Commission
HMIS : Hazardous Materials Identification System
NFPA : National Fire Protection Association
NIOSH : National Institute for Occupational Safety and Health
OSHA : Occupational Safety and Health Administration
PMRA : Health Canada Pest Management Regulatory Agency
RTK : Right to Know
WHMIS : Workplace Hazardous Materials Information System

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29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : MaxLife™ MAXLIFE/MULTI-VEHICLE 50/50 AFC Antifreeze Coolant

Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Antifreeze Coolant

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL (1-800-832-6825) SDS@valvoline.com	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL (1-800-832-6825) Product Information 1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Oral) : Category 4

Carcinogenicity : Category 1B

Reproductive toxicity : Category 1B

Specific target organ systemic toxicity - repeated exposure (Oral) : Category 2 (Kidney, Liver)

GHS label elements

Hazard pictograms :  

Signal Word : Danger

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Hazard Statements : Harmful if swallowed.
May cause cancer.
May damage fertility or the unborn child.
May cause damage to organs (Kidney, Liver) through prolonged or repeated exposure if swallowed.

Precautionary Statements : **Prevention:**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
IF exposed or concerned: Get medical advice/ attention.
Storage:
Store locked up.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
ETHYLENE GLYCOL	107-21-1	Acute Tox. 4; H302 STOT RE 2; H373	>=50.00 - < 60.00
DIETHYLENE GLYCOL	111-46-6	Acute Tox. 4; H302 STOT RE 2; H373	>=1.50 - < 5.00
DIPOTASSIUM PHOSPHATE	7758-11-4	Acute Tox. 3; H311	>=0.10 - < 0.50
DISODIUM TETRABORATE	1330-43-4	Repr. 1B; H360	>=0.10 - < 0.50

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SODIUM NITRATE	7631-99-4	Ox. Sol. 3; H272 Eye Irrit. 2A; H319 Carc. 1B; H350	>=0.10 - < 0.50

SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
- In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
If eye irritation persists, consult a specialist.
- If swallowed : Obtain medical attention.
Rinse mouth with water.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : Effects of acute ethylene glycol poisoning appear in three fairly distinct stages. The initial stage occurs shortly after exposure, lasts 6-12 hours, and is characterized by central nervous system effects (transient exhilaration, nausea, vomiting, and in severe cases, coma, convulsions, and possible death). The second stage lasts from 12-36 hours after exposure and is initiated by the onset of coma. This phase is characterized by tachypnea, tachycardia, mild hypotension, cyanosis, and in severe cases, pulmonary edema, bronchopneumonia, cardiac enlargement, and congestive failure. The final stage occurs 24-72 post-exposure and is characterized by renal failure, ranging from a mild increase in blood urea nitrogen and creatinine followed by recovery, to complete anuria with acute tubular necrosis

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that can lead to death. Oxaluria is found in most cases. The most significant laboratory finding in ethylene glycol intoxication is severe metabolic acidosis.

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:

stomach or intestinal upset (nausea, vomiting, diarrhea)

irritation (nose, throat, airways)

Cough

pain in the abdomen and lower back

cyanosis (causes blue coloring of the skin and nails from lack of oxygen)

lung edema (fluid buildup in the lung tissue)

acute kidney failure (sudden slowing or stopping of urine production)

Convulsions

Harmful if swallowed.

May cause cancer.

May damage fertility or the unborn child.

May cause damage to organs through prolonged or repeated exposure if swallowed.

Notes to physician

: This product contains ethylene glycol. Ethanol decreases the metabolism of ethylene glycol to toxic metabolites. Ethanol should be administered as soon as possible in cases of severe poisoning since the elimination half-life of ethylene glycol is 3 hours. If medical care will be delayed several hours, give the patient three to four 1-ounce oral "shots" of 86-proof or higher whiskey before or during transport to the hospital. Fomepizole (4-methylpyrazole) is an effective antagonist of alcohol dehydrogenase, and as such, may be used as an antidote in the treatment of ethylene glycol poisoning. Hemodialysis effectively removes ethylene glycol and its metabolites from the body.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Water spray

Foam

Carbon dioxide (CO₂)

Dry chemical

Unsuitable extinguishing media : High volume water jet

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Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Alcohols
Aldehydes
carbon dioxide and carbon monoxide
ethers
toxic fumes
Hydrocarbons

Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.
Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Do not breathe vapours/dust.
Do not smoke.
Container hazardous when empty.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
Smoking, eating and drinking should be prohibited in the

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application area.

For personal protection see section 8.

Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Observe label precautions.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
ETHYLENE GLYCOL	107-21-1	C	50 ppm 125 mg/m3	OSHA P0
		C	40 ppm 100 mg/m3 Vapour	CAL PEL
		TWA	25 ppm Vapour	ACGIH
		STEL	50 ppm Vapour	ACGIH
		STEL	10 mg/m3 Inhalable fraction, Aerosol only	ACGIH
DIETHYLENE GLYCOL	111-46-6	TWA	10 mg/m3	US WEEL
DISODIUM TETRABORATE	1330-43-4	TWA	1 mg/m3	NIOSH REL
		PEL	5 mg/m3	CAL PEL
		TWA	10 mg/m3	OSHA P0
		TWA	2 mg/m3 Inhalable fraction (Borate)	ACGIH
		STEL	6 mg/m3 Inhalable fraction (Borate)	ACGIH

Engineering measures : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

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A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

Hand protection
Remarks

: The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection

: Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection

: Wear as appropriate:
Impervious clothing
Safety shoes
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures

: Wash hands before breaks and at the end of workday.
When using do not eat or drink.
When using do not smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state

: liquid

Colour

: yellow

Odour

: No data available

Odour Threshold

: No data available

pH

: No data available

Melting point/freezing point

: No data available

Boiling point/boiling range

: 212 °F / 100 °C
(1,013.333333 hPa)
Calculated Phase Transition Liquid/Gas

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Flash point	: > 250 °F / > 121 °C Method: closed cup
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Upper explosion limit	: 15.3 %(V) GLP: Calculated Explosive Limit
Lower explosion limit	: 3.2 %(V) GLP: Calculated Explosive Limit
Vapour pressure	: 23.3333333 hPa (20 °C) Calculated Vapor Pressure
Relative vapour density	: No data available
Relative density	: No data available
Density	: 1.0716 g/cm3 (15.6 °C)
Solubility(ies)	
Water solubility	: No data available
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Thermal decomposition	: No data available
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Oxidizing properties	: No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No decomposition if stored and applied as directed.
Chemical stability	: Stable under recommended storage conditions.
Possibility of hazardous reactions	: Product will not undergo hazardous polymerization.

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Conditions to avoid : excessive heat

Incompatible materials : Acids
Aldehydes
Alkali metals
Alkaline earth metals
Bases
strong alkalis
Strong oxidizing agents
Sulphur compounds

Hazardous decomposition products : Alcohols
Aldehydes
carbon dioxide and carbon monoxide
ethers
Hydrocarbons
Organic acids
ketones

SECTION 11. TOXICOLOGICAL INFORMATION
Information on likely routes of exposure

Inhalation
Skin contact
Eye Contact
Ingestion

Acute toxicity

Harmful if swallowed.

Product:

Acute oral toxicity : Remarks: Ingestion of medications contaminated with diethylene glycol has caused kidney failure and death in humans. Products containing diethylene glycol should be considered toxic by ingestion.

Acute toxicity estimate: 967.8 mg/kg
Method: Calculation method

Acute dermal toxicity : Remarks: Skin absorption of this material (or a component) may be increased through injured skin.

Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Components:
ETHYLENE GLYCOL:

Acute oral toxicity : LD0 (Human): estimated 1.56 g/kg

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Assessment: The component/mixture is classified as acute oral toxicity, category 4.

Acute inhalation toxicity : LC50 (Rat): 10.9 mg/l
Exposure time: 1 h
Test atmosphere: dust/mist
Assessment: No adverse effect has been observed in acute inhalation toxicity tests.

Acute dermal toxicity : LD50 (Rabbit): 9,530 mg/kg

Acute toxicity (other routes of administration) : LD50 (Rat): 5,010 mg/kg
Application Route: Intraperitoneal

DIETHYLENE GLYCOL:

Acute oral toxicity : LD50 (Human): Expected 1,120 mg/kg
Target Organs: Kidney

Acute inhalation toxicity : LC50 (Rat): > 4.6 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: No adverse effect has been observed in acute inhalation toxicity tests.

Acute dermal toxicity : LD50 (Rabbit): 13,300 mg/kg

DIPOTASSIUM PHOSPHATE:

Acute oral toxicity : LD50 (Rat): > 500 mg/kg

LD50 (Rat, female): > 2,000 mg/kg
Method: OECD Test Guideline 420
Assessment: No adverse effect has been observed in acute oral toxicity tests.

Acute dermal toxicity : LD50 (Rabbit): > 300 mg/kg

LD50 (Rabbit): > 5,000 mg/kg
Method: OECD Test Guideline 402

DISODIUM TETRABORATE:

Acute inhalation toxicity : LC50 (Rat): > 2.03 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: No adverse effect has been observed in acute inhalation toxicity tests.

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Assessment: No adverse effect has been observed in acute dermal toxicity tests.

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SODIUM NITRATE:

Acute oral toxicity : LD50 (Rat): ca. 3,430 mg/kg
Method: OECD Test Guideline 401

Skin corrosion/irritation

Not classified based on available information.

Components:
ETHYLENE GLYCOL:

Species : Rabbit
Result : No skin irritation

DIETHYLENE GLYCOL:

Species : Human
Result : Slight, transient irritation

DIPOTASSIUM PHOSPHATE:

Species : Rabbit
Result : Slight, transient irritation

DISODIUM TETRABORATE:

Species : Rabbit
Result : No skin irritation

SODIUM NITRATE:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation
Remarks : Information given is based on data obtained from similar substances.

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks : Unlikely to cause eye irritation or injury.

Components:
ETHYLENE GLYCOL:

Result : Slight, transient irritation

DIETHYLENE GLYCOL:

Species : Rabbit
Result : Slight, transient irritation

DIPOTASSIUM PHOSPHATE:

Species : Rabbit
Result : Slight, transient irritation

DISODIUM TETRABORATE:

Result : Slight, transient irritation

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SODIUM NITRATE:

Species : Rabbit
Result : Irritating to eyes.
Method : OECD Test Guideline 405

Respiratory or skin sensitisation
Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:
ETHYLENE GLYCOL:

Test Type : Maximisation Test
Species : Guinea pig
Assessment : Does not cause skin sensitisation.

DIETHYLENE GLYCOL:

Test Type : Maximisation Test
Species : Guinea pig
Method : Directive 67/548/EEC, Annex V, B.6.
Result : Did not cause sensitisation on laboratory animals.

DIPOTASSIUM PHOSPHATE:

Test Type : Local lymph node assay
Species : Mouse
Assessment : Did not cause sensitisation on laboratory animals.
Method : OECD Test Guideline 429
Remarks : Information given is based on data obtained from similar substances.

DISODIUM TETRABORATE:

Test Type : Buehler Test
Species : Guinea pig
Assessment : Does not cause skin sensitisation.
Method : OECD Test Guideline 406

Germ cell mutagenicity

Not classified based on available information.

Components:
ETHYLENE GLYCOL:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Result: negative

DIETHYLENE GLYCOL:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471

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Result: negative
GLP: yes

Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 479
Result: negative
GLP: yes

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Species: Mouse
Method: OECD Test Guideline 474
Result: negative
GLP: yes

DIPOTASSIUM PHOSPHATE:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Remarks: Information given is based on data obtained from similar substances.

Carcinogenicity

May cause cancer.

IARC Group 2A: Probably carcinogenic to humans
Sodium nitrate Not Assigned
(nitrate (ingested) under conditions that result in endogenous nitrosation)

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

May damage fertility or the unborn child.

Components:

DISODIUM TETRABORATE:

Reproductive toxicity - Assessment : Clear evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

May cause damage to organs (Kidney, Liver) through prolonged or repeated exposure if swallowed.

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Components:**ETHYLENE GLYCOL:**

Exposure routes : Ingestion
Target Organs : Kidney, Liver
Assessment : May cause damage to organs through prolonged or repeated exposure.

DIETHYLENE GLYCOL:

Exposure routes : Ingestion
Target Organs : Kidney
Assessment : May cause damage to organs through prolonged or repeated exposure.

Aspiration toxicity

Not classified based on available information.

Experience with human exposure**Components:****ETHYLENE GLYCOL:**

Ingestion : Target Organs: Kidney

DIETHYLENE GLYCOL:General Information : Liver
Kidney**Further information****Product:**

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Components:**ETHYLENE GLYCOL:**Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 27,540 mg/l
Exposure time: 96 h
Test Type: static testLC50 (Pimephales promelas (fathead minnow)): 8,050 mg/l
Exposure time: 96 h

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- Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Test Type: static test
- Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 6,500 - 13,000 mg/l
End point: Growth inhibition
Exposure time: 7 Days
- Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 32,000 mg/l
Exposure time: 7 d
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 24,000 mg/l
Exposure time: 7 d
- DIETHYLENE GLYCOL:
Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 24 h
Test Type: static test
Method: DIN 38412
- DIPOTASSIUM PHOSPHATE:
Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203
Remarks: Information given is based on data obtained from similar substances.
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
Remarks: Information given is based on data obtained from similar substances.
- Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
Remarks: Information given is based on data obtained from similar substances.
- NOEC (Desmodesmus subspicatus (green algae)): > 100 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

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Remarks: Information given is based on data obtained from similar substances.

DISODIUM TETRABORATE:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 79.7 mg/l
Exposure time: 96 h
Remarks: Information refers to the main component.

Toxicity to algae : NOEC (Pseudokirchneriella subcapitata (green algae)): 17.5 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
Remarks: Information refers to the main component.

Toxicity to fish (Chronic toxicity) : NOEC (Danio rerio (zebra fish)): 5.6 mg/l
Exposure time: 34 d
Test Type: semi-static test
Method: OECD Test Guideline 210
Remarks: Information refers to the main component.

SODIUM NITRATE:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 1,355 - 2,063 mg/l
Exposure time: 96 h
Method: Static
Remarks: Mortality

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 3,581 mg/l
Exposure time: 48 h
Method: Static

LC50 (Daphnia magna (Water flea)): 665 mg/l
Exposure time: 96 h
Method: Static

Persistence and degradability
Components:
ETHYLENE GLYCOL:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 90 - 100 %
Exposure time: 10 d
Method: OECD Test Guideline 301

DIETHYLENE GLYCOL:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 70 - 80 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

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DIPOTASSIUM PHOSPHATE:

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

DISODIUM TETRABORATE:

Biodegradability : Result: The methods for determining biodegradability are not applicable to inorganic substances.

No data available

Bioaccumulative potential
Components:
ETHYLENE GLYCOL:

Bioaccumulation : Species: Crayfish (Procambarus)
Bioconcentration factor (BCF): 0.27
Exposure time: 61 d
Concentration: 1000 mg/l
Method: Flow through

Partition coefficient: n-octanol/water : log Pow: -1.36

DIETHYLENE GLYCOL:

Bioaccumulation : Species: Leuciscus idus (Golden orfe)
Bioconcentration factor (BCF): 100

Partition coefficient: n-octanol/water : log Pow: -1.47

No data available

Mobility in soil
Components:

No data available

Other adverse effects

No data available

Product:

Additional ecological information : No data available

Components:
SECTION 13. DISPOSAL CONSIDERATIONS
Disposal methods

General advice : Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

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Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION**International transport regulations****REGULATION**

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

UN	3082	Environmentally hazardous substance, liquid, n.o.s. (ETHYLENE GLYCOL)	9		III

CFR RAIL_C

UN	3082	Environmentally hazardous substance, liquid, n.o.s. (ETHYLENE GLYCOL)	9		III

U.S. DOT - INLAND WATERWAYS

UN	3082	Environmentally hazardous substance, liquid, n.o.s. (ETHYLENE GLYCOL)	9		III

TDG ROAD_C

Not dangerous goods

TDG RAIL_C

Not dangerous goods

TDG INWT_C

Not dangerous goods

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INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MX_DG

Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant

no

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
ETHYLENE GLYCOL	107-21-1	5000	9894

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)
Acute toxicity (any route of exposure)

California Prop. 65 **WARNING:** Reproductive Harm - www.P65Warnings.ca.gov.**The components of this product are reported in the following inventories:**

DSL : All components of this product are on the Canadian DSL

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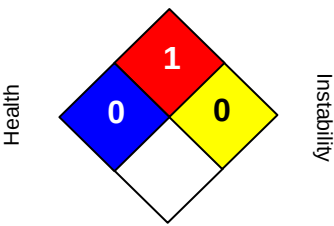
AICS	: On the inventory, or in compliance with the inventory
ENCS	: Not in compliance with the inventory
KECI	: Not in compliance with the inventory
PICCS	: Not in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
TCSI	: On the inventory, or in compliance with the inventory
TSCA	: On TSCA Inventory

TSCA list

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION
Further information

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NFPA:	HMIS III:						
Flammability Health Instability Special hazard. 	<table border="1"> <tr> <td>HEALTH</td><td>1*</td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	1*	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	1*						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

H272	May intensify fire; oxidizer.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H319	Causes serious eye irritation.
H350	May cause cancer.

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H360 May damage fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure if swallowed.

Sources of key data used to compile the Safety Data Sheet
Valvoline internal data including own and sponsored test reports
The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists
BEI : Biological Exposure Index
CAS : Chemical Abstracts Service (Division of the American Chemical Society).
CMR : Carcinogenic, Mutagenic or Toxic for Reproduction
FG : Food grade
GHS : Globally Harmonized System of Classification and Labeling of Chemicals.
H-statement : Hazard Statement
IATA : International Air Transport Association.
IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization
ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"
IMDG : International Maritime Code for Dangerous Goods
ISO : International Organization for Standardization
logPow : octanol-water partition coefficient
LCxx : Lethal Concentration, for xx percent of test population
LDxx : Lethal Dose, for xx percent of test population.
ICxx : Inhibitory Concentration for xx of a substance
Ecxx : Effective Concentration of xx
N.O.S.: Not Otherwise Specified
OECD : Organization for Economic Co-operation and Development
OEL : Occupational Exposure Limit
P-Statement : Precautionary Statement
PBT : Persistent , Bioaccumulative and Toxic
PPE : Personal Protective Equipment
STEL : Short-term exposure limit
STOT : Specific Target Organ Toxicity
TLV : Threshold Limit Value

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TWA : Time-weighted average
vPvB : Very Persistent and Very Bioaccumulative
WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
DOT : Department of Transportation
FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
HMIRC : Hazardous Materials Information Review Commission
HMIS : Hazardous Materials Identification System
NFPA : National Fire Protection Association
NIOSH : National Institute for Occupational Safety and Health
OSHA : Occupational Safety and Health Administration
PMRA : Health Canada Pest Management Regulatory Agency
RTK : Right to Know
WHMIS : Workplace Hazardous Materials Information System

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29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : SynPower™ Limited Slip SAE 75W-90 Full Synthetic Gear Oil

™ Trademark, Valvoline or its subsidiaries, registered in various countries

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL (1-800-8326-825)	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL (1-800-8326-825) Product Information 1-800-TEAMVAL (1-800-8326-825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Eye irritation : Category 2A

Skin sensitization : Category 1

GHS label elements

Hazard pictograms :



Signal Word : Warning

Hazard Statements : May cause an allergic skin reaction.
Causes serious eye irritation.

Precautionary Statements : **Prevention:**
Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
Wash skin thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/ eye protection/ face protection.
Response:

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IF ON SKIN: Wash with plenty of soap and water.
 IF IN EYES: Rinse cautiously with water for several minutes.
 Remove contact lenses, if present and easy to do. Continue
 rinsing.
 If skin irritation or rash occurs: Get medical advice/ attention.
 If eye irritation persists: Get medical advice/ attention.
 Wash contaminated clothing before reuse.

Disposal:

Dispose of contents/ container to an approved waste disposal
 plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	Asp. Tox. 1; H304	75.49
OLEFINSULFIDE	68937-96-2	Skin Sens. 1B; H317	3.68
Mineral Oil		Asp. Tox. 1; H304	2.40
React. prod. of bis(2- methylpentan-2- yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)		Flam. Liq. 4; H227 Acute Tox. 4; H302 Eye Dam. 1; H318 Skin Sens. 1; H317	1.3599

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
 Show this safety data sheet to the doctor in attendance.
 Do not leave the victim unattended.

If inhaled : If breathed in, move person into fresh air.
 If unconscious, place in recovery position and seek medical

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advice.

If symptoms persist, call a physician.

In case of skin contact	: Remove contaminated clothing. If irritation develops, get medical attention. If on skin, rinse well with water. First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water. Wash contaminated clothing before re-use.
In case of eye contact	: Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye.
If swallowed	: Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	: Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities. Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: acne stomach or intestinal upset (nausea, vomiting, diarrhea) irritation (nose, throat, airways) May cause an allergic skin reaction. Causes serious eye irritation.
Notes to physician	: No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray

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Foam
Carbon dioxide (CO₂)
Dry chemical

- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : carbon dioxide and carbon monoxide
Hydrocarbons
acrolein
Aldehydes
formaldehyde
Ketones
Sulphur oxides
Nitrogen oxides (NO_x)
hydrogen sulfide
boron oxides
- Specific extinguishing methods : Product is compatible with standard fire-fighting agents.
- Further information : Standard procedure for chemical fires.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
- Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.
- Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

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Advice on safe handling : Do not breathe vapours/dust.
 Do not smoke.
 Persons susceptible to skin sensitisation problems or asthma,
 allergies, chronic or recurrent respiratory disease should not
 be employed in any process in which this mixture is being
 used.
 Container hazardous when empty.
 Avoid exposure - obtain special instructions before use.
 Avoid contact with skin and eyes.
 Smoking, eating and drinking should be prohibited in the
 application area.
 For personal protection see section 8.
 Dispose of rinse water in accordance with local and national
 regulations.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated
 place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
WHITE MINERAL OIL	8042-47-5	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Hazardous components without workplace control parameters

Components	CAS-No.

Engineering measures : Provide sufficient mechanical (general and/or local exhaust)
 ventilation to maintain exposure below exposure guidelines (if
 applicable) or below levels that cause known, suspected or
 apparent adverse effects.

Personal protective equipment

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- Respiratory protection : A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.
- Hand protection
 Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Eye protection : Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.
- Skin and body protection : Wear as appropriate:
 Impervious clothing
 Safety shoes
 Choose body protection according to the amount and concentration of the dangerous substance at the work place.
 Discard gloves that show tears, pinholes, or signs of wear.
 Wear resistant gloves (consult your safety equipment supplier).
- Hygiene measures : Wash hands before breaks and at the end of workday.
 When using do not eat or drink.
 When using do not smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state : liquid
- Odour : mild
- Odour Threshold : No data available
- pH : No data available
- Melting point/freezing point : No data available
- Boiling point/boiling range : No data available
- Flash point : > 390 °F / > 199 °C
 Method: Cleveland open cup

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Evaporation rate : No data available

Flammability (solid, gas) : No data available

Upper explosion limit : 6 %(V)
 Calculated Explosive Limit

Lower explosion limit : 1 %(V)
 Calculated Explosive Limit

Vapour pressure : 1.3333333 hPa (20 °C)
 Calculated Vapor Pressure

Relative vapour density : No data available

Relative density : No data available

Density : 0.86 g/cm3 (15.56 °C)

Solubility(ies)

Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Thermal decomposition : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : 100 mm2/s (40 °C)

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : None known.

Incompatible materials : Strong oxidizing agents

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Hazardous decomposition
 products

Aldehydes
 carbon dioxide and carbon monoxide
 Hydrocarbons
 hydrogen sulfide
 Nitrogen oxides (NOx)
 Sodium oxides
 Sulphur oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation
 Skin contact
 Eye Contact
 Ingestion

Acute toxicity

Not classified based on available information.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

OLEFINSULFIDE:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
 Method: OECD Test Guideline 401
 Assessment: Not classified as acutely toxic by ingestion under GHS.
 Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
 Method: OECD Test Guideline 402
 Assessment: Not classified as acutely toxic by dermal absorption under GHS.
 Remarks: No mortality observed at this dose.

React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched):

Acute oral toxicity : LD50 (Rat): ca. 2,000 mg/kg
 Method: OECD Test Guideline 401
 Assessment: The component/mixture is classified as acute oral toxicity, category 4.

Skin corrosion/irritation

Not classified based on available information.

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Product:

Remarks: May cause skin irritation in susceptible persons.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Result: Slight, transient irritation

OLEFINSULFIDE:

Result: Mild skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin., Causes serious eye irritation.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Result: No eye irritation

OLEFINSULFIDE:

Result: Slight, transient irritation

React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched):

Result: Corrosive

Respiratory or skin sensitisation

Skin sensitisation: May cause an allergic skin reaction.

Respiratory sensitisation: Not classified based on available information.

Components:

OLEFINSULFIDE:

Test Type: Maximisation Test

Species: Guinea pig

Assessment: The product is a skin sensitizer, sub-category 1B.

Method: OECD Test Guideline 406

React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched):

Test Type: Local lymph node assay

Species: Mouse

Method: OECD Test Guideline 429

Result: May cause sensitisation by skin contact.

Germ cell mutagenicity

Not classified based on available information.

Components:

OLEFINSULFIDE:

Genotoxicity in vitro : Test Type: in vitro assay

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Result: Positive results were obtained in some in vitro tests.

Genotoxicity in vivo : Test Type: Micronucleus test
 Test species: Mouse
 Cell type: Bone marrow
 Method: OECD Test Guideline 474
 Result: negative

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

May be fatal if swallowed and enters airways.

Mineral Oil:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks: No data available

Carcinogenicity:

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Acute aquatic toxicity

: Not classified based on available information.

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Chronic aquatic toxicity : Not classified based on available information.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Toxicity to fish : LL50 (Fish): > 100 mg/l
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
 Exposure time: 48 h

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
 Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

OLEFINSULFIDE:

Ecotoxicology Assessment

Acute aquatic toxicity : Harmful to aquatic life.

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched):

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): ca. 24 mg/l
 Exposure time: 96 h
 Test Type: static test
 Test substance: WAF
 Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EL50 (Water flea (Daphnia magna)): ca. 91.4 mg/l
 Exposure time: 48 h
 Test Type: static test
 Test substance: WAF
 Method: OECD Test Guideline 202

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): 15 mg/l
 End point: Growth inhibition
 Exposure time: 96 h
 Test Type: static test
 Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 3.3 mg/l

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End point: Growth inhibition
 Exposure time: 96 h
 Test Type: static test
 Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Water flea (Daphnia magna)): 0.12 mg/l
 Exposure time: 21 d
 End point: Reproduction Test
 Test Type: semi-static test
 Test substance: WAF
 Method: OECD Test Guideline 211

Ecotoxicology Assessment
 Acute aquatic toxicity : Toxic to aquatic life.

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

Persistence and degradability
Components:
OLEFINSULFIDE:

Biodegradability : Result: Not readily biodegradable.
 Biodegradation: 13 %
 Exposure time: 28 d
 Method: OECD Test Guideline 301B

React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched):

Biodegradability : Result: Not readily biodegradable.
 Biodegradation: 7.4 %
 Exposure time: 28 d
 Method: Modified Sturm Test

No data available

Bioaccumulative potential
Components:

React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched):

Partition coefficient: n-octanol/water : Remarks: No data available

No data available

Mobility in soil
Components:

No data available

Other adverse effects

No data available

Product:

Additional ecological information : No data available

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Components:**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION**International transport regulations****REGULATION**

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

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countries
723856

TDG_INWT_C

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

MARINE
POLLUTANT:(
DI-TERT-
BUTYL
POLYSULFID
E)**INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO**

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MX_DG

Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant

no

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act
CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
METHANOL	67-56-1	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Acute Health Hazard

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SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

The components of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

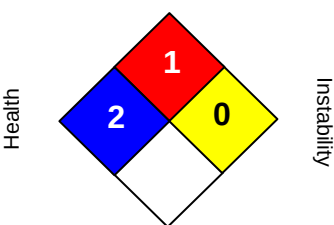
TSCA : On TSCA Inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION
Further information

Revision Date: 07/17/2017

NFPA:	HMIS III:						
Flammability  Health Instability Special hazard.	<table border="1"> <tr> <td>HEALTH</td><td>2</td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	2	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	2						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

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Full text of H-Statements

H227	Combustible liquid.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

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PBT : Persistent , Bioaccumulative and Toxic
 PPE : Personal Protective Equipment
 STEL : Short-term exposure limit
 STOT : Specific Target Organ Toxicity
 TLV : Threshold Limit Value
 TWA : Time-weighted average
 vPvB : Very Persistent and Very Bioaccumulative
 WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
 DOT : Department of Transportation
 FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
 HMIRC : Hazardous Materials Information Review Commission
 HMIS : Hazardous Materials Identification System
 NFPA : National Fire Protection Association
 NIOSH : National Institute for Occupational Safety and Health
 OSHA : Occupational Safety and Health Administration
 PMRA : Health Canada Pest Management Regulatory Agency
 RTK : Right to Know
 WHMIS : Workplace Hazardous Materials Information System

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773780

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**Product identifier**

Trade name : Premium Blue™ 8600 ES SAE 15W-40
Diesel Engine Oil
™ Trademark, Valvoline or its subsidiaries, registered in
various countries

Details of the supplier of the safety data sheet

Valvoline LLC
100 Valvoline Way
Lexington, KY 40509
United States of America (USA)
1-800-TEAMVAL (1-800-832-6825)

SDS@valvoline.com

Emergency telephone number

1-800-VALVOLINE (1-800-825-8654)

Regulatory Information Number

1-800-TEAMVAL (1-800-832-6825)

Product Information

1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	Not a hazardous substance or mixture.	>=80.00 - < 90.00
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	Asp. Tox. 1; H304	>=5.00 - < 10.00

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SECTION 4. FIRST AID MEASURES

- General advice : No hazards which require special first aid measures.
- If inhaled : If breathed in, move person into fresh air.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
- In case of eye contact : Remove contact lenses.
Protect unharmed eye.
- If swallowed : Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : No symptoms known or expected.
- Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
Carbon dioxide (CO₂)
Dry chemical
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : carbon dioxide and carbon monoxide
Hydrocarbons
Nitrogen oxides (NO_x)
- Specific extinguishing methods : Product is compatible with standard fire-fighting agents.

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Further information : Standard procedure for chemical fires.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions : Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
 Keep in suitable, closed containers for disposal.

Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.
 For personal protection see section 8.

Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC	64742-65-0	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL

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		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Engineering measures : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear resistant gloves (consult your safety equipment supplier).
 Wear as appropriate:
 Safety shoes

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid
 Colour : amber
 Odour : hydrocarbon-like
 Odour Threshold : No data available

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pH : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : > 424.9 °F / 218.3 °C

Flash point : 394 - 480 °F / 201 - 249 °C
 Method: Cleveland open cup

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Self-ignition : No data available

Upper explosion limit / Upper flammability limit : 6 %(V)
 Calculated Explosive Limit

Lower explosion limit / Lower flammability limit : 1 %(V)
 Calculated Explosive Limit

Vapour pressure : 0.0133333 hPa (70.00 °F / 21.11 °C)
 Calculated Vapor Pressure

Relative vapour density : No data available

Relative density : No data available

Density : 0.880 g/cm3 (60.01 °F / 15.56 °C)

Solubility(ies)
 Water solubility : insoluble

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Decomposition temperature : No data available

Viscosity
 Viscosity, dynamic : No data available

Viscosity, kinematic : 115 mm2/s (104 °F / 40 °C)

Oxidizing properties : No data available

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SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No decomposition if stored and applied as directed.
Chemical stability	: Stable under recommended storage conditions.
Possibility of hazardous reactions	: Product will not undergo hazardous polymerization.
Conditions to avoid	: None known.
Incompatible materials	: Strong oxidizing agents
Hazardous decomposition products	No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation
Skin contact
Eye Contact
Ingestion

Acute toxicity

Not classified based on available information.

Components:**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Skin corrosion/irritation

Not classified based on available information.

Components:**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

Assessment : Slight, transient irritation

Result : Slight, transient irritation

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Assessment : Slight, transient irritation

Result : Slight, transient irritation

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Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks : Unlikely to cause eye irritation or injury.

Components:**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

Result : No eye irritation

Assessment : No eye irritation

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Result : No eye irritation

Assessment : No eye irritation

Respiratory or skin sensitisation**Skin sensitisation**

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Components:**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

IARC No component of this product present at levels greater than or equal to 0.1% is
identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is
on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is
identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

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Components:
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

No aspiration toxicity classification

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

May be fatal if swallowed and enters airways.

Further information
Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION
Ecotoxicity
Product:

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Components:
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Toxicity to fish : LL50 (Fish): > 100 mg/l
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
 Exposure time: 48 h

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
 Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Ecotoxicology Assessment
 Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Toxicity to fish : LL50 (Fish): > 100 mg/l



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Exposure time: 96 h

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 Exposure time: 48 h

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 Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Ecotoxicology Assessment Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Persistence and degradability

Components:

No data available

Bioaccumulative potential

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Partition coefficient: n-octanol/water : log Pow: Expected > 7

No data available

Mobility in soil

Components:

No data available

Other adverse effects

No data available

Product:

Additional ecological information : No data available

Components:

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

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Contaminated packaging : Empty remaining contents.

SECTION 14. TRANSPORT INFORMATION**International Regulations****UNRTDG**

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations**49 CFR**

Not regulated as a dangerous good

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
BENZENE	71-43-2	10	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

California Prop. 65

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for carcinogenicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

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This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for reproductive/developmental toxicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

The components of this product are reported in the following inventories:

DSL	: All components of this product are on the Canadian DSL
AICS	: On the inventory, or in compliance with the inventory
ENCS	: Not in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
TCSI	: Not in compliance with the inventory
TSCA	: On TSCA Inventory

TSCA list

No substances are subject to TSCA 12(b) export notification requirements.

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

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NFPA:	HMIS III:

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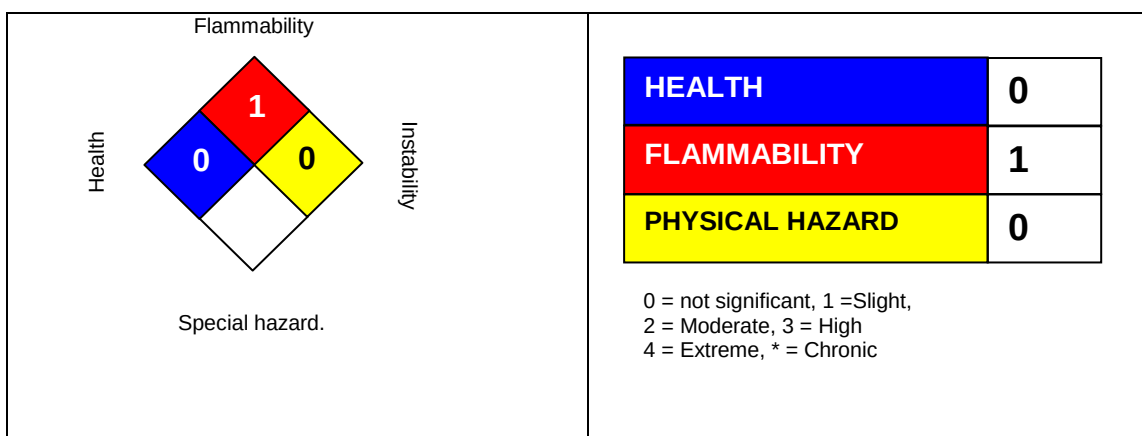
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NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

H304 May be fatal if swallowed and enters airways.

Sources of key data used to compile the Safety Data Sheet

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FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

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ICAO-TI (ICAO) : Technical Instructions by the “International Civil Aviation Organization”

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System

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29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Premium Blue™ Full Synthetic Extreme SAE 5W-40 Heavy Duty Engine Oil

™ Trademark, Valvoline or its subsidiaries, registered in various countries

Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Lubricant

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL (1-800-832-6825)	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL (1-800-832-6825) Product Information 1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Reproductive toxicity : Category 2

GHS label elements

Hazard pictograms :



Signal Word : Warning

Hazard Statements : Suspected of damaging fertility or the unborn child.

Precautionary Statements : **Prevention:**
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Wear protective gloves/ protective clothing/ eye protection/ face protection.

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Response:

IF exposed or concerned: Get medical advice/ attention.

Storage:

Store locked up.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	Asp. Tox. 1; H304	50.2739
DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC (<3 % DMSO EXTRACT)	64742-65-0	This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).	6.0393
ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE)	93819-94-4	Skin Irrit. 2; H315 Eye Dam. 1; H318	1.0871
DISTILLATES (PETROLEUM), SOLVENT-REFINED LIGHT PA	64741-89-5	This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).	1.0065
CATALYTIC DE WAXED HEAVY PARAFFINIC OIL (PETROLEUM)	64742-70-7	Not a hazardous substance or mixture.	1.0065
Dodecylphenol, mixed isomers	74499-35-7	Skin Irrit. 2; H315	0.2012

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(branched)

Eye Irrit. 2A; H319

Repr. 2; H361

SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
 Show this safety data sheet to the doctor in attendance.
 Do not leave the victim unattended.
- If inhaled : If unconscious, place in recovery position and seek medical advice.
 If symptoms persist, call a physician.
- In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
- In case of eye contact : Flush eyes with water as a precaution.
 Remove contact lenses.
 Protect unharmed eye.
 If eye irritation persists, consult a specialist.
- If swallowed : Obtain medical attention.
 Do not give milk or alcoholic beverages.
 Never give anything by mouth to an unconscious person.
 If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:
 acne
 stomach or intestinal upset (nausea, vomiting, diarrhea)
 irritation (nose, throat, airways)
 Suspected of damaging fertility or the unborn child.
 Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum



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occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Water spray
 Foam
 Carbon dioxide (CO₂)
 Dry chemical

Unsuitable extinguishing media : High volume water jet

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : carbon dioxide and carbon monoxide
 Hydrocarbons
 nitrogen oxides (NO_x)
 zinc oxide
 Sulphur oxides
 hydrogen sulfide
 mercaptans
 Aldehydes

Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and : Use personal protective equipment.
 Ensure adequate ventilation.

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- emergency procedures Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
- Environmental precautions : Prevent product from entering drains.
 Prevent further leakage or spillage if safe to do so.
 If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
 Keep in suitable, closed containers for disposal.
- Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Do not breathe vapours/dust.
 Do not smoke.
 Container hazardous when empty.
 Avoid exposure - obtain special instructions before use.
 Avoid contact with skin and eyes.
 Smoking, eating and drinking should be prohibited in the application area.
 For personal protection see section 8.
 Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
 Containers which are opened must be carefully resealed and kept upright to prevent leakage.
 Observe label precautions.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH

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		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC (<3 % DMSO EXTRACT)	64742-65-0	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
DISTILLATES (PETROLEUM), SOLVENT-REFINED LIGHT PA	64741-89-5	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
CATALYTIC DE WAXED HEAVY PARAFFINIC OIL (PETROLEUM)	64742-70-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Hazardous components without workplace control parameters

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Components	CAS-No.
ZINC BIS[O-(6-METHYLHELPTYL)]BIS[O-SEC-BUTYL)]BIS(DITHIOPHOSPHATE)	93819-94-4
Dodecylphenol, mixed isomers (branched)	74499-35-7

Engineering measures : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection

: Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection

: Wear resistant gloves (consult your safety equipment supplier).
 Wear as appropriate:
 Impervious clothing
 Safety shoes
 Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

: Wash hands before breaks and at the end of workday.
 When using do not eat or drink.
 When using do not smoke.

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: liquid
Odour	: No data available
Odour Threshold	: No data available
pH	: No data available
Melting point/freezing point	: No data available
	No data available
Boiling point/boiling range	: 392 °F / 200 °C Calculated Phase Transition Liquid/Gas
Flash point	: > 390 °F / > 199 °C
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Upper explosion limit	: 6 %(V) GLP: Calculated Explosive Limit
Lower explosion limit	: 1 %(V) GLP: Calculated Explosive Limit
Vapour pressure	: 1.3333333 hPa (20 °C) Calculated Vapor Pressure
Relative vapour density	: No data available
Relative density	: 0.8556 (20 °C)
Density	: No data available
Solubility(ies)	
Water solubility	: insoluble
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Thermal decomposition	: No data available

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Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : 100 mm²/s (40 °C)**Oxidizing properties**

: No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : excessive heat

Incompatible materials : Acids
Strong oxidizing agents

Strong oxidizing agents

Hazardous decomposition products

Aldehydes
carbon dioxide and carbon monoxide
Hydrocarbons
hydrogen sulfide
Nitrogen oxides (NO_x)
Sulphur oxides
zinc oxide fumes
mercaptans

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation
Skin contact
Eye Contact
Ingestion

Acute toxicity

Not classified based on available information.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

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Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC (<3 % DMSO EXTRACT):

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Acute oral toxicity : LD50 (Rat): 2,600 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 3,160 mg/kg
 Method: OECD Test Guideline 402
 Assessment: Not classified as acutely toxic by dermal absorption under GHS.

DISTILLATES (PETROLEUM), SOLVENT-REFINED LIGHT PA:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

CATALYTIC DE WAXED HEAVY PARAFFINIC OIL (PETROLEUM):

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
 Assessment: Not classified as acutely toxic by ingestion under GHS.

Remarks: Information given is based on data obtained from similar substances.

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
 Assessment: Not classified as acutely toxic by dermal absorption under GHS.
 Remarks: Information given is based on data obtained from similar substances.

Skin corrosion/irritation

Not classified based on available information.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Result: Slight, transient irritation

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC (<3 % DMSO EXTRACT):

Result: Slight, transient irritation

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ZINC BIS[O-(6-METHYLHELPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPATE):

Species: Guinea pig

Method: OECD Test Guideline 404

Result: Irritating to skin.

Remarks: Information given is based on data obtained from similar substances.

DISTILLATES (PETROLEUM), SOLVENT-REFINED LIGHT PA:

Result: Slight, transient irritation

CATALYTIC DE WAXED HEAVY PARAFFINIC OIL (PETROLEUM):

Result: Slight, transient irritation

Dodecylphenol, mixed isomers (branched):

Result: Irritating to skin.

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks: Unlikely to cause eye irritation or injury.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Result: No eye irritation

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC (<3 % DMSO EXTRACT):

Result: Slight, transient irritation

ZINC BIS[O-(6-METHYLHELPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPATE):

Species: Rabbit

Result: Corrosive

Remarks: Information given is based on data obtained from similar substances.

DISTILLATES (PETROLEUM), SOLVENT-REFINED LIGHT PA:

Result: Slight, transient irritation

CATALYTIC DE WAXED HEAVY PARAFFINIC OIL (PETROLEUM):

Result: Slight, transient irritation

Dodecylphenol, mixed isomers (branched):

Result: Irritating to eyes.

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Components:

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DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC (<3 % DMSO EXTRACT):

Genotoxicity in vitro : Test Type: Ames test
Result: negative

ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Genotoxicity in vitro : Test Type: Ames test
Test species: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Remarks: Information given is based on data obtained from similar substances.

Genotoxicity in vivo : Test Type: Micronucleus test
Test species: Mouse
Method: OECD Test Guideline 474
Result: negative
Remarks: Information given is based on data obtained from similar substances.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Suspected of damaging fertility or the unborn child.

Components:

Dodecylphenol, mixed isomers (branched):

Reproductive toxicity - : Some evidence of adverse effects on sexual function and
Assessment fertility, and/or on development, based on animal experiments.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks: No data available

Carcinogenicity:

IARC

No component of this product present at levels greater than or



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equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Acute aquatic toxicity : Acute aquatic toxicity Category 3; Harmful to aquatic life.

Chronic aquatic toxicity : Chronic aquatic toxicity Category 3; Harmful to aquatic life with long lasting effects.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Toxicity to fish : LL50 (Fish): > 100 mg/l
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
 Exposure time: 48 h

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
 Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

ZINC BIS[O-(6-METHYLHELPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 4.5 mg/l
 Exposure time: 96 h
 Test Type: semi-static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Water flea (Daphnia magna)): 5.4 mg/l
 Exposure time: 48 h
 Test Type: static test

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Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): 2.1 mg/l
 End point: Growth inhibition
 Exposure time: 72 h
 Test Type: static test

Dodecylphenol, mixed isomers (branched):

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Persistence and degradability
Components:

ZINC BIS[O-(6-METHYLHELPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 1.5 %

Exposure time: 28 d

Method: OECD Test Guideline 301B

No data available

Bioaccumulative potential
Components:

ZINC BIS[O-(6-METHYLHELPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Partition coefficient: n-octanol/water : log Pow: 0.59 - 1.2 (23 °C)

CATALYTIC DE WAXED HEAVY PARAFFINIC OIL (PETROLEUM):

Partition coefficient: n-octanol/water : log Pow: > 3.5

No data available

Mobility in soil
Components:

No data available

Other adverse effects

No data available

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Harmful to aquatic life with long lasting effects.

Components:
SECTION 13. DISPOSAL CONSIDERATIONS
Disposal methods

General advice : The product should not be allowed to enter drains, water courses or the soil.

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Do not contaminate ponds, waterways or ditches with chemical or used container.

Send to a licensed waste management company.

Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION**International transport regulations****REGULATION**

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

TDG_INWT_C

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

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Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MX_DG

Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant

no

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act
CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
ETHYLENEDIAMINE	107-15-3	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
ETHYLENEDIAMINE	107-15-3	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : Chronic Health Hazard**SARA 313**

ZINC BIS[O-(6-METHYLHELPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOS PATE) 93819-94-4 1.08 %

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California Prop 65

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

The components of this product are reported in the following inventories:

DSL	: All components of this product are on the Canadian DSL
AICS	: On the inventory, or in compliance with the inventory
ENCS	: Not in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
TSCA	: On TSCA Inventory

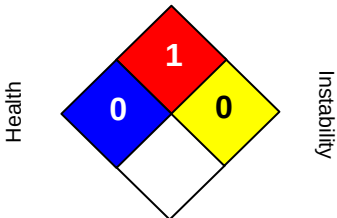
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

Revision Date: 12/26/2017

NFPA:	HMIS III:						
Flammability  Health Instability Special hazard.	<table border="1"> <tr> <td>HEALTH</td><td>0*</td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	0*	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	0*						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

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Full text of H-Statements

H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H361	Suspected of damaging fertility or the unborn child.

Sources of key data used to compile the Safety Data Sheet
 Valvoline internal data including own and sponsored test reports
 The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists
 BEI : Biological Exposure Index
 CAS : Chemical Abstracts Service (Division of the American Chemical Society).
 CMR : Carcinogenic, Mutagenic or Toxic for Reproduction
 FG : Food grade
 GHS : Globally Harmonized System of Classification and Labeling of Chemicals.
 H-statement : Hazard Statement
 IATA : International Air Transport Association.
 IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization
 ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"
 IMDG : International Maritime Code for Dangerous Goods
 ISO : International Organization for Standardization
 logPow : octanol-water partition coefficient
 LCxx : Lethal Concentration, for xx percent of test population
 LDxx : Lethal Dose, for xx percent of test population.
 ICxx : Inhibitory Concentration for xx of a substance
 Ecxx : Effective Concentration of xx
 N.O.S.: Not Otherwise Specified
 OECD : Organization for Economic Co-operation and Development
 OEL : Occupational Exposure Limit
 P-Statement : Precautionary Statement
 PBT : Persistent , Bioaccumulative and Toxic

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PPE : Personal Protective Equipment
 STEL : Short-term exposure limit
 STOT : Specific Target Organ Toxicity
 TLV : Threshold Limit Value
 TWA : Time-weighted average
 vPvB : Very Persistent and Very Bioaccumulative
 WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
 DOT : Department of Transportation
 FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
 HMIRC : Hazardous Materials Information Review Commission
 HMIS : Hazardous Materials Identification System
 NFPA : National Fire Protection Association
 NIOSH : National Institute for Occupational Safety and Health
 OSHA : Occupational Safety and Health Administration
 PMRA : Health Canada Pest Management Regulatory Agency
 RTK : Right to Know
 WHMIS : Workplace Hazardous Materials Information System

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29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ Full Synthetic Continuously Variable Transmission Fluid

™ Trademark, Valvoline or its subsidiaries, registered in various countries

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL (1-800-832-6825) SDS@valvoline.com	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL (1-800-832-6825) Product Information 1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin sensitization : Category 1

GHS label elements

Hazard pictograms : 

Signal Word : Warning

Hazard Statements : May cause an allergic skin reaction.

Precautionary Statements : **Prevention:**
Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves.
Response:

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IF ON SKIN: Wash with plenty of soap and water.
 If skin irritation or rash occurs: Get medical advice/ attention.
 Wash contaminated clothing before reuse.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	Asp. Tox. 1; H304	>=30.00 - < 40.00
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	Not a hazardous substance or mixture.	>=5.00 - < 10.00
Acetamide, 2-hydroxy-, N,N-dicoco alkyl derivs.	866259-61-2	Skin Sens. 1B; H317	>=1.00 - < 1.50

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
 Show this safety data sheet to the doctor in attendance.
 Do not leave the victim unattended.

If inhaled : If breathed in, move person into fresh air.
 If unconscious, place in recovery position and seek medical advice.
 If symptoms persist, call a physician.

In case of skin contact : Remove contaminated clothing. If irritation develops, get medical attention.
 If on skin, rinse well with water.
 First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
 Wash contaminated clothing before re-use.

In case of eye contact : Flush eyes with water as a precaution.

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Remove contact lenses.
Protect unharmed eye.
If eye irritation persists, consult a specialist.

If swallowed : Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed : May cause an allergic skin reaction.
No symptoms known or expected.

Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
Carbon dioxide (CO₂)
Dry chemical

Unsuitable extinguishing media : High volume water jet

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : carbon dioxide and carbon monoxide
Hydrocarbons
Nitrogen oxides (NO_x)

Specific extinguishing methods : Product is compatible with standard fire-fighting agents.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

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- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
- Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.
- Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Do not breathe vapours/dust.
Do not smoke.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Container hazardous when empty.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis

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HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Engineering measures : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Hand protection

Remarks

: The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection

: Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection

: Wear as appropriate:
 Impervious clothing
 Safety shoes
 Choose body protection according to the amount and concentration of the dangerous substance at the work place.
 Discard gloves that show tears, pinholes, or signs of wear.
 Wear resistant gloves (consult your safety equipment supplier).



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Hygiene measures : Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : clear

Odour : characteristic

Odour Threshold : No data available

pH : Not applicable

Melting point/freezing point : No data available

Boiling point/boiling range : No data available

Flash point : > 219.99 °F / > 104.44 °C

Calculated Flash Point

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Self-ignition : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : No data available

Density : 0.844 g/cm³ (77 °F / 25 °C)

Solubility(ies)

Water solubility : immiscible

Solubility in other solvents : No data available

Partition coefficient: n- : No data available

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octanol/water

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : 33.9 mm²/s (104 °F / 40 °C)

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : excessive heat
heatIncompatible materials : Alkali metals
aluminum
Ammonia
Combustible material
halogens
Lead
Metals
metal oxides
Oxidizing agents
peroxides
reducing agents
sodium
Strong acids
strong bases
water
Zinc
Peroxides

Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

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Information on likely routes of exposure

Inhalation
 Skin contact
 Eye Contact
 Ingestion

Acute toxicity

Not classified based on available information.

Components:

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.58 mg/l
 Exposure time: 4 h
 Test atmosphere: dust/mist
 Assessment: Not classified as acutely toxic by inhalation under GHS.
 Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
 Remarks: No mortality observed at this dose.

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Acetamide, 2-hydroxy-, N,N-dicoco alkyl derivs.:

Acute oral toxicity : LD50 (Rat): > 2,500 mg/kg
 Assessment: Not classified as acutely toxic by ingestion under GHS.
 Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
 Assessment: Not classified as acutely toxic by dermal absorption under GHS.
 Remarks: No mortality observed at this dose.

Skin corrosion/irritation

Not classified based on available information.

Product:

Remarks : May cause skin irritation in susceptible persons.

Components:

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Species : Rabbit
 Result : No skin irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation

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Result : Slight, transient irritation

Acetamide, 2-hydroxy-, N,N-dicoco alkyl derivs.:

Species : Rabbit

Result : Mild skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks : Unlikely to cause eye irritation or injury.

Components:
HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Species : Rabbit

Result : No eye irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : No eye irritation

Assessment : No eye irritation

Acetamide, 2-hydroxy-, N,N-dicoco alkyl derivs.:

Species : Rabbit

Result : Slight, transient irritation

Respiratory or skin sensitisation
Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Product:

Remarks : May cause allergic skin reaction.

Components:
HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Test Type : Buehler Test

Species : Guinea pig

Assessment : Does not cause skin sensitisation.

Acetamide, 2-hydroxy-, N,N-dicoco alkyl derivs.:

Test Type : Local lymph node assay (LLNA)

Assessment : The product is a skin sensitizer, sub-category 1B.

Method : OECD Test Guideline 429

Germ cell mutagenicity

Not classified based on available information.

Components:
Acetamide, 2-hydroxy-, N,N-dicoco alkyl derivs.:

Genotoxicity in vitro : Test Type: Ames test

Test system: Salmonella typhimurium

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Metabolic activation: with and without metabolic activation
Result: negative

Carcinogenicity

Not classified based on available information.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Components:

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

May be fatal if swallowed and enters airways.

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

No aspiration toxicity classification

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Short-term (acute) aquatic : Acute aquatic toxicity Category 3; Harmful to aquatic life.

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hazard

Long-term (chronic) aquatic hazard : Not classified based on available information.

Components:
HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
 Exposure time: 96 h
 Test Type: static test
 Test substance: WAF
 Method: OECD Test Guideline 203
 Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l
 Exposure time: 48 h
 Test Type: static test
 Test substance: WAF
 Method: OECD Test Guideline 202

Toxicity to algae : NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l
 End point: Growth inhibition
 Exposure time: 72 h
 Test Type: static test
 Test substance: WAF
 Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOELR (Oncorhynchus mykiss (rainbow trout)): Calculated >= 1,000 mg/l
 Exposure time: 14 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEL (Daphnia (water flea)): 10 mg/l
 Exposure time: 21 d
 Test substance: WAF
 Method: OECD Test Guideline 211

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Toxicity to fish : LL50 (Fish): > 100 mg/l
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
 Exposure time: 48 h

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
 Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

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Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Ecotoxicology Assessment
Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Acetamide, 2-hydroxy-, N,N-dicoco alkyl derivs.:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 610 mg/l
Exposure time: 96 h
Test Type: semi-static test
Test substance: WAF

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 77 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to algae : EL50 (Desmodesmus subspicatus (green algae)): > 160 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Test substance: WAF

Persistence and degradability**Components:**

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 2 - 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

Acetamide, 2-hydroxy-, N,N-dicoco alkyl derivs.:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 67 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

No data available

Bioaccumulative potential**Components:**

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Partition coefficient: n-octanol/water : log Pow: Expected > 7

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No data available

Mobility in soil

Components:

No data available

Other adverse effects

No data available

Product:

Additional ecological information

: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Harmful to aquatic life.

Components:

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice

: Dispose of in accordance with all applicable local, state and federal regulations.

The product should not be allowed to enter drains, water courses or the soil.

Do not contaminate ponds, waterways or ditches with chemical or used container.

Send to a licensed waste management company.

Contaminated packaging

: Empty remaining contents.

Dispose of as unused product.

Empty containers should be taken to an approved waste handling site for recycling or disposal.

Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

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Not regulated as a dangerous good

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
METHANOL	67-56-1	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
SULFUR DIOXIDE	7446-09-5	500	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : Respiratory or skin sensitisation**California Prop. 65**

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for carcinogenicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for reproductive/developmental toxicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

The components of this product are reported in the following inventories:

DSL	: All components of this product are on the Canadian DSL
AICS	: On the inventory, or in compliance with the inventory
ENCS	: On the inventory, or in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
TCSI	: On the inventory, or in compliance with the inventory

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TSCA : On TSCA Inventory

TSCA list

No substances are subject to TSCA 12(b) export notification requirements.

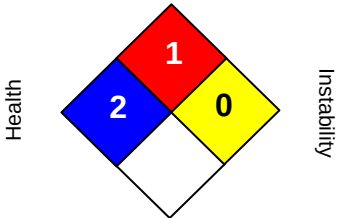
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

Revision Date: 05/30/2019

NFPA:	HMIS III:						
Flammability  Health Instability Special hazard.	<table border="1"> <tr> <td>HEALTH</td><td>2</td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	2	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	2						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

H304 May be fatal if swallowed and enters airways.
H317 May cause an allergic skin reaction.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

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SAFETY DATA SHEET	Revision Date: 05/30/2019
	Print Date: 9/10/2019
	SDS Number: 000000149117
Valvoline™ Full Synthetic Continuously Variable Transmission Fluid ™ Trademark, Valvoline or its subsidiaries, registered in various countries 804751	Version: 1.6

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists
BEI : Biological Exposure Index
CAS : Chemical Abstracts Service (Division of the American Chemical Society).
CMR : Carcinogenic, Mutagenic or Toxic for Reproduction
FG : Food grade
GHS : Globally Harmonized System of Classification and Labeling of Chemicals.
H-statement : Hazard Statement
IATA : International Air Transport Association.
IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization
ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"
IMDG : International Maritime Code for Dangerous Goods
ISO : International Organization for Standardization
logPow : octanol-water partition coefficient
LCxx : Lethal Concentration, for xx percent of test population
LDxx : Lethal Dose, for xx percent of test population.
ICxx : Inhibitory Concentration for xx of a substance
Ecxx : Effective Concentration of xx
N.O.S.: Not Otherwise Specified
OECD : Organization for Economic Co-operation and Development
OEL : Occupational Exposure Limit
P-Statement : Precautionary Statement
PBT : Persistent , Bioaccumulative and Toxic
PPE : Personal Protective Equipment
STEL : Short-term exposure limit
STOT : Specific Target Organ Toxicity
TLV : Threshold Limit Value
TWA : Time-weighted average
vPvB : Very Persistent and Very Bioaccumulative
WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
DOT : Department of Transportation
FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
HMIRC : Hazardous Materials Information Review Commission
HMIS : Hazardous Materials Identification System
NFPA : National Fire Protection Association
NIOSH : National Institute for Occupational Safety and Health
OSHA : Occupational Safety and Health Administration

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PMRA : Health Canada Pest Management Regulatory Agency
RTK : Right to Know
WHMIS : Workplace Hazardous Materials Information System

**SAFETY DATA SHEET**

Revision Date: 08/06/2019

Print Date: 9/18/2019

SDS Number: 000000220178

Valvoline™ MaxLife™ High Mileage SAE 0W-20 Motor Oil

Version: 1.7

805782

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**Product identifier**

Trade name : Valvoline™ MaxLife™ High Mileage SAE 0W-20
Motor Oil

Details of the supplier of the safety data sheet

Valvoline LLC
100 Valvoline Way
Lexington, KY 40509
United States of America (USA)
1-800-TEAMVAL (1-800-832-6825)

SDS@valvoline.com

Emergency telephone number

1-800-VALVOLINE (1-800-825-8654)

Regulatory Information Number

1-800-TEAMVAL (1-800-832-6825)

Product Information

1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based	72623-87-1	Asp. Tox. 1; H304	>=70.00 - < 80.00
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	Not a hazardous substance or mixture.	>=10.00 - < 15.00

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DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC		Not a hazardous substance or mixture.	≥ 1.50 - < 5.00
Lubricating oils (petroleum), hydrotreated	64742-58-1	Not a hazardous substance or mixture.	≥ 1.00 - < 1.50

SECTION 4. FIRST AID MEASURES

General advice	: No hazards which require special first aid measures.
If inhaled	: If breathed in, move person into fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	: First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
In case of eye contact	: Remove contact lenses. Protect unharmed eye.
If swallowed	: Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	: No symptoms known or expected.
Notes to physician	: No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray Foam Carbon dioxide (CO ₂) Dry chemical
Specific hazards during firefighting	: Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	: carbon dioxide and carbon monoxide Hydrocarbons

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Specific extinguishing
methods

:

Product is compatible with standard fire-fighting agents.

Further information

:

Standard procedure for chemical fires.

Special protective equipment
for firefighters

:

In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions,
protective equipment and
emergency procedures

:

Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions

:

Prevent further leakage or spillage if safe to do so.

Methods and materials for
containment and cleaning up

:

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

Other information

:

Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling

:

Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.

Materials to avoid

:

No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based	72623-87-1	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH

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		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC		TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
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		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
Lubricating oils (petroleum), hydrotreated	64742-58-1	TWA	5 mg/m3 Inhalable fraction	ACGIH

Engineering measures

: General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection

: No personal respiratory protective equipment normally required.

Eye protection

: Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

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Skin and body protection : Wear resistant gloves (consult your safety equipment supplier).
Wear as appropriate:
Safety shoes

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Odour : No data available

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : No data available

Flash point : 426 °F / 219 °C
Method: Cleveland open cup

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Self-ignition : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapour pressure : 1 hPa (68 °F / 20 °C)
Calculated Vapor Pressure

Relative vapour density : No data available

Relative density : No data available

Density : 0.845 g/cm³

Solubility(ies)
Water solubility : No data available

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Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : 45.5 mm²/s (104 °F / 40 °C)

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : None known.

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION
Information on likely routes of exposure

Inhalation

Skin contact

Eye Contact

Ingestion

Acute toxicity

Not classified based on available information.

Components:
Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.58 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: Not classified as acutely toxic by inhalation under GHS.

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Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Remarks: No mortality observed at this dose.

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Lubricating oils (petroleum), hydrotreated:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: Not classified as acutely toxic by ingestion under GHS.

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: Not classified as acutely toxic by dermal absorption under GHS.

Skin corrosion/irritation

Not classified based on available information.

Components:**Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:**

Species : Rabbit
Result : No skin irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation
Result : Slight, transient irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation
Result : Slight, transient irritation

Lubricating oils (petroleum), hydrotreated:

Assessment : No skin irritation
Result : No skin irritation

Result : Repeated exposure may cause skin dryness or cracking.

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Result : Slight, transient irritation
Remarks : Expected based on components.

Remarks : Unlikely to cause eye irritation or injury.

Components:**Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:**

Species : Rabbit

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Result : No eye irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : No eye irritation

Assessment : No eye irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : Slight, transient irritation

Assessment : Slight, transient irritation

Lubricating oils (petroleum), hydrotreated:

Result : Slight, transient irritation

Assessment : Slight, transient irritation

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Test Type : Buehler Test

Species : Guinea pig

Assessment : Does not cause skin sensitisation.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Components:

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation

Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation

Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation

Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

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Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Components:

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

May be fatal if swallowed and enters airways.

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

No aspiration toxicity classification

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Components:

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 203
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 202

Toxicity to algae : NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l
End point: Growth inhibition
Exposure time: 72 h

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Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOELR (Oncorhynchus mykiss (rainbow trout)): $\geq 1,000$ mg/l
Exposure time: 14 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEL (Daphnia (water flea)): 10 mg/l
Exposure time: 21 d
Test substance: WAF
Method: OECD Test Guideline 211

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Toxicity to fish : LL50 (Fish): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): $> 10,000$ mg/l
Exposure time: 48 h

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Ecotoxicology Assessment
Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Lubricating oils (petroleum), hydrotreated:

Toxicity to daphnia and other aquatic invertebrates : LC50 (Brine shrimp (Artemia salina)): $> 22,500$ mg/l
Exposure time: 48 h

Ecotoxicology Assessment
Short-term (acute) aquatic hazard :

Not classified based on available information.

Long-term (chronic) aquatic hazard : No toxicity at the limit of solubility

Not classified based on available information.

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Persistence and degradability
Components:

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 2 - 4 %

Exposure time: 28 d

Method: OECD Test Guideline 301B

No data available

Bioaccumulative potential
Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Partition coefficient: n-octanol/water : log Pow: Expected > 7

No data available

No data available

Mobility in soil
Components:

No data available

Other adverse effects

No data available

Product:

Additional ecological information : No data available

Components:
SECTION 13. DISPOSAL CONSIDERATIONS
Disposal methods

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.

SECTION 14. TRANSPORT INFORMATION
International Regulations
UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

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National Regulations

49 CFR

Not regulated as a dangerous good

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

California Prop. 65

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for carcinogenicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for reproductive/developmental toxicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

The components of this product are reported in the following inventories:

DSL	: All components of this product are on the Canadian DSL
AICS	: On the inventory, or in compliance with the inventory
ENCS	: Not in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
TCSI	: On the inventory, or in compliance with the inventory
TSCA	: On TSCA Inventory

TSCA list

No substances are subject to TSCA 12(b) export notification requirements.

Inventories

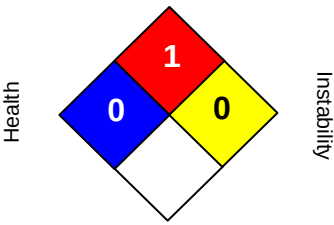
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SECTION 16. OTHER INFORMATION

Further information

Revision Date: 08/06/2019

NFPA:	HMIS III:						
Flammability Health Instability  Special hazard.	<table border="1"> <tr> <td>HEALTH</td><td>0</td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	0	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	0						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

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Combustible Liquid Class IIIB

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H304 May be fatal if swallowed and enters airways.

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CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
 DOT : Department of Transportation
 FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
 HMIRC : Hazardous Materials Information Review Commission
 HMIS : Hazardous Materials Identification System
 NFPA : National Fire Protection Association
 NIOSH : National Institute for Occupational Safety and Health
 OSHA : Occupational Safety and Health Administration
 PMRA : Health Canada Pest Management Regulatory Agency
 RTK : Right to Know
 WHMIS : Workplace Hazardous Materials Information System



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29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ High Mileage with MaxLife™ Tech 10W-30 Motor Oil

Product code : 809333

Details of the supplier of the safety data sheet

Valvoline LLC
100 Valvoline Way
Lexington, KY 40509
United States of America (USA)
1-800-TEAMVAL (1-800-832-6825)

SDS@valvoline.com

Emergency telephone number

1-800-VALVOLINE (1-800-825-8654)

Regulatory Information Number

1-800-TEAMVAL (1-800-832-6825)

Product Information

1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	Not a hazardous substance or mixture.	>=50.00 - < 60.00
Distillates, petroleum, solvent-	64741-88-4	Not a hazardous	>=20.00 - < 30.00



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refined heavy paraffinic		substance or mixture.	
Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based	72623-87-1	Asp. Tox. 1; H304	>=10.00 - < 15.00

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

- General advice : No hazards which require special first aid measures.
- If inhaled : If breathed in, move person into fresh air.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
- In case of eye contact : Remove contact lenses.
Protect unharmed eye.
- If swallowed : Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : No symptoms known or expected.
- Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
Carbon dioxide (CO2)
Dry chemical
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
If product is heated above its flash point it will produce vapors sufficient to support combustion. Vapors are heavier than air and may travel along the ground and be ignited by heat, pilot



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lights, other flames and ignition sources at locations near the point of release.

Hazardous combustion products : carbon dioxide and carbon monoxide
Hydrocarbons

Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.

Further information : Standard procedure for chemical fires.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions : Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.

Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis



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DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable particulate matter	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
Distillates, petroleum, solvent- refined heavy paraffinic	64741-88-4	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable particulate matter	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based	72623-87-1	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable particulate matter	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL

Engineering measures : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally



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required.

Eye protection	:	Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.
Skin and body protection	:	Wear resistant gloves (consult your safety equipment supplier). Wear as appropriate: Safety shoes
Hygiene measures	:	General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	amber
Odour	:	mild
Odour Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Boiling point/boiling range	:	> 424 °F / > 218 °C (1013 hPa)
Flash point	:	> 390 °F / > 199 °C Method: Cleveland open cup
Evaporation rate	:	< 1
Flammability (solid, gas)	:	No data available
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	< 1.0 mmHg (68 °F / 20 °C)



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Relative vapour density	: > 1 AIR=1
Relative density	: No data available
Density	: 0.8687 g/cm ³ (60.1 °F / 15.6 °C)
Solubility(ies)	
Water solubility	: No data available
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Decomposition temperature	: No data available
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: ca. 70 mm ² /s (104 °F / 40 °C)
Oxidizing properties	: No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No decomposition if stored and applied as directed.
Chemical stability	: Stable under recommended storage conditions.
Possibility of hazardous reactions	: Product will not undergo hazardous polymerization.
Conditions to avoid	: None known.
Incompatible materials	: Strong oxidizing agents
Hazardous decomposition products	No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation
Skin contact
Eye Contact
Ingestion



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Acute toxicity

Not classified based on available information.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Distillates, petroleum, solvent-refined heavy paraffinic:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.58 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: Not classified as acutely toxic by inhalation under GHS.
Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Remarks: No mortality observed at this dose.

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.58 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: Not classified as acutely toxic by inhalation under GHS.
Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Remarks: No mortality observed at this dose.

Skin corrosion/irritation

Not classified based on available information.

Product:

Result : Slight, transient irritation

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation

Result : Slight, transient irritation

Distillates, petroleum, solvent-refined heavy paraffinic:

Species : Rabbit

Result : No skin irritation

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Species : Rabbit



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Result : No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Result : Slight, transient irritation
Remarks : Expected based on components.

Remarks : Unlikely to cause eye irritation or injury.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : No eye irritation
Assessment : No eye irritation

Distillates, petroleum, solvent-refined heavy paraffinic:

Species : Rabbit
Result : No eye irritation

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Species : Rabbit
Result : No eye irritation

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

Distillates, petroleum, solvent-refined heavy paraffinic:

Test Type : Buehler Test
Species : Guinea pig
Assessment : Does not cause skin sensitisation.

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Test Type : Buehler Test
Species : Guinea pig
Assessment : Does not cause skin sensitisation.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation



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Assessment	(EC) 1272/2008, Annex VI, Part 3, Note L)
IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

No aspiration toxicity classification

Distillates, petroleum, solvent-refined heavy paraffinic:

No aspiration toxicity classification

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Components:



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DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Toxicity to fish : LL50 (Fish): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
Exposure time: 48 h

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Ecotoxicology Assessment
Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Distillates, petroleum, solvent-refined heavy paraffinic:

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 203
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 202

Toxicity to algae : NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOELR (Oncorhynchus mykiss (rainbow trout)): Calculated >= 1,000 mg/l
Exposure time: 14 d



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Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEL (Daphnia (water flea)): 10 mg/l
Exposure time: 21 d
Test substance: WAF
Method: OECD Test Guideline 211

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:
Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 203
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 202

Toxicity to algae : NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOELR (Oncorhynchus mykiss (rainbow trout)): >= 1,000 mg/l
Exposure time: 14 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEL (Daphnia (water flea)): 10 mg/l
Exposure time: 21 d
Test substance: WAF
Method: OECD Test Guideline 211

Persistence and degradability

Components:

Distillates, petroleum, solvent-refined heavy paraffinic:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 2 - 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:
Biodegradability : Result: Not readily biodegradable.
Biodegradation: 2 - 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

No data available



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Bioaccumulative potential

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Partition coefficient: n-octanol/water : log Pow: Expected > 7

No data available

Mobility in soil

Components:

No data available

Other adverse effects

No data available

Product:

Additional ecological information : No data available

Components:

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

Not regulated as a dangerous good

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.



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SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

California Prop. 65

 **WARNING:** Cancer - www.P65Warnings.ca.gov.

The components of this product are reported in the following inventories:

DSL	: All components of this product are on the Canadian DSL
AICS	: On the inventory, or in compliance with the inventory
ENCS	: On the inventory, or in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
TCSI	: On the inventory, or in compliance with the inventory
TSCA	: On TSCA Inventory

TSCA list

No substances are subject to TSCA 12(b) export notification requirements.

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

Internal information : R0355563



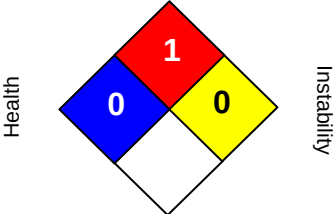
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NFPA:	HMIS III:						
Flammability Health Instability Special hazard 	<table><tr><td>HEALTH</td><td>0</td></tr><tr><td>FLAMMABILITY</td><td>1</td></tr><tr><td>PHYSICAL HAZARD</td><td>0</td></tr></table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	0	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	0						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification
Combustible Liquid Class IIIB

Full text of H-Statements

H304 May be fatal if swallowed and enters airways.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).



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ICAO : International Civil Aviation Organization
ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"
IMDG : International Maritime Code for Dangerous Goods
ISO : International Organization for Standardization
logPow : octanol-water partition coefficient
LCxx : Lethal Concentration, for xx percent of test population
LDxx : Lethal Dose, for xx percent of test population.
ICxx : Inhibitory Concentration for xx of a substance
Ecxx : Effective Concentration of xx
N.O.S.: Not Otherwise Specified
OECD : Organization for Economic Co-operation and Development
OEL : Occupational Exposure Limit
P-Statement : Precautionary Statement
PBT : Persistent , Bioaccumulative and Toxic
PPE : Personal Protective Equipment
STEL : Short-term exposure limit
STOT : Specific Target Organ Toxicity
TLV : Threshold Limit Value
TWA : Time-weighted average
vPvB : Very Persistent and Very Bioaccumulative
WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
DOT : Department of Transportation
FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
HMIRC : Hazardous Materials Information Review Commission
HMIS : Hazardous Materials Identification System
NFPA : National Fire Protection Association
NIOSH : National Institute for Occupational Safety and Health
OSHA : Occupational Safety and Health Administration
PMRA : Health Canada Pest Management Regulatory Agency
RTK : Right to Know
WHMIS : Workplace Hazardous Materials Information System

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SAFETY DATA SHEET	Revision Date: 06/07/2018
	Print Date: 9/18/2019
	SDS Number: R0382635
Valvoline™ Full Synthetic ATF+4 Automatic Transmission Fluid ™ Trademark, Valvoline or its subsidiaries, registered in various countries 822348	Version: 1.6

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ Full Synthetic ATF+4 Automatic Transmission Fluid

™ Trademark, Valvoline or its subsidiaries, registered in various countries

Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Engine, gear & lubricating oil.

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL (1-800-832-6825)	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL (1-800-832-6825) Product Information 1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

GHS label elements

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)

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SDS Number: R0382635

Version: 1.6

Valvoline™ Full Synthetic ATF+4 Automatic Transmission Fluid
 ™ Trademark, Valvoline or its subsidiaries, registered in various
 countries
 822348

HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).	>=50.00 - < 60.00
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	Asp. Tox. 1; H304	>=30.00 - < 40.00
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	Asp. Tox. 1; H304	>=1.50 - < 5.00
Mineral Oil		Asp. Tox. 1; H304	>=1.50 - < 5.00
DODECYL HYDROXYPROPYL SULFIDE	67124-09-8	Skin Sens. 1; H317	>=0.50 - < 1.00

SECTION 4. FIRST AID MEASURES

General advice	: No hazards which require special first aid measures.
If inhaled	: If breathed in, move person into fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	: First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
In case of eye contact	: Remove contact lenses. Protect unharmed eye.
If swallowed	: Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	: Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes



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appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:

acne
 stomach or intestinal upset (nausea, vomiting, diarrhea)
 irritation (nose, throat, airways)

Notes to physician

: No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Water spray

Foam

Carbon dioxide (CO₂)

Dry chemical

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : carbon dioxide and carbon monoxide
 Hydrocarbons
 Aldehydes

Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

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emergency procedures

- Environmental precautions : Prevent product from entering drains.
 Prevent further leakage or spillage if safe to do so.
 If the product contaminates rivers and lakes or drains inform
 respective authorities.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel,
 acid binder, universal binder, sawdust).
 Keep in suitable, closed containers for disposal.
- Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Smoking, eating and drinking should be prohibited in the
 application area.
 For personal protection see section 8.
- Conditions for safe storage : Containers which are opened must be carefully resealed and
 kept upright to prevent leakage.
- Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1

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		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Engineering measures : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear resistant gloves (consult your safety equipment supplier).
 Wear as appropriate:
 Safety shoes

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

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Physical state : liquid

Colour : red

Odour : No data available

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : No data available

Flash point : > 390 °F / > 199 °C
 Method: Cleveland open cup

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Upper explosion limit : 6 %(V)
 Calculated Explosive Limit

Lower explosion limit : 1 %(V)
 Calculated Explosive Limit

Vapour pressure : 0.0133333 hPa (21.11 °C)
 Calculated Vapor Pressure

Relative vapour density : No data available

Relative density : 0.854 (15.6 °C)

Density : 0.8508 g/cm3 (15.56 °C)

Solubility(ies)

Water solubility : Not applicable

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Thermal decomposition : No data available

Viscosity

Viscosity, dynamic : < 10,000 mPa.sMethod: Brookfield

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Viscosity, kinematic : ca. 34 mm²/s (40 °C)

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : excessive heat

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : carbon dioxide and carbon monoxide
 Hydrocarbons

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation
 Skin contact
 Eye Contact
 Ingestion

Acute toxicity

Not classified based on available information.

Components:

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.58 mg/l
 Exposure time: 4 h
 Test atmosphere: dust/mist
 Assessment: Not classified as acutely toxic by inhalation under GHS.
 Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
 Remarks: No mortality observed at this dose.

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Distillates (Petroleum), Hydrotreated Heavy Paraffinic:
Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

DODECYL HYDROXYPROPYL SULFIDE:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
GLP: yes

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Assessment: Not classified as acutely toxic by dermal
absorption under GHS.

Skin corrosion/irritation

Not classified based on available information.

Components:

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Species: Rabbit

Result: No skin irritation

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Result: Slight, transient irritation

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Result: Slight, transient irritation

DODECYL HYDROXYPROPYL SULFIDE:

Species: Rabbit

Result: No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Result: Slight, transient irritation

Remarks: Expected based on components.

Remarks: Unlikely to cause eye irritation or injury.

Components:

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Species: Rabbit

Result: No eye irritation

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Result: No eye irritation

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Result: Slight, transient irritation

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DODECYL HYDROXYPROPYL SULFIDE:

Species: Rabbit

Result: No eye irritation

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

Components:
HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Test Type: Buehler Test

Species: Guinea pig

Assessment: Does not cause skin sensitisation.

DODECYL HYDROXYPROPYL SULFIDE:

Test Type: Local lymph node assay

Species: Guinea pig

Assessment: May cause sensitisation by skin contact.

Method: OECD Test Guideline 429

Germ cell mutagenicity

Not classified based on available information.

Components:
DODECYL HYDROXYPROPYL SULFIDE:

Genotoxicity in vitro

: Test Type: Ames test

Test species: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Result: negative

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Components:
HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

May be fatal if swallowed and enters airways.

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

May be fatal if swallowed and enters airways.

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

May be fatal if swallowed and enters airways.

Mineral Oil:

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May be fatal if swallowed and enters airways.

Further information**Product:**

Remarks: No data available

Carcinogenicity:**IARC**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Ecotoxicology Assessment

Acute aquatic toxicity : Acute aquatic toxicity Category 3; Harmful to aquatic life.

Chronic aquatic toxicity : Chronic aquatic toxicity Category 3; Harmful to aquatic life with long lasting effects.

Components:

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 203
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 202

Toxicity to algae : NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test

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Test substance: WAF
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOELR (Oncorhynchus mykiss (rainbow trout)): Calculated >= 1,000 mg/l
Exposure time: 14 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEL (Daphnia (water flea)): 10 mg/l
Exposure time: 21 d
Test substance: WAF
Method: OECD Test Guideline 211

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:
Toxicity to fish : LL50 (Fish): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
Exposure time: 48 h

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

DODECYL HYDROXYPROPYL SULFIDE:
Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.75 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 0.58 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: WAF

Toxicity to algae : EL50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Test substance: WAF

M-Factor (Acute aquatic toxicity) : 1

Toxicity to daphnia and other : NOEL (Daphnia magna (Water flea)): 0.32 mg/l

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aquatic invertebrates
 (Chronic toxicity)

Exposure time: 21 d
 Test Type: semi-static test
 Method: OECD Test Guideline 211
 GLP: yes

M-Factor (Chronic aquatic toxicity) : 1

Persistence and degradability
Components:

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Biodegradability : Result: Not readily biodegradable.
 Biodegradation: 2 - 4 %
 Exposure time: 28 d
 Method: OECD Test Guideline 301B

DODECYL HYDROXYPROPYL SULFIDE:

Biodegradability : Result: Not readily biodegradable.
 Biodegradation: 5 %
 Exposure time: 28 d
 Method: OECD Test Guideline 301F

No data available

Bioaccumulative potential
Components:

DODECYL HYDROXYPROPYL SULFIDE:

Partition coefficient: n-octanol/water : log Pow: 4.7 - 6.5

No data available

Mobility in soil
Components:

No data available

Other adverse effects

No data available

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Harmful to aquatic life with long lasting effects.

Components:
SECTION 13. DISPOSAL CONSIDERATIONS
Disposal methods

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

The product should not be allowed to enter drains, water courses or the soil.

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Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste
handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION**International transport regulations****REGULATION**

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

TDG_INWT_C

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

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Not dangerous goods

MX_DG

Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant

no

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act
CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
BENZENE	71-43-2	10	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
SULFUR DIOXIDE	7446-09-5	500	*
SULFUR DIOXIDE	7446-09-5		*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : No SARA Hazards**SARA 313**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

ENCS : Not in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

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PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

TSCA : On TSCA Inventory

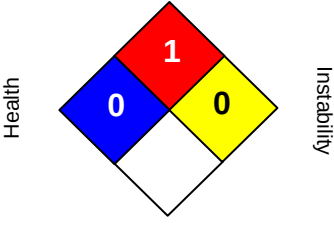
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

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NFPA:	HMIS III:						
Flammability Health Instability Special hazard. 	<table border="1"> <tr> <td>HEALTH</td><td>0</td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	0	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	0						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

H304 May be fatal if swallowed and enters airways.
 H317 May cause an allergic skin reaction.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

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The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists
 BEI : Biological Exposure Index
 CAS : Chemical Abstracts Service (Division of the American Chemical Society).
 CMR : Carcinogenic, Mutagenic or Toxic for Reproduction
 FG : Food grade
 GHS : Globally Harmonized System of Classification and Labeling of Chemicals.
 H-statement : Hazard Statement
 IATA : International Air Transport Association.
 IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization
 ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"
 IMDG : International Maritime Code for Dangerous Goods
 ISO : International Organization for Standardization
 logPow : octanol-water partition coefficient
 LCxx : Lethal Concentration, for xx percent of test population
 LDxx : Lethal Dose, for xx percent of test population.
 ICxx : Inhibitory Concentration for xx of a substance
 Ecxx : Effective Concentration of xx
 N.O.S.: Not Otherwise Specified
 OECD : Organization for Economic Co-operation and Development
 OEL : Occupational Exposure Limit
 P-Statement : Precautionary Statement
 PBT : Persistent , Bioaccumulative and Toxic
 PPE : Personal Protective Equipment
 STEL : Short-term exposure limit
 STOT : Specific Target Organ Toxicity
 TLV : Threshold Limit Value
 TWA : Time-weighted average
 vPvB : Very Persistent and Very Bioaccumulative
 WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
 DOT : Department of Transportation
 FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
 HMIRC : Hazardous Materials Information Review Commission
 HMIS : Hazardous Materials Identification System
 NFPA : National Fire Protection Association
 NIOSH : National Institute for Occupational Safety and Health
 OSHA : Occupational Safety and Health Administration
 PMRA : Health Canada Pest Management Regulatory Agency

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RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System

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Valvoline™ Full Synthetic with MaxLife™ Technology SAE 5W-20 Motor Oil 849497	Version: 1.4

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ Full Synthetic with MaxLife™ Technology SAE 5W-20 Motor Oil

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL (1-800-832-6825)	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL (1-800-832-6825) Product Information 1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

GHS label elements

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	Asp. Tox. 1; H304	21.9338
Mineral Oil		Asp. Tox. 1; H304	6.0407

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SECTION 4. FIRST AID MEASURES

- General advice : No hazards which require special first aid measures.
- If inhaled : If breathed in, move person into fresh air.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
- In case of eye contact : Remove contact lenses.
Protect unharmed eye.
- If swallowed : Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.
Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:
acne
stomach or intestinal upset (nausea, vomiting, diarrhea)
irritation (nose, throat, airways)
- Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray

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Foam
Carbon dioxide (CO₂)
Dry chemical

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : carbon dioxide and carbon monoxide
Hydrocarbons
nitrogen oxides (NO_x)

Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.

Further information : Standard procedure for chemical fires.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions : Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.

Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Hazardous components without workplace control parameters

Components	CAS-No.
Mineral Oil	

Engineering measures : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear as appropriate:
Safety shoes
Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

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Physical state	: liquid
Odour	: No data available
Odour Threshold	: No data available
pH	: No data available
Melting point/freezing point	: No data available
Boiling point/boiling range	: No data available
Flash point	: > 390 °F / > 199 °C Method: Cleveland open cup
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: No data available
Relative vapour density	: No data available
Relative density	: No data available
Density	: 0.849 g/cm ³
Solubility(ies)	
Water solubility	: No data available
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Thermal decomposition	: No data available
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: 50.4 mm ² /s (40 °C)
Oxidizing properties	: No data available

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SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : None known.

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : carbon dioxide and carbon monoxide
Hydrocarbons
Nitrogen oxides (NOx)**SECTION 11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure : Inhalation
Skin contact
Eye Contact
Ingestion**Acute toxicity**

Not classified based on available information.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Skin corrosion/irritation

Not classified based on available information.

Product:

Result: Slight, transient irritation

Remarks: Expected based on components.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Result: Slight, transient irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Result: Slight, transient irritation

Remarks: Expected based on components.

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Remarks: Unlikely to cause eye irritation or injury.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:
Result: No eye irritation

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.
Respiratory sensitisation: Not classified based on available information.
Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:
May be fatal if swallowed and enters airways.

Mineral Oil:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks: No data available

Carcinogenicity:

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 12. ECOLOGICAL INFORMATION

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Ecotoxicity**Product:**

Ecotoxicology Assessment

Acute aquatic toxicity : Not classified based on available information.

Chronic aquatic toxicity : Not classified based on available information.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Toxicity to fish : LL50 (Fish): > 100 mg/l
Exposure time: 96 hToxicity to daphnia and other : EL50 (Aquatic invertebrates): > 10,000 mg/l
aquatic invertebrates Exposure time: 48 hToxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
Exposure time: 72 hToxicity to fish (Chronic : NOEC (Fish): 10 mg/l
toxicity)Toxicity to daphnia and other : NOEC (Aquatic invertebrates): 10 mg/l
aquatic invertebrates
(Chronic toxicity)**Persistence and degradability****Components:**

No data available

Bioaccumulative potential**Components:**

No data available

Mobility in soil**Components:**

No data available

Other adverse effects

No data available

Product:Additional ecological : No data available
information**Components:****SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.

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SECTION 14. TRANSPORT INFORMATION**International transport regulations****REGULATION**

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

TDG_INWT_C

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MX_DG

Not dangerous goods

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*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Marine pollutant	no

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
TOLUENE	108-88-3	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
SULFUR DIOXIDE	7446-09-5	500	*
SULFUR DIOXIDE	7446-09-5		*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : No SARA Hazards

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

The components of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AICS : Not in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : Not in compliance with the inventory

IECSC : Not in compliance with the inventory

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TSCA : On TSCA Inventory

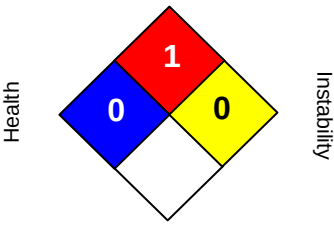
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

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NFPA:	HMIS III:						
Flammability Health Instability  Special hazard.	<table border="1"> <tr> <td>HEALTH</td><td>0</td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	0	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	0						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

H304 May be fatal if swallowed and enters airways.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

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List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System

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29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ Full Synthetic with MaxLife™ Technology SAE 0W-20 Motor Oil

Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Motor Oil

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL (1-800-832-6825)	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL (1-800-832-6825) Product Information 1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

GHS label elements

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	Asp. Tox. 1; H304	59.6379
Mineral Oil		Asp. Tox. 1; H304	5.43

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SECTION 4. FIRST AID MEASURES

General advice	: No hazards which require special first aid measures.
If inhaled	: If breathed in, move person into fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	: First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
In case of eye contact	: Remove contact lenses. Protect unharmed eye.
If swallowed	: Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	: Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities. Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: acne stomach or intestinal upset (nausea, vomiting, diarrhea) irritation (nose, throat, airways)
Notes to physician	: No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

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- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
Carbon dioxide (CO₂)
Dry chemical
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : carbon dioxide and carbon monoxide
Hydrocarbons
nitrogen oxides (NO_x)
- Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.
- Further information : Standard procedure for chemical fires.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.
- Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.
- Materials to avoid : No materials to be especially mentioned.

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Hazardous components without workplace control parameters

Components	CAS-No.
Mineral Oil	

Engineering measures : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear resistant gloves (consult your safety equipment supplier).
Wear as appropriate:
Safety shoes

Hygiene measures : General industrial hygiene practice.

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: liquid
Odour	: No data available
Odour Threshold	: No data available
pH	: No data available
Melting point/freezing point	: No data available
Boiling point/boiling range	: 424.99 °F / 218.33 °C (1,013.333333 hPa) Calculated Phase Transition Liquid/Gas
Flash point	: > 390 °F / > 199 °C Method: Cleveland open cup
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: 0.00004 hPaCalculated Vapor Pressure
Relative vapour density	: No data available
Relative density	: No data available
Density	: 0.847 g/cm3 (15.6 °C)
Solubility(ies)	
Water solubility	: No data available
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Thermal decomposition	: No data available
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: 45.2 mm2/s (40 °C)

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Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : None known.

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products
carbon dioxide and carbon monoxide
Hydrocarbons
Nitrogen oxides (NOx)**SECTION 11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure : Inhalation
Skin contact
Eye Contact
Ingestion**Acute toxicity**

Not classified based on available information.

Components:Distillates (Petroleum), Hydrotreated Heavy Paraffinic:
Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Skin corrosion/irritation

Not classified based on available information.

Product:Result: Slight, transient irritation
Remarks: Expected**Components:**Distillates (Petroleum), Hydrotreated Heavy Paraffinic:
Result: Slight, transient irritation**Serious eye damage/eye irritation**

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Not classified based on available information.

Product:

Result: Slight, transient irritation

Remarks: Expected based on components.

Remarks: Unlikely to cause eye irritation or injury.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Result: No eye irritation

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

May be fatal if swallowed and enters airways.

Mineral Oil:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks: No data available

Carcinogenicity:

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No component of this product present at levels greater than or

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equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Ecotoxicology Assessment

Acute aquatic toxicity : Not classified based on available information.

Chronic aquatic toxicity : Not classified based on available information.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Toxicity to fish : LL50 (Fish): > 100 mg/l
Exposure time: 96 hToxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
Exposure time: 48 hToxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Persistence and degradability**Components:**

No data available

Bioaccumulative potential**Components:**

No data available

Mobility in soil**Components:**

No data available

Other adverse effects

No data available

Product:

Additional ecological information : No data available

Components:**SECTION 13. DISPOSAL CONSIDERATIONS**

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Disposal methods

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.

SECTION 14. TRANSPORT INFORMATION**International transport regulations****REGULATION**

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

TDG_INWT_C

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

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INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MX_DG

Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant

no

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act
CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
TOLUENE	108-88-3	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
SULFUR DIOXIDE	7446-09-5	500	*
SULFUR DIOXIDE	7446-09-5		*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : No SARA Hazards**SARA 313**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

The components of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AICS : Not in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

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KECI : On the inventory, or in compliance with the inventory

PICCS : Not in compliance with the inventory

IECSC : Not in compliance with the inventory

TSCA : On TSCA Inventory

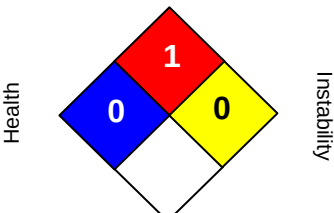
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

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NFPA:	HMIS III:						
Flammability  Health Instability Special hazard.	<table border="1"> <tr> <td>HEALTH</td><td>0</td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	0	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	0						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

H304 May be fatal if swallowed and enters airways.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

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The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists
BEI : Biological Exposure Index
CAS : Chemical Abstracts Service (Division of the American Chemical Society).
CMR : Carcinogenic, Mutagenic or Toxic for Reproduction
FG : Food grade
GHS : Globally Harmonized System of Classification and Labeling of Chemicals.
H-statement : Hazard Statement
IATA : International Air Transport Association.
IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization
ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"
IMDG : International Maritime Code for Dangerous Goods
ISO : International Organization for Standardization
logPow : octanol-water partition coefficient
LCxx : Lethal Concentration, for xx percent of test population
LDxx : Lethal Dose, for xx percent of test population.
ICxx : Inhibitory Concentration for xx of a substance
Ecxx : Effective Concentration of xx
N.O.S.: Not Otherwise Specified
OECD : Organization for Economic Co-operation and Development
OEL : Occupational Exposure Limit
P-Statement : Precautionary Statement
PBT : Persistent , Bioaccumulative and Toxic
PPE : Personal Protective Equipment
STEL : Short-term exposure limit
STOT : Specific Target Organ Toxicity
TLV : Threshold Limit Value
TWA : Time-weighted average
vPvB : Very Persistent and Very Bioaccumulative
WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
DOT : Department of Transportation
FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
HMIRC : Hazardous Materials Information Review Commission
HMIS : Hazardous Materials Identification System
NFPA : National Fire Protection Association
NIOSH : National Institute for Occupational Safety and Health
OSHA : Occupational Safety and Health Administration

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PMRA : Health Canada Pest Management Regulatory Agency
RTK : Right to Know
WHMIS : Workplace Hazardous Materials Information System

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29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : SynPower™ EUROPEAN FULL SYNTHETIC SAE 0W-40
 Synthetic Motor Oil
 ™ Trademark, Valvoline or its subsidiaries, registered in various countries

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL (1-800-832-6825) SDS@valvoline.com	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL (1-800-832-6825) Product Information 1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
LUBRICATING OILS, PETROLEUM, C20-50, HYDROTREATED	72623-87-1	Not a hazardous substance or mixture.	>=20.00 - < 30.00
Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based	72623-87-1	Asp. Tox. 1; H304	>=5.00 - < 10.00
ZINC BIS[O-(6-	93819-94-4	Skin Irrit. 2; H315	>=1.00 - < 1.50

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METHYLHELPTYL]]BIS[O-SEC-BUTYL]]BIS(DITHIOPHOSPATE)

Eye Dam. 1; H318

SECTION 4. FIRST AID MEASURES

- General advice : No hazards which require special first aid measures.
- If inhaled : If breathed in, move person into fresh air.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
- In case of eye contact : Remove contact lenses.
Protect unharmed eye.
- If swallowed : Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : No symptoms known or expected.
- Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
Carbon dioxide (CO2)
Dry chemical
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : carbon dioxide and carbon monoxide
Nitrogen oxides (NOx)
zinc oxide

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Sulphur oxides
hydrogen sulfide
mercaptans

Specific extinguishing
methods

:

Product is compatible with standard fire-fighting agents.

Further information

:

Standard procedure for chemical fires.

Special protective equipment
for firefighters

:

In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions,
protective equipment and
emergency procedures

:

Persons not wearing protective equipment should be excluded
from area of spill until clean-up has been completed.

Environmental precautions

:

Prevent further leakage or spillage if safe to do so.

Methods and materials for
containment and cleaning up

:

Soak up with inert absorbent material (e.g. sand, silica gel,
acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

Other information

:

Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling

:

Smoking, eating and drinking should be prohibited in the
application area.
For personal protection see section 8.

Materials to avoid

:

No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis

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LUBRICATING OILS, PETROLEUM, C20-50, HYDROTREATED	72623-87-1	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based	72623-87-1	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL

Engineering measures : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear as appropriate:
Safety shoes
Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : General industrial hygiene practice.

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Odour	: No data available
Odour Threshold	: No data available
pH	: No data available
Melting point/freezing point	: No data available
Boiling point/boiling range	: No data available
Flash point	: 428 °F / 220 °C Method: Cleveland open cup
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Self-ignition	: No data available
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: No data available
Vapour pressure	: No data available
Relative vapour density	: No data available
Relative density	: No data available
Density	: 0.843 g/cm3
Solubility(ies)	
Water solubility	: No data available
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Decomposition temperature	: No data available
Viscosity	

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Viscosity, dynamic : No data available

Viscosity, kinematic : 77 mm²/s (104 °F / 40 °C)

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : excessive heat

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation

Skin contact

Eye Contact

Ingestion

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Components:**LUBRICATING OILS, PETROLEUM, C20-50, HYDROTREATED:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.58 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: Not classified as acutely toxic by inhalation
under GHS.
Remarks: No mortality observed at this dose.

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Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Remarks: No mortality observed at this dose.

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.58 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: Not classified as acutely toxic by inhalation
under GHS.
Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Remarks: No mortality observed at this dose.

ZINC BIS[O-(6-METHYLHELPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPATE):

Acute oral toxicity : LD50 (Rat): 2,600 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 3,160 mg/kg
Method: OECD Test Guideline 402
Assessment: Not classified as acutely toxic by dermal
absorption under GHS.

Skin corrosion/irritation

Not classified based on available information.

Components:**LUBRICATING OILS, PETROLEUM, C20-50, HYDROTREATED:**

Species : Rabbit
Result : No skin irritation

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Species : Rabbit
Result : No skin irritation

ZINC BIS[O-(6-METHYLHELPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPATE):

Species : Guinea pig
Method : OECD Test Guideline 404
Result : Irritating to skin.
Remarks : Information given is based on data obtained from similar
substances.

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks : Unlikely to cause eye irritation or injury.

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Components:
LUBRICATING OILS, PETROLEUM, C20-50, HYDROTREATED:

Species : Rabbit
 Result : No eye irritation

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Species : Rabbit
 Result : No eye irritation

ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Species : Rabbit
 Result : Corrosive
 Remarks : Information given is based on data obtained from similar substances.

Respiratory or skin sensitisation
Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:
LUBRICATING OILS, PETROLEUM, C20-50, HYDROTREATED:

Test Type : Buehler Test
 Species : Guinea pig
 Assessment : Does not cause skin sensitisation.

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Test Type : Buehler Test
 Species : Guinea pig
 Assessment : Does not cause skin sensitisation.

Germ cell mutagenicity

Not classified based on available information.

Components:
ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Genotoxicity in vitro : Test Type: Ames test
 Test system: Salmonella typhimurium
 Metabolic activation: with and without metabolic activation
 Method: OECD Test Guideline 471
 Result: negative
 Remarks: Information given is based on data obtained from similar substances.

Genotoxicity in vivo : Test Type: Micronucleus test
 Species: Mouse
 Method: OECD Test Guideline 474
 Result: negative
 Remarks: Information given is based on data obtained from similar substances.

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Carcinogenicity

Not classified based on available information.

Components:**LUBRICATING OILS, PETROLEUM, C20-50, HYDROTREATED:**

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

IARC No component of this product present at levels greater than or equal to 0.1% is
identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is
on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is
identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Components:**LUBRICATING OILS, PETROLEUM, C20-50, HYDROTREATED:**

No aspiration toxicity classification

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

May be fatal if swallowed and enters airways.

Further information**Product:**

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Ecotoxicology Assessment

Short-term (acute) aquatic : Not classified based on available information.
hazard

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Long-term (chronic) aquatic hazard : Not classified based on available information.

Components:

LUBRICATING OILS, PETROLEUM, C20-50, HYDROTREATED:

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
 Exposure time: 96 h
 Test Type: static test
 Test substance: WAF
 Method: OECD Test Guideline 203
 Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l
 Exposure time: 48 h
 Test Type: static test
 Test substance: WAF
 Method: OECD Test Guideline 202

Toxicity to algae : NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l
 End point: Growth inhibition
 Exposure time: 72 h
 Test Type: static test
 Test substance: WAF
 Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOELR (Oncorhynchus mykiss (rainbow trout)): Calculated >= 1,000 mg/l
 Exposure time: 14 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEL (Daphnia (water flea)): 10 mg/l
 Exposure time: 21 d
 Test substance: WAF
 Method: OECD Test Guideline 211

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
 Exposure time: 96 h
 Test Type: static test
 Test substance: WAF
 Method: OECD Test Guideline 203
 Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l
 Exposure time: 48 h
 Test Type: static test
 Test substance: WAF
 Method: OECD Test Guideline 202

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Toxicity to algae : NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOELR (Oncorhynchus mykiss (rainbow trout)): >= 1,000 mg/l
Exposure time: 14 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEL (Daphnia (water flea)): 10 mg/l
Exposure time: 21 d
Test substance: WAF
Method: OECD Test Guideline 211

ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):
Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 4.5 mg/l
Exposure time: 96 h
Test Type: semi-static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 5.4 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): 2.1 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test

Persistence and degradability
Components:

LUBRICATING OILS, PETROLEUM, C20-50, HYDROTREATED:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 2 - 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 2 - 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 1.5 %
Exposure time: 28 d

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Method: OECD Test Guideline 301B

No data available

Bioaccumulative potential

Components:

ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Partition coefficient: n- : log Pow: 0.59 - 1.2 (23 °C)
 octanol/water

No data available

Mobility in soil

Components:

No data available

Other adverse effects

No data available

Product:

Additional ecological : No data available
 information

Components:

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

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Not regulated as a dangerous good

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

California Prop. 65

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for carcinogenicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for reproductive/developmental toxicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

The components of this product are reported in the following inventories:

DSL	: All components of this product are on the Canadian DSL
AICS	: On the inventory, or in compliance with the inventory
ENCS	: Not in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: Simplified notification - contact us for details
TCSI	: Not in compliance with the inventory
TSCA	: On TSCA Inventory

TSCA list

No substances are subject to TSCA 12(b) export notification requirements.

Inventories



SAFETY DATA SHEET

Revision Date: 07/31/2019

Print Date: 8/27/2019

SDS Number: 000000273583

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AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

Revision Date: 07/31/2019

NFPA:	HMIS III:						
Flammability Health Instability Special hazard.	<table> <tr> <td>HEALTH</td><td>0</td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	0	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	0						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H318 Causes serious eye damage.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

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List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System

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Valvoline™ Full Synthetic CVT Transmission Fluid ™ Trademark, Valvoline or its subsidiaries, registered in various countries 876133	Version: 1.6

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ Full Synthetic CVT Transmission Fluid

™ Trademark, Valvoline or its subsidiaries, registered in various countries

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL (1-800-832-6825) SDS@valvoline.com	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL (1-800-832-6825) Product Information 1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin sensitization : Category 1

GHS label elements

Hazard pictograms :



Signal Word : Warning

Hazard Statements : May cause an allergic skin reaction.

Precautionary Statements : **Prevention:**
Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves.
Response:
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/ attention.

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Wash contaminated clothing before reuse.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	Asp. Tox. 1; H304	>=30.00 - < 40.00
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	Not a hazardous substance or mixture.	>=5.00 - < 10.00
Acetamide, 2-hydroxy-, N,N-dicoco alkyl derivs.	866259-61-2	Skin Sens. 1B; H317	>=1.00 - < 1.50

SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
 Show this safety data sheet to the doctor in attendance.
 Do not leave the victim unattended.
- If inhaled : If breathed in, move person into fresh air.
 If unconscious, place in recovery position and seek medical advice.
 If symptoms persist, call a physician.
- In case of skin contact : Remove contaminated clothing. If irritation develops, get medical attention.
 If on skin, rinse well with water.
 First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
 Wash contaminated clothing before re-use.
- In case of eye contact : Flush eyes with water as a precaution.
 Remove contact lenses.
 Protect unharmed eye.
 If eye irritation persists, consult a specialist.

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- If swallowed : Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : May cause an allergic skin reaction.
No symptoms known or expected.
- Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
Carbon dioxide (CO₂)
Dry chemical
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : carbon dioxide and carbon monoxide
Hydrocarbons
Nitrogen oxides (NO_x)
- Specific extinguishing methods : Product is compatible with standard fire-fighting agents.
- Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

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- Environmental precautions : Prevent product from entering drains.
 Prevent further leakage or spillage if safe to do so.
 If the product contaminates rivers and lakes or drains inform
 respective authorities.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel,
 acid binder, universal binder, sawdust).
 Keep in suitable, closed containers for disposal.
- Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Do not breathe vapours/dust.
 Do not smoke.
 Persons susceptible to skin sensitisation problems or asthma,
 allergies, chronic or recurrent respiratory disease should not
 be employed in any process in which this mixture is being
 used.
 Container hazardous when empty.
 Avoid exposure - obtain special instructions before use.
 Avoid contact with skin and eyes.
 Smoking, eating and drinking should be prohibited in the
 application area.
 For personal protection see section 8.
 Dispose of rinse water in accordance with local and national
 regulations.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated
 place.
 Containers which are opened must be carefully resealed and
 kept upright to prevent leakage.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3	OSHA P0

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			Mist	
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Engineering measures : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear as appropriate:
Impervious clothing
Safety shoes
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Discard gloves that show tears, pinholes, or signs of wear.
Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid



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Colour : clear

Odour : characteristic

Odour Threshold : No data available

pH : Not applicable

Melting point/freezing point : No data available

Boiling point/boiling range : No data available

Flash point : > 219.99 °F / > 104.44 °C

Calculated Flash Point

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Self-ignition : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : No data available

Density : 0.844 g/cm³ (77 °F / 25 °C)

Solubility(ies)

Water solubility : immiscible

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : No data available

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Viscosity, kinematic : 33.9 mm²/s (104 °F / 40 °C)

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : excessive heat
heat

Incompatible materials : Alkali metals
aluminum
Ammonia
Combustible material
halogens
Lead
Metals
metal oxides
Oxidizing agents
peroxides
reducing agents
sodium
Strong acids
strong bases
water
Zinc
Peroxides

Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation
Skin contact
Eye Contact
Ingestion

Acute toxicity

Not classified based on available information.

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Components:
HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.58 mg/l
 Exposure time: 4 h
 Test atmosphere: dust/mist
 Assessment: Not classified as acutely toxic by inhalation
 under GHS.
 Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
 Remarks: No mortality observed at this dose.

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Acetamide, 2-hydroxy-, N,N-dicoco alkyl derivs.:

Acute oral toxicity : LD50 (Rat): > 2,500 mg/kg
 Assessment: Not classified as acutely toxic by ingestion under
 GHS.
 Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
 Assessment: Not classified as acutely toxic by dermal
 absorption under GHS.
 Remarks: No mortality observed at this dose.

Skin corrosion/irritation

Not classified based on available information.

Product:

Remarks : May cause skin irritation in susceptible persons.

Components:
HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Species : Rabbit
 Result : No skin irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation
 Result : Slight, transient irritation

Acetamide, 2-hydroxy-, N,N-dicoco alkyl derivs.:

Species : Rabbit
 Result : Mild skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

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Product:

Remarks : Unlikely to cause eye irritation or injury.

Components:
HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Species : Rabbit
 Result : No eye irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : No eye irritation
 Assessment : No eye irritation

Acetamide, 2-hydroxy-, N,N-dicoco alkyl derivs.:

Species : Rabbit
 Result : Slight, transient irritation

Respiratory or skin sensitisation
Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Product:

Remarks : May cause allergic skin reaction.

Components:
HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Test Type : Buehler Test
 Species : Guinea pig
 Assessment : Does not cause skin sensitisation.

Acetamide, 2-hydroxy-, N,N-dicoco alkyl derivs.:

Test Type : Local lymph node assay (LLNA)
 Assessment : The product is a skin sensitiser, sub-category 1B.
 Method : OECD Test Guideline 429

Germ cell mutagenicity

Not classified based on available information.

Components:
Acetamide, 2-hydroxy-, N,N-dicoco alkyl derivs.:

Genotoxicity in vitro : Test Type: Ames test
 Test system: Salmonella typhimurium
 Metabolic activation: with and without metabolic activation
 Result: negative

Carcinogenicity

Not classified based on available information.

Components:
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
 Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

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IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Components:**HYDROTREATED LIGHT PARAFFINIC DISTILLATE:**

May be fatal if swallowed and enters airways.

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

No aspiration toxicity classification

Further information**Product:**

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Acute aquatic toxicity Category 3; Harmful to aquatic life.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Components:**HYDROTREATED LIGHT PARAFFINIC DISTILLATE:**

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Test Type: static test

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Test substance: WAF
 Method: OECD Test Guideline 203
 Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l
 Exposure time: 48 h
 Test Type: static test
 Test substance: WAF
 Method: OECD Test Guideline 202

Toxicity to algae : NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l
 End point: Growth inhibition
 Exposure time: 72 h
 Test Type: static test
 Test substance: WAF
 Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOELR (Oncorhynchus mykiss (rainbow trout)): Calculated >= 1,000 mg/l
 Exposure time: 14 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEL (Daphnia (water flea)): 10 mg/l
 Exposure time: 21 d
 Test substance: WAF
 Method: OECD Test Guideline 211

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:
 Toxicity to fish : LL50 (Fish): > 100 mg/l
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
 Exposure time: 48 h

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
 Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Ecotoxicology Assessment
 Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

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Acetamide, 2-hydroxy-, N,N-dicoco alkyl derivs.:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 610 mg/l
 Exposure time: 96 h
 Test Type: semi-static test
 Test substance: WAF

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 77 mg/l
 aquatic invertebrates
 Exposure time: 48 h
 Test Type: static test

Toxicity to algae : EL50 (Desmodesmus subspicatus (green algae)): > 160 mg/l
 End point: Growth inhibition
 Exposure time: 72 h
 Test Type: static test
 Test substance: WAF

Persistence and degradability
Components:

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Biodegradability : Result: Not readily biodegradable.
 Biodegradation: 2 - 4 %
 Exposure time: 28 d
 Method: OECD Test Guideline 301B

Acetamide, 2-hydroxy-, N,N-dicoco alkyl derivs.:

Biodegradability : Result: Readily biodegradable.
 Biodegradation: 67 %
 Exposure time: 28 d
 Method: OECD Test Guideline 301B

No data available

Bioaccumulative potential
Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Partition coefficient: n- : log Pow: Expected > 7
 octanol/water

No data available

Mobility in soil
Components:

No data available

Other adverse effects

No data available

Product:

Additional ecological : An environmental hazard cannot be excluded in the event of
 information unprofessional handling or disposal., Harmful to aquatic life.

Components:

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SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

The product should not be allowed to enter drains, water courses or the soil.

Do not contaminate ponds, waterways or ditches with chemical or used container.

Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

Not regulated as a dangerous good

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

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Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
METHANOL	67-56-1	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
SULFUR DIOXIDE	7446-09-5	500	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : Respiratory or skin sensitisation**California Prop. 65**

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for carcinogenicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for reproductive/developmental toxicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

The components of this product are reported in the following inventories:

DSL	: All components of this product are on the Canadian DSL
AICS	: On the inventory, or in compliance with the inventory
ENCS	: On the inventory, or in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
TCSI	: On the inventory, or in compliance with the inventory
TSCA	: On TSCA Inventory

TSCA list

No substances are subject to TSCA 12(b) export notification requirements.

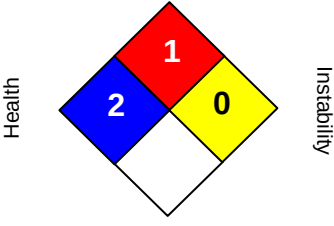
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION**Further information**

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SAFETY DATA SHEET	Revision Date: 05/30/2019
	Print Date: 12/18/2019
	SDS Number: 000000149117
Valvoline™ Full Synthetic CVT Transmission Fluid ™ Trademark, Valvoline or its subsidiaries, registered in various countries 876133	Version: 1.6

Revision Date: 05/30/2019

NFPA:	HMIS III:						
Flammability  Health Instability Special hazard.	<table border="1"> <tr> <td>HEALTH</td><td>2</td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 =Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	2	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	2						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification
Combustible Liquid Class IIIB

Full text of H-Statements

H304 May be fatal if swallowed and enters airways.
H317 May cause an allergic skin reaction.

Sources of key data used to compile the Safety Data Sheet
Valvoline internal data including own and sponsored test reports
The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists
BEI : Biological Exposure Index
CAS : Chemical Abstracts Service (Division of the American Chemical Society).
CMR : Carcinogenic, Mutagenic or Toxic for Reproduction
FG : Food grade
GHS : Globally Harmonized System of Classification and Labeling of Chemicals.
H-statement : Hazard Statement

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IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the “International Air Transport Association” (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the “International Civil Aviation Organization”

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System

**SAFETY DATA SHEET**

Revision Date: 09/06/2018

Print Date: 7/23/2019

SDS Number: 000000269652

Version: 1.1

Valvoline™ Full Synthetic Advanced SAE 0W-16 Motor Oil
™ Trademark, Valvoline or its subsidiaries, registered in various
countries
878400

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**Product identifier**

Trade name : Valvoline™ Full Synthetic Advanced SAE 0W-16 Motor Oil

™ Trademark, Valvoline or its subsidiaries, registered in
various countries

Details of the supplier of the safety data sheet

Valvoline LLC
100 Valvoline Way
Lexington, KY 40509
United States of America (USA)
1-800-TEAMVAL (1-800-832-6825)

Emergency telephone number

1-800-VALVOLINE (1-800-825-8654)

Regulatory Information Number

1-800-TEAMVAL (1-800-832-6825)

Product Information

1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**Hazardous components**

Chemical name	CAS-No.	Classification	Concentration (%)
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	Asp. Tox. 1; H304	>=60.00 - < 70.00
Mineral Oil		Asp. Tox. 1; H304	>=5.00 - < 10.00
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	Not a hazardous substance or mixture.	>=1.00 - < 1.50

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Valvoline™ Full Synthetic Advanced SAE 0W-16 Motor Oil
™ Trademark, Valvoline or its subsidiaries, registered in various
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878400

SECTION 4. FIRST AID MEASURES

- General advice : No hazards which require special first aid measures.
- If inhaled : If breathed in, move person into fresh air.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
- In case of eye contact : Remove contact lenses.
Protect unharmed eye.
- If swallowed : Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : No symptoms known or expected.
- Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
Carbon dioxide (CO₂)
Dry chemical
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : carbon dioxide and carbon monoxide
Hydrocarbons
Nitrogen oxides (NO_x)
- Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.

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Further information : Standard procedure for chemical fires.

Special protective equipment : In the event of fire, wear self-contained breathing apparatus.
for firefighters

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions : Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.

Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL

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		PEL	5 mg/m3 particulate	CAL PEL
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Engineering measures : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear as appropriate:
 Safety shoes
 Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : liquid

Odour : No data available

Odour Threshold : No data available

pH : No data available

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Melting point/freezing point	: No data available
Boiling point/boiling range	: No data available
Flash point	: > 390 °F / > 199 °C Method: Cleveland open cup
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: No data available
Relative vapour density	: No data available
Relative density	: No data available
Density	: 0.843 g/cm3
Solubility(ies)	
Water solubility	: No data available
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Thermal decomposition	: No data available
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: 34.8 mm2/s (40 °C)
Oxidizing properties	: No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No decomposition if stored and applied as directed.
Chemical stability	: Stable under recommended storage conditions.
Possibility of hazardous reactions	: Product will not undergo hazardous polymerization.

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878400

Conditions to avoid : None known.

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation

Skin contact

Eye Contact

Ingestion

Acute toxicity

Not classified based on available information.

Components:**Distillates (Petroleum), Hydrotreated Heavy Paraffinic:**

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Skin corrosion/irritation

Not classified based on available information.

Components:**Distillates (Petroleum), Hydrotreated Heavy Paraffinic:**

Assessment : Slight, transient irritation

Result : Slight, transient irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation

Result : Slight, transient irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks : Unlikely to cause eye irritation or injury.

Components:**Distillates (Petroleum), Hydrotreated Heavy Paraffinic:**

Result : No eye irritation

Assessment : No eye irritation

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DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : No eye irritation

Assessment : No eye irritation

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation

Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

May be fatal if swallowed and enters airways.

Mineral Oil:

May be fatal if swallowed and enters airways.

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

No aspiration toxicity classification

Further information

Product:

Remarks : No data available



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SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Toxicity to fish : LL50 (Fish): > 100 mg/l
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
 Exposure time: 48 h

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
 Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Toxicity to fish : LL50 (Fish): > 100 mg/l
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
 Exposure time: 48 h

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
 Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

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Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Ecotoxicology Assessment
Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Persistence and degradability

Components:

No data available

Bioaccumulative potential

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Partition coefficient: n-octanol/water : log Pow: Expected > 7

No data available

Mobility in soil

Components:

No data available

Other adverse effects

No data available

Product:

Additional ecological information : No data available

Components:

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.

SECTION 14. TRANSPORT INFORMATION

International transport regulations

REGULATION

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countries
878400

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

TDG_INWT_C

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MX_DG

Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant

no

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Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
TOLUENE	108-88-3	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

California Prop. 65

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PICCS	: On the inventory, or in compliance with the inventory
IECSC	: Not in compliance with the inventory
TCSI	: Not in compliance with the inventory
TSCA	: On TSCA Inventory

TSCA list

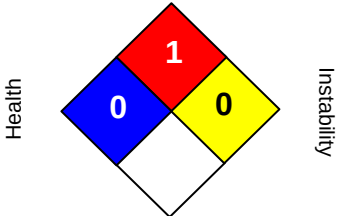
The following substance(s) is/are subject to TSCA 12(b) export notification requirements:
Mineral Oil Not Assigned

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SECTION 16. OTHER INFORMATION

Further information

Revision Date: 09/06/2018

NFPA:	HMIS III:						
Flammability  Health Instability Special hazard.	<table border="1"> <tr> <td>HEALTH</td><td>0</td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	0	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	0						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

H304 May be fatal if swallowed and enters airways.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

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List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

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CAS : Chemical Abstracts Service (Division of the American Chemical Society).
 CMR : Carcinogenic, Mutagenic or Toxic for Reproduction
 FG : Food grade
 GHS : Globally Harmonized System of Classification and Labeling of Chemicals.
 H-statement : Hazard Statement
 IATA : International Air Transport Association.
 IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization
 ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"
 IMDG : International Maritime Code for Dangerous Goods
 ISO : International Organization for Standardization
 logPow : octanol-water partition coefficient
 LCxx : Lethal Concentration, for xx percent of test population
 LDxx : Lethal Dose, for xx percent of test population.
 ICxx : Inhibitory Concentration for xx of a substance
 Ecxx : Effective Concentration of xx
 N.O.S.: Not Otherwise Specified
 OECD : Organization for Economic Co-operation and Development
 OEL : Occupational Exposure Limit
 P-Statement : Precautionary Statement
 PBT : Persistent , Bioaccumulative and Toxic
 PPE : Personal Protective Equipment
 STEL : Short-term exposure limit
 STOT : Specific Target Organ Toxicity
 TLV : Threshold Limit Value
 TWA : Time-weighted average
 vPvB : Very Persistent and Very Bioaccumulative
 WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
 DOT : Department of Transportation
 FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
 HMIRC : Hazardous Materials Information Review Commission
 HMIS : Hazardous Materials Identification System
 NFPA : National Fire Protection Association
 NIOSH : National Institute for Occupational Safety and Health
 OSHA : Occupational Safety and Health Administration
 PMRA : Health Canada Pest Management Regulatory Agency
 RTK : Right to Know
 WHMIS : Workplace Hazardous Materials Information System

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SAFETY DATA SHEET	Revision Date: 08/07/2019
	Print Date: 9/18/2019
	SDS Number: R0355879
Valvoline™ Synthetic Blend with MaxLife™ Technology SAE 10W-40 Motor Oil 881148	Version: 1.10

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ Synthetic Blend with MaxLife™ Technology
SAE 10W-40 Motor Oil

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL (1-800-832-6825) SDS@valvoline.com	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL (1-800-832-6825) Product Information 1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	Not a hazardous substance or mixture.	>=40.00 - < 50.00
Lubricating Oils (Petroleum), C20-	72623-87-1	Asp. Tox. 1; H304	>=20.00 - < 30.00

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50, Hydrotreated Neutral Oil-Based			
Distillates, petroleum, solvent-refined heavy paraffinic	64741-88-4	Not a hazardous substance or mixture.	≥ 10.00 - < 15.00
Lubricating oils (petroleum), hydrotreated	64742-58-1	Not a hazardous substance or mixture.	≥ 1.50 - < 5.00
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC		Not a hazardous substance or mixture.	≥ 1.50 - < 5.00

SECTION 4. FIRST AID MEASURES

General advice	: No hazards which require special first aid measures.
If inhaled	: If breathed in, move person into fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	: First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
In case of eye contact	: Remove contact lenses. Protect unharmed eye.
If swallowed	: Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	: No symptoms known or expected.
Notes to physician	: No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray Foam Carbon dioxide (CO ₂) Dry chemical

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Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : carbon dioxide and carbon monoxide
Hydrocarbons

Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.

Further information : Standard procedure for chemical fires.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions : Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.

Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of	Control parameters /	Basis

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		exposure)	Permissible concentration	
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based	72623-87-1	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
Distillates, petroleum, solvent-refined heavy paraffinic	64741-88-4	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
Lubricating oils (petroleum), hydrotreated	64742-58-1	TWA	5 mg/m3 Inhalable fraction	ACGIH
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC		TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3	NIOSH REL

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			Mist	
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Engineering measures : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear resistant gloves (consult your safety equipment supplier).
Wear as appropriate:
Safety shoes

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Odour : No data available

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : No data available

Flash point : 394 - 480 °F / 201 - 249 °C

Method: Cleveland open cup

Evaporation rate : No data available

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Flammability (solid, gas) : No data available
 Self-ignition : No data available
 Upper explosion limit / Upper flammability limit : 6 %(V)
 Calculated Explosive Limit
 Lower explosion limit / Lower flammability limit : 1 %(V)
 Calculated Explosive Limit
 Vapour pressure : 0.0133333 hPa (70.00 °F / 21.11 °C)
 Calculated Vapor Pressure
 Relative vapour density : No data available
 Relative density : No data available
 Density : 0.868 g/cm3
 Solubility(ies)
 Water solubility : No data available
 Solubility in other solvents : No data available
 Partition coefficient: n-octanol/water : No data available
 Decomposition temperature : No data available
 Viscosity
 Viscosity, dynamic : No data available
 Viscosity, kinematic : 102 mm2/s (104 °F / 40 °C)
 Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.
 Chemical stability : Stable under recommended storage conditions.
 Possibility of hazardous reactions : Product will not undergo hazardous polymerization.
 Conditions to avoid : None known.
 Incompatible materials : Strong oxidizing agents

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Hazardous decomposition
products

No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation

Skin contact

Eye Contact

Ingestion

Acute toxicity

Not classified based on available information.

Components:**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.58 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: Not classified as acutely toxic by inhalation under GHS.
Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Remarks: No mortality observed at this dose.

Distillates, petroleum, solvent-refined heavy paraffinic:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.58 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: Not classified as acutely toxic by inhalation under GHS.
Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Remarks: No mortality observed at this dose.

Lubricating oils (petroleum), hydrotreated:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: Not classified as acutely toxic by ingestion under GHS.

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Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: Not classified as acutely toxic by dermal absorption under GHS.

Skin corrosion/irritation

Not classified based on available information.

Components:
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation
Result : Slight, transient irritation

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Species : Rabbit
Result : No skin irritation

Distillates, petroleum, solvent-refined heavy paraffinic:

Species : Rabbit
Result : No skin irritation

Lubricating oils (petroleum), hydrotreated:

Assessment : No skin irritation
Result : No skin irritation

Result : Repeated exposure may cause skin dryness or cracking.

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation
Result : Slight, transient irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Result : Slight, transient irritation
Remarks : Expected based on components.

Remarks : Unlikely to cause eye irritation or injury.

Components:
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : No eye irritation
Assessment : No eye irritation

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Species : Rabbit
Result : No eye irritation

Distillates, petroleum, solvent-refined heavy paraffinic:

Species : Rabbit
Result : No eye irritation

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Lubricating oils (petroleum), hydrotreated:

Result : Slight, transient irritation

Assessment : Slight, transient irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : Slight, transient irritation

Assessment : Slight, transient irritation

Respiratory or skin sensitisation
Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:
Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Test Type : Buehler Test

Species : Guinea pig

Assessment : Does not cause skin sensitisation.

Distillates, petroleum, solvent-refined heavy paraffinic:

Test Type : Buehler Test

Species : Guinea pig

Assessment : Does not cause skin sensitisation.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Components:
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation

Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation

Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation

Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

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Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

No aspiration toxicity classification

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

May be fatal if swallowed and enters airways.

Distillates, petroleum, solvent-refined heavy paraffinic:

No aspiration toxicity classification

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Toxicity to fish : LL50 (Fish): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
Exposure time: 48 h

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
Exposure time: 72 h

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Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Ecotoxicology Assessment
Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 203
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 202

Toxicity to algae : NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOELR (Oncorhynchus mykiss (rainbow trout)): >= 1,000 mg/l
Exposure time: 14 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEL (Daphnia (water flea)): 10 mg/l
Exposure time: 21 d
Test substance: WAF
Method: OECD Test Guideline 211

Distillates, petroleum, solvent-refined heavy paraffinic:

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 203

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Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 202

Toxicity to algae : NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOELR (Oncorhynchus mykiss (rainbow trout)): Calculated >= 1,000 mg/l
Exposure time: 14 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEL (Daphnia (water flea)): 10 mg/l
Exposure time: 21 d
Test substance: WAF
Method: OECD Test Guideline 211

Lubricating oils (petroleum), hydrotreated:

Toxicity to daphnia and other aquatic invertebrates : LC50 (Brine shrimp (Artemia salina)): > 22,500 mg/l
Exposure time: 48 h

Ecotoxicology Assessment
Short-term (acute) aquatic hazard

Not classified based on available information.

Long-term (chronic) aquatic hazard : No toxicity at the limit of solubility

Not classified based on available information.

Persistence and degradability
Components:

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 2 - 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

Distillates, petroleum, solvent-refined heavy paraffinic:

Biodegradability : Result: Not readily biodegradable.

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Biodegradation: 2 - 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

No data available

Bioaccumulative potential**Components:**

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Partition coefficient: n-octanol/water : log Pow: Expected > 7

No data available

Mobility in soil**Components:**

No data available

Other adverse effects

No data available

Product:

Additional ecological information : No data available

Components:

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.

SECTION 14. TRANSPORT INFORMATION**International Regulations****UNRTDG**

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

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Not regulated as a dangerous good

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

California Prop. 65

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for carcinogenicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for reproductive/developmental toxicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for reproductive/developmental toxicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

The components of this product are reported in the following inventories:

DSL	: All components of this product are on the Canadian DSL
AICS	: On the inventory, or in compliance with the inventory
ENCS	: Not in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
TCSI	: On the inventory, or in compliance with the inventory



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TSCA : On TSCA Inventory

TSCA list

No substances are subject to TSCA 12(b) export notification requirements.

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

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NFPA:	HMIS III:						
Flammability Health Instability Special hazard.	<table> <tr> <td>HEALTH</td><td>0</td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	0	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	0						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

H304 May be fatal if swallowed and enters airways.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the

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information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System

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	SDS Number: R0164091
Valvoline™ Conventional Daily Protection SAE 10W-40 Motor Oil ™ Trademark, Valvoline or its subsidiaries, registered in various countries 881157	Version: 1.5

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ Conventional Daily Protection SAE 10W-40 Motor Oil

™ Trademark, Valvoline or its subsidiaries, registered in various countries

Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Motor Oil

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL (1-800-832-6825) SDS@valvoline.com	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL (1-800-832-6825) Product Information 1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)

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SDS Number: R0164091

Version: 1.5

Valvoline™ Conventional Daily Protection SAE 10W-40 Motor Oil
 ™ Trademark, Valvoline or its subsidiaries, registered in various
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DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	Not a hazardous substance or mixture.	>=80.00 - < 90.00
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	Asp. Tox. 1; H304	>=1.50 - < 5.00
Lubricating oils (petroleum), hydrotreated	64742-58-1	Not a hazardous substance or mixture.	>=1.50 - < 5.00
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC		Not a hazardous substance or mixture.	>=1.50 - < 5.00

SECTION 4. FIRST AID MEASURES

General advice	: No hazards which require special first aid measures.
If inhaled	: If breathed in, move person into fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	: First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
In case of eye contact	: Remove contact lenses. Protect unharmed eye.
If swallowed	: Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	: No symptoms known or expected.
Notes to physician	: No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray Foam Carbon dioxide (CO2)

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Dry chemical

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : carbon dioxide and carbon monoxide
 Hydrocarbons
 Aldehydes

Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.

Further information : Standard procedure for chemical fires.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions : Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
 Keep in suitable, closed containers for disposal.

Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.
 For personal protection see section 8.

Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

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Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
Lubricating oils (petroleum), hydrotreated	64742-58-1	TWA	5 mg/m3 Inhalable fraction	ACGIH
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC		TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Engineering measures

: General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure

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guidelines (if applicable) or below levels that cause known,
suspected or apparent adverse effects.

Personal protective equipment

- Respiratory protection : No personal respiratory protective equipment normally required.
- Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.
- Skin and body protection : Wear as appropriate:
Safety shoes
Wear resistant gloves (consult your safety equipment supplier).
- Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : liquid
- Colour : amber
- Odour : hydrocarbon-like
- Odour Threshold : No data available
- pH : No data available
- Melting point/freezing point : No data available
- Boiling point/boiling range : 570.00 °F / 298.89 °C
(1013.33 hPa)
- Flash point : 394 - 480 °F / 201 - 249 °C
Method: Cleveland open cup
- Evaporation rate : 1
Ethyl Ether
- Flammability (solid, gas) : No data available
- Self-ignition : No data available
- Upper explosion limit / Upper : No data available

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flammability limit

Lower explosion limit / Lower
 flammability limit : No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : No data available

Density : 0.8690 g/cm³ (60.01 °F / 15.56 °C)

Solubility(ies)

Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-
 octanol/water : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : 104 mm²/s (104 °F / 40 °C)

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous
 reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : excessive heat

Incompatible materials : Strong oxidizing agents

Hazardous decomposition
 products : No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

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Information on likely routes of exposure

Inhalation
 Skin contact
 Eye Contact
 Ingestion

Acute toxicity

Not classified based on available information.

Components:
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Lubricating oils (petroleum), hydrotreated:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
 Assessment: Not classified as acutely toxic by ingestion under GHS.

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
 Assessment: Not classified as acutely toxic by dermal absorption under GHS.

Skin corrosion/irritation

Not classified based on available information.

Components:
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation

Result : Slight, transient irritation

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Assessment : Slight, transient irritation

Result : Slight, transient irritation

Lubricating oils (petroleum), hydrotreated:

Assessment : No skin irritation

Result : No skin irritation

Result : Repeated exposure may cause skin dryness or cracking.

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation

Result : Slight, transient irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks : Unlikely to cause eye irritation or injury.

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Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : No eye irritation

Assessment : No eye irritation

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Result : Slight, transient irritation

Assessment : Slight, transient irritation

Lubricating oils (petroleum), hydrotreated:

Result : Slight, transient irritation

Assessment : Slight, transient irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : Slight, transient irritation

Assessment : Slight, transient irritation

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation

Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation

Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation

Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

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STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Components:
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

No aspiration toxicity classification

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

May be fatal if swallowed and enters airways.

Further information
Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION
Ecotoxicity
Product:

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Components:
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Toxicity to fish : LL50 (Fish): > 100 mg/l
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
 Exposure time: 48 h

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
 Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

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Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Lubricating oils (petroleum), hydrotreated:

Toxicity to daphnia and other aquatic invertebrates : LC50 (Brine shrimp (*Artemia salina*)): > 22,500 mg/l
Exposure time: 48 h

Ecotoxicology Assessment

Short-term (acute) aquatic hazard :

Not classified based on available information.

Long-term (chronic) aquatic hazard : No toxicity at the limit of solubility

Not classified based on available information.

Persistence and degradability**Components:**

No data available

Bioaccumulative potential**Components:**

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Partition coefficient: n-octanol/water : log Pow: Expected > 7

No data available

Mobility in soil**Components:**

No data available

Other adverse effects

No data available

Product:

Additional ecological information : No data available

Components:

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

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Contaminated packaging : Empty remaining contents.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

Not regulated as a dangerous good

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

California Prop. 65

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for carcinogenicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for reproductive/developmental toxicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

The components of this product are reported in the following inventories:



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DSL	: All components of this product are on the Canadian DSL
AICS	: On the inventory, or in compliance with the inventory
ENCS	: q (quantity restricted)
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
TCSI	: On the inventory, or in compliance with the inventory
TSCA	: On TSCA Inventory

TSCA list

No substances are subject to TSCA 12(b) export notification requirements.

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

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NFPA:	HMIS III:						
Flammability Health Instability Special hazard.	<table border="1"> <tr> <td>HEALTH</td><td>0</td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	0	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	0						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

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H304

May be fatal if swallowed and enters airways.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

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WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System

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Valvoline™ Synthetic Blend with MaxLife™ Technology SAE 10W-30 Motor Oil 881161	Version: 1.9

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ Synthetic Blend with MaxLife™ Technology
SAE 10W-30 Motor Oil

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL (1-800-832-6825) SDS@valvoline.com	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL (1-800-832-6825) Product Information 1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	Not a hazardous substance or mixture.	>=50.00 - < 60.00
Distillates, petroleum, solvent-	64741-88-4	Not a hazardous	>=15.00 - < 20.00

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refined heavy paraffinic		substance or mixture.	
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC		Not a hazardous substance or mixture.	>=1.50 - < 5.00

SECTION 4. FIRST AID MEASURES

General advice	: No hazards which require special first aid measures.
If inhaled	: If breathed in, move person into fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	: First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
In case of eye contact	: Remove contact lenses. Protect unharmed eye.
If swallowed	: Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	: No symptoms known or expected.
Notes to physician	: No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray Foam Carbon dioxide (CO2) Dry chemical
Specific hazards during firefighting	: Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	: carbon dioxide and carbon monoxide Hydrocarbons

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Specific extinguishing methods

:

Product is compatible with standard fire-fighting agents.

Further information

: Standard procedure for chemical fires.

Special protective equipment for firefighters

: In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

: Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions

: Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up

: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

Other information

: Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling

: Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.

Materials to avoid

: No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3	ACGIH

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			Inhalable fraction	
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
Distillates, petroleum, solvent-refined heavy paraffinic	64741-88-4	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC		TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Engineering measures : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed

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into eyes.

Skin and body protection : Wear resistant gloves (consult your safety equipment supplier).
Wear as appropriate:
Safety shoes

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : amber

Odour : mild

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : > 424 °F / > 218 °C
(1013 hPa)

Flash point : > 390 °F / > 199 °C
Method: Cleveland open cup

Evaporation rate : < 1

Flammability (solid, gas) : No data available

Self-ignition : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapour pressure : < 1.0 mmHg (68 °F / 20 °C)

Relative vapour density : > 1
AIR=1

Relative density : No data available

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Density : 0.8687 g/cm³ (60.1 °F / 15.6 °C)

Solubility(ies)

Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : ca. 70 mm²/s (104 °F / 40 °C)

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : None known.

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation

Skin contact

Eye Contact

Ingestion

Acute toxicity

Not classified based on available information.

Components:**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

Acute oral toxicity : LD50 (Rat): > 15 g/kg

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Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Distillates, petroleum, solvent-refined heavy paraffinic:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.58 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: Not classified as acutely toxic by inhalation under GHS.

Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

Remarks: No mortality observed at this dose.

Skin corrosion/irritation

Not classified based on available information.

Product:

Result : Slight, transient irritation

Components:
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation

Result : Slight, transient irritation

Distillates, petroleum, solvent-refined heavy paraffinic:

Species : Rabbit

Result : No skin irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation

Result : Slight, transient irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Result : Slight, transient irritation

Remarks : Expected based on components.

Remarks : Unlikely to cause eye irritation or injury.

Components:
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : No eye irritation

Assessment : No eye irritation

Distillates, petroleum, solvent-refined heavy paraffinic:

Species : Rabbit

Result : No eye irritation

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DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : Slight, transient irritation

Assessment : Slight, transient irritation

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

Distillates, petroleum, solvent-refined heavy paraffinic:

Test Type : Buehler Test

Species : Guinea pig

Assessment : Does not cause skin sensitisation.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation

Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation

Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

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Components:**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

No aspiration toxicity classification

Distillates, petroleum, solvent-refined heavy paraffinic:

No aspiration toxicity classification

Further information**Product:**

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Components:**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**Toxicity to fish : LL50 (Fish): > 100 mg/l
Exposure time: 96 hToxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
Exposure time: 48 hToxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Distillates, petroleum, solvent-refined heavy paraffinic:

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l

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Exposure time: 96 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 203
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 202

Toxicity to algae : NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOELR (Oncorhynchus mykiss (rainbow trout)): Calculated >= 1,000 mg/l
Exposure time: 14 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEL (Daphnia (water flea)): 10 mg/l
Exposure time: 21 d
Test substance: WAF
Method: OECD Test Guideline 211

Persistence and degradability
Components:

Distillates, petroleum, solvent-refined heavy paraffinic:

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 2 - 4 %

Exposure time: 28 d

Method: OECD Test Guideline 301B

No data available

Bioaccumulative potential
Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Partition coefficient: n-octanol/water : log Pow: Expected > 7

No data available

No data available

Mobility in soil
Components:

No data available

Other adverse effects

No data available

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Product:

Additional ecological information : No data available

Components:**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.

SECTION 14. TRANSPORT INFORMATION**International Regulations****UNRTDG**

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations**49 CFR**

Not regulated as a dangerous good

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

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SARA 311/312 Hazards : No SARA Hazards

California Prop. 65

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for carcinogenicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for reproductive/developmental toxicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

The components of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

TCSI : On the inventory, or in compliance with the inventory

TSCA : On TSCA Inventory

TSCA list

No substances are subject to TSCA 12(b) export notification requirements.

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

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NFPA:	HMIS III:

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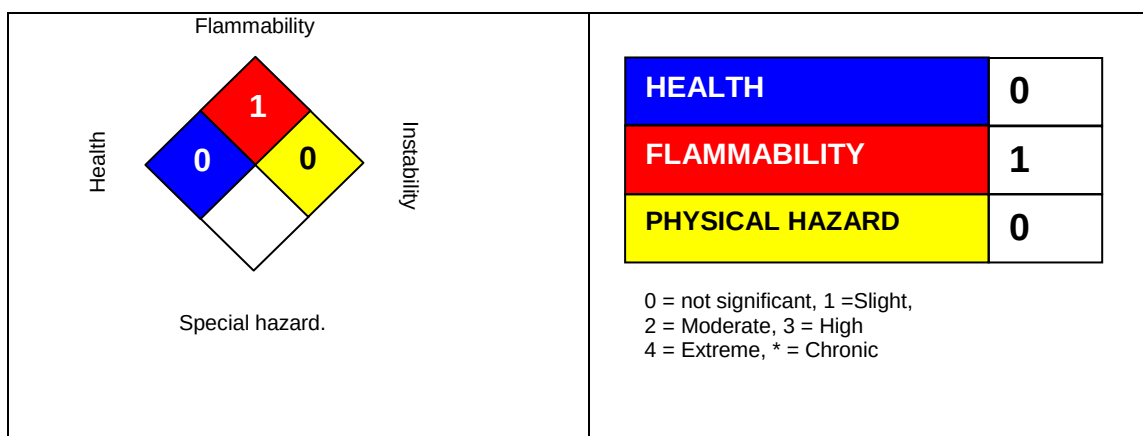
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NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"

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IMDG : International Maritime Code for Dangerous Goods
ISO : International Organization for Standardization
logPow : octanol-water partition coefficient
LCxx : Lethal Concentration, for xx percent of test population
LDxx : Lethal Dose, for xx percent of test population.
ICxx : Inhibitory Concentration for xx of a substance
Ecxx : Effective Concentration of xx
N.O.S.: Not Otherwise Specified
OECD : Organization for Economic Co-operation and Development
OEL : Occupational Exposure Limit
P-Statement : Precautionary Statement
PBT : Persistent , Bioaccumulative and Toxic
PPE : Personal Protective Equipment
STEL : Short-term exposure limit
STOT : Specific Target Organ Toxicity
TLV : Threshold Limit Value
TWA : Time-weighted average
vPvB : Very Persistent and Very Bioaccumulative
WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
DOT : Department of Transportation
FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
HMIRC : Hazardous Materials Information Review Commission
HMIS : Hazardous Materials Identification System
NFPA : National Fire Protection Association
NIOSH : National Institute for Occupational Safety and Health
OSHA : Occupational Safety and Health Administration
PMRA : Health Canada Pest Management Regulatory Agency
RTK : Right to Know
WHMIS : Workplace Hazardous Materials Information System

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29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ FULL SYNTHETIC EUROPEAN VEHICLE SAE 5W-40 Motor Oil

™ Trademark, Valvoline or its subsidiaries, registered in various countries

Relevant identified uses of the substance or mixture and uses advised against

Recommended use : lubricant

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL (1-800-832-6825) SDS@valvoline.com	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL (1-800-832-6825) Product Information 1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

Hazardous components

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Chemical name	CAS-No.	Classification	Concentration (%)
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	Not a hazardous substance or mixture.	>=20.00 - < 30.00
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	Asp. Tox. 1; H304	>=5.00 - < 10.00
Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based	72623-87-1	Asp. Tox. 1; H304	>=5.00 - < 10.00
ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE)	93819-94-4	Skin Irrit. 2; H315 Eye Dam. 1; H318	>=1.00 - < 1.50

SECTION 4. FIRST AID MEASURES

General advice	: No hazards which require special first aid measures.
If inhaled	: If breathed in, move person into fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	: First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
In case of eye contact	: Remove contact lenses. Protect unharmed eye.
If swallowed	: Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	: No symptoms known or expected.
Notes to physician	: No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local

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circumstances and the surrounding environment.

Water spray

Foam

Carbon dioxide (CO₂)

Dry chemical

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : carbon dioxide and carbon monoxide
Hydrocarbons
Nitrogen oxides (NO_x)
zinc oxide
Sulphur oxides
hydrogen sulfide
mercaptans

Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.

Further information : Standard procedure for chemical fires.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions : Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.

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Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based	72623-87-1	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL

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Engineering measures : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear as appropriate:
Safety shoes
Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : amber

Odour : mild

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : > 424 °F / 218 °C
(1013 hPa)

Flash point : > 390 °F / > 199 °C

Method: Pensky-Martens closed cup

Evaporation rate : No data available

Flammability (solid, gas) : No data available

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Self-ignition : No data available

Upper explosion limit / Upper flammability limit : 6 %(V)
Calculated Explosive Limit

Lower explosion limit / Lower flammability limit : 1 %(V)
Calculated Explosive Limit

Vapour pressure : 1.3333333 hPa (68 °F / 20 °C)
Calculated Vapor Pressure

Relative vapour density : No data available

Relative density : No data available

Density : 0.8520 g/cm³ (60.01 °F / 15.56 °C)

Solubility(ies)
Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Decomposition temperature : No data available

Viscosity
Viscosity, dynamic : No data available

Viscosity, kinematic : ca. 115 mm²/s (104 °F / 40 °C)

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : excessive heat

Incompatible materials : Strong oxidizing agents

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Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION
Information on likely routes of exposure

Inhalation

Skin contact

Eye Contact

Ingestion

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg
 Method: Calculation method

Components:
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.58 mg/l
 Exposure time: 4 h
 Test atmosphere: dust/mist
 Assessment: Not classified as acutely toxic by inhalation under GHS.
 Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
 Remarks: No mortality observed at this dose.

ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Acute oral toxicity : LD50 (Rat): 2,600 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 3,160 mg/kg
 Method: OECD Test Guideline 402
 Assessment: Not classified as acutely toxic by dermal absorption under GHS.

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Skin corrosion/irritation

Not classified based on available information.

Components:**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

Assessment : Slight, transient irritation

Result : Slight, transient irritation

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Assessment : Slight, transient irritation

Result : Slight, transient irritation

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Species : Rabbit

Result : No skin irritation

ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Species : Guinea pig

Method : OECD Test Guideline 404

Result : Irritating to skin.

Remarks : Information given is based on data obtained from similar substances.

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Result : No eye irritation

Remarks : Expected based on components.

Remarks : Unlikely to cause eye irritation or injury.

Components:**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

Result : No eye irritation

Assessment : No eye irritation

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Result : No eye irritation

Assessment : No eye irritation

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Species : Rabbit

Result : No eye irritation

ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Species : Rabbit

Result : Corrosive

Remarks : Information given is based on data obtained from similar substances.

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Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Test Type : Buehler Test
Species : Guinea pig
Assessment : Does not cause skin sensitisation.

Germ cell mutagenicity

Not classified based on available information.

Components:

ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Remarks: Information given is based on data obtained from similar substances.

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse
Method: OECD Test Guideline 474
Result: negative
Remarks: Information given is based on data obtained from similar substances.

Carcinogenicity

Not classified based on available information.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is

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identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

No aspiration toxicity classification

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

May be fatal if swallowed and enters airways.

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Toxicity to fish : LL50 (Fish): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
Exposure time: 48 h

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l

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Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Ecotoxicology Assessment Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:
 Toxicity to fish : LL50 (Fish): > 100 mg/l
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
 Exposure time: 48 h

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
 Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Ecotoxicology Assessment Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:
 Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
 Exposure time: 96 h
 Test Type: static test
 Test substance: WAF
 Method: OECD Test Guideline 203
 Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l

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aquatic invertebrates

Exposure time: 48 h
 Test Type: static test
 Test substance: WAF
 Method: OECD Test Guideline 202

Toxicity to algae

: NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l
 End point: Growth inhibition
 Exposure time: 72 h
 Test Type: static test
 Test substance: WAF
 Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity)

: NOELR (Oncorhynchus mykiss (rainbow trout)): >= 1,000 mg/l
 Exposure time: 14 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

: NOEL (Daphnia (water flea)): 10 mg/l
 Exposure time: 21 d
 Test substance: WAF
 Method: OECD Test Guideline 211

ZINC BIS[O-(6-METHYLHELPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 4.5 mg/l
 Exposure time: 96 h
 Test Type: semi-static test

Toxicity to daphnia and other aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 5.4 mg/l
 Exposure time: 48 h
 Test Type: static test

Toxicity to algae

: EC50 (Selenastrum capricornutum (green algae)): 2.1 mg/l
 End point: Growth inhibition
 Exposure time: 72 h
 Test Type: static test

Persistence and degradability
Components:

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Biodegradability : Result: Not readily biodegradable.
 Biodegradation: 2 - 4 %
 Exposure time: 28 d
 Method: OECD Test Guideline 301B

ZINC BIS[O-(6-METHYLHELPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Biodegradability : Result: Not readily biodegradable.
 Biodegradation: 1.5 %
 Exposure time: 28 d
 Method: OECD Test Guideline 301B

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No data available

Bioaccumulative potential

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Partition coefficient: n-octanol/water : log Pow: Expected > 7

ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Partition coefficient: n-octanol/water : log Pow: 0.59 - 1.2 (23 °C)

No data available

Mobility in soil

Components:

No data available

Other adverse effects

No data available

Product:

Additional ecological information : No data available

Components:

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

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Not regulated as a dangerous good

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

California Prop. 65

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for carcinogenicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for reproductive/developmental toxicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

The components of this product are reported in the following inventories:

DSL	: All components of this product are on the Canadian DSL
AICS	: On the inventory, or in compliance with the inventory
ENCS	: On the inventory, or in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
TCSI	: Not in compliance with the inventory
TSCA	: On TSCA Inventory

TSCA list

No substances are subject to TSCA 12(b) export notification requirements.

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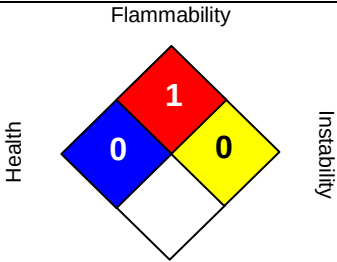
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

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NFPA:	HMIS III:						
 Flammability Health Instability Special hazard.	<table border="1"> <tr> <td>HEALTH</td><td>0</td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	0	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	0						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H318 Causes serious eye damage.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

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List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists
BEI : Biological Exposure Index
CAS : Chemical Abstracts Service (Division of the American Chemical Society).
CMR : Carcinogenic, Mutagenic or Toxic for Reproduction
FG : Food grade
GHS : Globally Harmonized System of Classification and Labeling of Chemicals.
H-statement : Hazard Statement
IATA : International Air Transport Association.
IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization
ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"
IMDG : International Maritime Code for Dangerous Goods
ISO : International Organization for Standardization
logPow : octanol-water partition coefficient
LCxx : Lethal Concentration, for xx percent of test population
LDxx : Lethal Dose, for xx percent of test population.
ICxx : Inhibitory Concentration for xx of a substance
Ecxx : Effective Concentration of xx
N.O.S.: Not Otherwise Specified
OECD : Organization for Economic Co-operation and Development
OEL : Occupational Exposure Limit
P-Statement : Precautionary Statement
PBT : Persistent , Bioaccumulative and Toxic
PPE : Personal Protective Equipment
STEL : Short-term exposure limit
STOT : Specific Target Organ Toxicity
TLV : Threshold Limit Value
TWA : Time-weighted average
vPvB : Very Persistent and Very Bioaccumulative
WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
DOT : Department of Transportation
FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
HMIRC : Hazardous Materials Information Review Commission
HMIS : Hazardous Materials Identification System
NFPA : National Fire Protection Association
NIOSH : National Institute for Occupational Safety and Health
OSHA : Occupational Safety and Health Administration
PMRA : Health Canada Pest Management Regulatory Agency
RTK : Right to Know
WHMIS : Workplace Hazardous Materials Information System

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29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ FULL SYNTHETIC EUROPEAN VEHICLE
SAE 5W-30 XL-III
Synthetic Motor Oil

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL (1-800-832-6825)	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL (1-800-832-6825) Product Information 1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

GHS label elements

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	Asp. Tox. 1; H304	8.8469

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SECTION 4. FIRST AID MEASURES

General advice	: No hazards which require special first aid measures.
If inhaled	: If breathed in, move person into fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	: First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
In case of eye contact	: Remove contact lenses. Protect unharmed eye.
If swallowed	: Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	: Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities. Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: acne stomach or intestinal upset (nausea, vomiting, diarrhea) irritation (nose, throat, airways)
Notes to physician	: No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray Foam

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Carbon dioxide (CO₂)

Dry chemical

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : carbon dioxide and carbon monoxide
Hydrocarbons

Specific extinguishing methods : Product is compatible with standard fire-fighting agents.

Further information : Standard procedure for chemical fires.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions : Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.

Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

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Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Engineering measures : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear resistant gloves (consult your safety equipment supplier).
Wear as appropriate:
Safety shoes

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : liquid

Odour : No data available

Odour Threshold : No data available

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pH	: No data available
Melting point/freezing point	: No data available
Boiling point/boiling range	: No data available
Flash point	: > 390 °F / > 199 °C Method: Cleveland open cup
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: 1.3333333 hPa (20 °C) Calculated Vapor Pressure
Relative vapour density	: No data available
Relative density	: No data available
Density	: 0.853 g/cm3
Solubility(ies)	
Water solubility	: No data available
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Thermal decomposition	: No data available
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Oxidizing properties	: No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No decomposition if stored and applied as directed.
Chemical stability	: Stable under recommended storage conditions.

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Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : None known.

Incompatible materials : Oxidizing agents
Strong bases
strong mineral acids

Hazardous decomposition products : carbon dioxide and carbon monoxide
Hydrocarbons

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation
Skin contact
Eye Contact
Ingestion

Acute toxicity

Not classified based on available information.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Skin corrosion/irritation

Not classified based on available information.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Result: Slight, transient irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Result: Slight, transient irritation

Remarks: Expected based on components.

Remarks: Unlikely to cause eye irritation or injury.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Result: No eye irritation

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

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Respiratory sensitisation: Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks: No data available

Carcinogenicity:

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Acute aquatic toxicity : Not classified based on available information.

Chronic aquatic toxicity : Not classified based on available information.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Toxicity to fish : LL50 (Fish): > 100 mg/l

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Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
Exposure time: 48 hToxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Persistence and degradability**Components:**

No data available

Bioaccumulative potential**Components:**

No data available

Mobility in soil**Components:**

No data available

Other adverse effects

No data available

Product:

Additional ecological information : No data available

Components:**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.

SECTION 14. TRANSPORT INFORMATION**International transport regulations****REGULATION**

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

**SAFETY DATA SHEET**

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Version: 1.3

Valvoline™ FULL SYNTHETIC EUROPEAN VEHICLE SAE 5W-30
XL-III Synthetic Motor Oil

881167

U.S. DOT - ROAD

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

TDG_INWT_C

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MX_DG

Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant

no

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Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

ENCS : Not in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

TSCA : On TSCA Inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

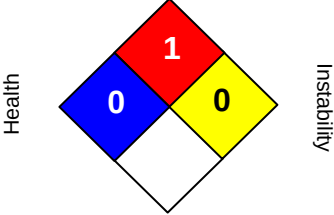
Further information

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NFPA:	HMIS III:

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Flammability



Health

Instability

Special hazard.

HEALTH	0
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

NFPA Flammable and Combustible Liquids Classification
Combustible Liquid Class IIIB

Full text of H-Statements

H304 May be fatal if swallowed and enters airways.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

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ICAO-TI (ICAO) : Technical Instructions by the “International Civil Aviation Organization”

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System

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29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ Full Synthetic High Mileage SAE 10W-30 Motor Oil

™ Trademark, Valvoline or its subsidiaries, registered in various countries

Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Motor Oil

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL (1-800-832-6825) SDS@valvoline.com	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL (1-800-832-6825) Product Information 1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	Asp. Tox. 1; H304	>=5.00 - < 10.00

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DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	Not a hazardous substance or mixture.	>=1.50 - < 5.00

SECTION 4. FIRST AID MEASURES

- General advice : No hazards which require special first aid measures.
- If inhaled : If breathed in, move person into fresh air.
 If unconscious, place in recovery position and seek medical advice.
 If symptoms persist, call a physician.
- If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.
- In case of skin contact : Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.
- First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
- In case of eye contact : If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention.
- Remove contact lenses.
 Protect unharmed eye.
- If swallowed : Do not give milk or alcoholic beverages.
 Never give anything by mouth to an unconscious person.
 If symptoms persist, call a physician.
- Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.
- Most important symptoms and effects, both acute and delayed : No symptoms known or expected.



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Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Water spray

Foam

Carbon dioxide (CO₂)

Dry chemical

Dry chemical

Carbon dioxide (CO₂)

Water spray

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : carbon dioxide and carbon monoxide
 Hydrocarbons
 Nitrogen oxides (NO_x)

Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.

Further information : Standard procedure for chemical fires.

DO NOT direct a solid stream of water or foam into hot, burning pools of liquid since this may cause frothing and increase fire intensity. Frothing can be violent and possibly endanger any firefighter standing too close to the burning liquid.

Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning material with water used for cooling purposes.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA).

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SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
	: Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
Environmental precautions	: Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Do not let product enter drains. Do not flush into surface water or sanitary sewer system.
Methods and materials for containment and cleaning up	: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Keep in suitable, closed containers for disposal. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Other information	: Comply with all applicable federal, state, and local regulations. Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	: Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Smoking, eating and drinking should be prohibited in the application area. For personal protection see section 8.
Conditions for safe storage	: Store in a cool, dry, ventilated area.
Materials to avoid	: No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC	64742-65-0	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

The identity and concentration of one or more component(s) is being withheld under business confidentiality.

Engineering measures : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear resistant gloves (consult your safety equipment supplier).
 Wear normal work clothing including long pants, long-sleeved shirts and foot covering to prevent direct contact of the product with the skin. Launder clothing before reuse. If skin

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irritation develops, contact your facility health and safety
 professional or your local safety equipment supplier to
 determine the proper personal protective equipment for your
 use.

Wear resistant gloves (consult your safety equipment
 supplier).

Wear as appropriate:

Safety shoes

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Odour : No data available

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : 626 °F / 330 °C
 (1,013.333333 hPa)
 Calculated Phase Transition Liquid/Gas

Flash point : 448 °F / 231 °C

Method: Cleveland open cup

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Self-ignition : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapour pressure : 1.3333333 hPa (68 °F / 20 °C)
 Calculated Vapor Pressure

Relative vapour density : No data available

Relative density : No data available

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Density : 0.861 g/cm³

Solubility(ies)
Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Decomposition temperature : No data available

Viscosity
Viscosity, dynamic : No data available

Viscosity, kinematic : 70.5 mm²/s (104 °F / 40 °C)

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Stable.

Product will not undergo hazardous polymerization.

Conditions to avoid : heat

Incompatible materials : Alkali metals
aluminum
Ammonia
Combustible material
halogens
Metals
metal oxides
Oxidizing agents
peroxides
reducing agents
sodium
Strong acids
water

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Hazardous decomposition
products

No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation
Skin contact
Eye Contact
Ingestion
Inhalation
Skin absorption
Skin contact
Eye Contact
Ingestion

Acute toxicity

Not classified based on available information.

Components:**Distillates (Petroleum), Hydrotreated Heavy Paraffinic:**

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Skin corrosion/irritation

Not classified based on available information.

Product:

Result : Repeated exposure may cause skin dryness or cracking.

Components:**Distillates (Petroleum), Hydrotreated Heavy Paraffinic:**

Assessment : Slight, transient irritation

Result : Slight, transient irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation

Result : Slight, transient irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Result : Slight, transient irritation

Remarks : Expected based on components.

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Remarks : Unlikely to cause eye irritation or injury.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Result : No eye irritation

Assessment : No eye irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : No eye irritation

Assessment : No eye irritation

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation

Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

May be fatal if swallowed and enters airways.

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

No aspiration toxicity classification

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Further information**Product:**

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Toxicity to fish : LL50 (Fish): > 100 mg/l
Exposure time: 96 hToxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
Exposure time: 48 hToxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Toxicity to fish : LL50 (Fish): > 100 mg/l
Exposure time: 96 hToxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
Exposure time: 48 hToxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
Exposure time: 72 h

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Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Ecotoxicology Assessment
Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Persistence and degradability**Components:**

No data available

Bioaccumulative potential**Components:**

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Partition coefficient: n-octanol/water : log Pow: Expected > 7

No data available

Mobility in soil**Components:**

No data available

Other adverse effects

No data available

Product:

Additional ecological information : No data available

Components:

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.

SECTION 14. TRANSPORT INFORMATION**International transport regulations**

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REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

CFR RAIL_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

TDG_INWT_C

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MX_DG

Not dangerous goods

*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

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Marine pollutant

no

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
TOLUENE	108-88-3	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
SULFUR DIOXIDE	7446-09-5	500	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : No SARA Hazards**California Prop. 65**

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for carcinogenicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for reproductive/developmental toxicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

The components of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AICS : Not in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : Not in compliance with the inventory

TCSI : Not in compliance with the inventory

TSCA : On TSCA Inventory

TSCA list

No substances are subject to TSCA 12(b) export notification requirements.



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Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

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NFPA:	HMIS III:						
Flammability Health Instability Special hazard.	<table> <tr> <td>HEALTH</td><td>0</td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	0	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	0						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

H304 May be fatal if swallowed and enters airways.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

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SAFETY DATA SHEET	Revision Date: 04/03/2019
	Print Date: 9/10/2019
	SDS Number: R0396488
Valvoline™ Full Synthetic High Mileage SAE 10W-30 Motor Oil ™ Trademark, Valvoline or its subsidiaries, registered in various countries 881170	Version: 1.9

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System

**SAFETY DATA SHEET**

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Print Date: 9/10/2019

SDS Number: 000000130059

Version: 1.4

Valvoline Professional Series™ Complete Fuel System Treatment
™ Trademark, Valvoline or its subsidiaries, registered in various
countries
679741

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**Product identifier**

Trade name : Valvoline Professional Series™ Complete Fuel System
Treatment

™ Trademark, Valvoline or its subsidiaries, registered in
various countries

Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Industrial chemical

Details of the supplier of the safety data sheet

Valvoline LLC
100 Valvoline Way
Lexington, KY 40509
United States of America (USA)
1-800-TEAMVAL (1-800-832-6825)

Emergency telephone number

1-800-VALVOLINE (1-800-825-8654)

Regulatory Information Number

1-800-TEAMVAL (1-800-832-6825)

Product Information

1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Flammable liquids : Category 3

Skin irritation : Category 2

Eye irritation : Category 2A

Carcinogenicity (Inhalation) : Category 2

Aspiration hazard : Category 1

GHS label elements

Hazard pictograms :



Signal Word : Danger

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- Hazard Statements** : Flammable liquid and vapor.
May be fatal if swallowed and enters airways.
Causes skin irritation.
Causes serious eye irritation.
Suspected of causing cancer if inhaled.
- Precautionary Statements** : **Prevention:**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ ventilating/ lighting/ equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash skin thoroughly after handling.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
IF SWALLOWED: Immediately call a POISON CENTER/doctor.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/ attention.
Do NOT induce vomiting.
If skin irritation occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
Storage:
Store in a well-ventilated place. Keep cool.
Store locked up.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards

Static-accumulating flammable liquid.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

- Substance / Mixture : Mixture
Chemical nature : Defatter
Chemical nature : Static Accumulator

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Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics		Flam. Liq. 4; H227 Asp. Tox. 1; H304	42.2786
POLY[OXY(1,2-PROPANEDIYL)], ALPHA, -(3-AMINOPROPYL)-, OMEGA.-HYDROXY-, C12-C15 ALKYL ETHERS		Skin Irrit. 2; H315 Eye Dam. 1; H318	30.5928
Distillates (petroleum), hydrotreated middle	64742-46-7	Flam. Liq. 3; H226 Acute Tox. 4; H332 Skin Irrit. 2; H315 Asp. Tox. 1; H304	16.9114
NAPHTHA (PETROLEUM), HYDROTREATED HEAVY	64742-48-9	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 STOT SE 3; H335 Asp. Tox. 1; H304	15.4147
Poly[oxy(1,2-propanediyl)].alpha.-propyl-.omega.-hydroxy-C12-15 alkyl ethers		Skin Irrit. 2; H315 Eye Dam. 1; H318	2.5367
HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE		Flam. Liq. 4; H227 STOT SE 3; H336 Asp. Tox. 1; H304	2.1139
NAPHTHALENE	91-20-3	Acute Tox. 4; H302 Carc. 2; H351	0.1691



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SECTION 4. FIRST AID MEASURES

General advice	: Move out of dangerous area. Call a POISON CENTRE or doctor/physician if exposed or you feel unwell. Show this safety data sheet to the doctor in attendance. Symptoms of poisoning may appear several hours later. Do not leave the victim unattended.
If inhaled	: Move to fresh air. If breathed in, move person into fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	: Remove contaminated clothing. If irritation develops, get medical attention. If on skin, rinse well with water. Wash contaminated clothing before re-use. If on clothes, remove clothes.
In case of eye contact	: Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye.
If swallowed	: Obtain medical attention. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	: Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea) irritation (nose, throat, airways) Headache Dizziness May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. Suspected of causing cancer if inhaled.
Notes to physician	: No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray Foam Alcohol-resistant foam

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Unsuitable extinguishing media	: Carbon dioxide (CO ₂) Dry chemical
Specific hazards during firefighting	: High volume water jet
	: Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	: carbon dioxide and carbon monoxide carbon
Specific extinguishing methods	:
Further information	: Product is compatible with standard fire-fighting agents. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Use a water spray to cool fully closed containers.
Special protective equipment for firefighters	: In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Evacuate personnel to safe areas. Remove all sources of ignition. Use personal protective equipment. Ensure adequate ventilation. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
Environmental precautions	: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
Other information	: Comply with all applicable federal, state, and local regulations. Suppress (knock down) gases/vapours/mists with a water spray jet.

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SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Open drum carefully as content may be under pressure.
Avoid formation of aerosol.
Provide sufficient air exchange and/or exhaust in work rooms.
Do not breathe vapours/dust.
Do not smoke.
Container hazardous when empty.
Take precautionary measures against static discharges.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Observe label precautions.
No smoking.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates (petroleum), hydrotreated middle	64742-46-7	REL	5 mg/m3 Mist.	NIOSH/GUID E
		STEL	10 mg/m3 Mist.	NIOSH/GUID E
				NIOSH/GUID E
		PEL	5 mg/m3 Mist.	OSHA_TRA NS
				OSHA_TRA NS
		TWA	5 mg/m3 Mist.	ACGIH
		STEL	10 mg/m3 Mist.	ACGIH
				ACGIH
		TWA	0.2 mg/m3 Inhalable fraction.	ACGIHLIS_P

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				ACGIHLIS P
				ACGIHLIS P
				ACGIHLIS P
NAPHTHA (PETROLEUM), HYDROTREATED HEAVY	64742-48-9	TWA	100 ppm	SUPLR EXP
HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE		TWA	200 mg/m3 (total hydrocarbon vapor)	ACGIH
NAPHTHALENE	91-20-3	TWA	10 ppm	ACGIH
		TWA	10 ppm 50 mg/m3	NIOSH REL
		ST	15 ppm 75 mg/m3	NIOSH REL
		TWA	10 ppm 50 mg/m3	OSHA Z-1
		TWA	10 ppm 50 mg/m3	OSHA P0
		STEL	15 ppm 75 mg/m3	OSHA P0
		PEL	0.1 ppm 0.5 mg/m3	CAL PEL

Engineering measures : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.

Skin and body protection : Wear as appropriate:
Impervious clothing
Safety shoes
Flame-resistant clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Discard gloves that show tears, pinholes, or signs of wear.
Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : Wash hands before breaks and at the end of workday.
When using do not eat or drink.
When using do not smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

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Physical state : liquid
Odour : No data available
Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available
Boiling point/boiling range : 365 °F / 185 °C
Calculated Phase Transition Liquid/Gas

Flash point : 108.0 °F / 42.2 °C
Calculated Flash Point

Evaporation rate : No data available

Flammability (solid, gas) :
No data available

Flammability (liquids) : Static-accumulating flammable liquid.

Flammability (liquids) :
Upper explosion limit : No data available

Lower explosion limit : No data available

Vapour pressure : 1.131 hPaCalculated Vapor Pressure

Relative vapour density : No data available

Relative density : No data available

Density : 0.870 g/cm³ (20 °C)

Solubility(ies)
Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Thermal decomposition : No data available

Viscosity
Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

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Acute dermal toxicity : LD50 (Rabbit): > 2.0 g/kg
 LD50 (Rat, male and female): > 2,500 mg/kg
 Assessment: Not classified as acutely toxic by dermal
 absorption under GHS.

Acute toxicity (other routes of administration) : LD50 (Mouse, female): 710 mg/kg
 Application Route: Gavage
 LD50 (Mouse): 150 mg/kg
 Application Route: Intraperitoneal
 LD50 (Mouse, male): 533 mg/kg
 Application Route: Gavage

Skin corrosion/irritation

Causes skin irritation.

Product:

Remarks: May cause skin irritation and/or dermatitis.

Result: Repeated exposure may cause skin dryness or cracking.

Components:

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Result: No skin irritation

POLY[OXY(1,2-PROPANEDIYL)], ALPHA, -(3-AMINOPROPYL)-, OMEGA.-HYDROXY-, C12-C15
 ALKYL ETHERS:

Result: Irritating to skin.

Distillates (petroleum), hydrotreated middle:

Result: Irritating to skin.

NAPHTHA (PETROLEUM), HYDROTREATED HEAVY:

Result: Irritating to skin.

Poly[oxy(1,2-propanediyl)].alpha.-propyl.-omega.-hydroxy-C12-15 alkyl ethers:

Result: Irritating to skin.

HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE:

Result: Slight, transient irritation

NAPHTHALENE:

Result: Slight, transient irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Result: Irritating to eyes.

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Remarks: Expected based on components.

Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin., Causes serious eye irritation.

Components:

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics:
 Result: Slight, transient irritation

POLY[OXY(1,2-PROPANEDIYL)], ALPHA, -(3-AMINOPROPYL)-, OMEGA.-HYDROXY-, C12-C15
 ALKYL ETHERS:
 Result: Risk of serious damage to eyes.

NAPHTHA (PETROLEUM), HYDROTREATED HEAVY:
 Result: Irritating to eyes.

Poly[oxy(1,2-propanediyl)].alpha.-propyl-.omega.-hydroxy-C12-15 alkyl ethers:
 Result: Risk of serious damage to eyes.

HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE:
 Result: Slight, transient irritation

NAPHTHALENE:
 Result: Slight, transient irritation

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.
 Respiratory sensitisation: Not classified based on available information.

Components:

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics:
 Assessment: Did not cause sensitisation on laboratory animals.
 Method: OECD Test Guideline 406

POLY[OXY(1,2-PROPANEDIYL)], ALPHA, -(3-AMINOPROPYL)-, OMEGA.-HYDROXY-, C12-C15
 ALKYL ETHERS:
 Assessment: Does not cause skin sensitisation.

Germ cell mutagenicity
 Not classified based on available information.

Carcinogenicity

Suspected of causing cancer if inhaled.

Components:

NAPHTHALENE:
 Carcinogenicity - : Limited evidence of carcinogenicity in inhalation studies with
 Assessment animals.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

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Not classified based on available information.

Components:

NAPHTHA (PETROLEUM), HYDROTREATED HEAVY:

Assessment: May cause respiratory irritation.

HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE:

Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

May be fatal if swallowed and enters airways.

Components:

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

May be fatal if swallowed and enters airways.

Distillates (petroleum), hydrotreated middle:

May be fatal if swallowed and enters airways.

NAPHTHA (PETROLEUM), HYDROTREATED HEAVY:

May be fatal if swallowed and enters airways.

HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE:

May be fatal if swallowed and enters airways.

Further information**Product:**

Remarks: Solvents may degrease the skin.

Carcinogenicity:**IARC**

Group 2B: Possibly carcinogenic to humans

NAPHTHALENE

91-20-3

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

Reasonably anticipated to be a human carcinogen

NAPHTHALENE

91-20-3

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Acute aquatic toxicity Category 1; Very toxic to aquatic life.

Long-term (chronic) aquatic hazard : Chronic aquatic toxicity Category 1; Very toxic to aquatic life with long lasting effects.

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Components:

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 1,000 mg/l
 Exposure time: 96 h

Toxicity to daphnia and other : EL50 (Daphnia magna (Water flea)): > 1,000 mg/l
 aquatic invertebrates Exposure time: 48 h

Toxicity to algae : EL50 (Pseudokirchneriella subcapitata (green algae)): > 1,000
 mg/l
 Exposure time: 72 h

POLY[OXY(1,2-PROPANEDIYL)], ALPHA, -(3-AMINOPROPYL)-, OMEGA.-HYDROXY-, C12-C15
 ALKYL ETHERS:

Ecotoxicology Assessment

Short-term (acute) aquatic : Very toxic to aquatic life.
 hazard

Long-term (chronic) aquatic : Very toxic to aquatic life with long lasting effects.
 hazard

Distillates (petroleum), hydrotreated middle:

Ecotoxicology Assessment

Long-term (chronic) aquatic : Toxic to aquatic life with long lasting effects.
 hazard

HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 2 - 5 mg/l
 Exposure time: 96 h
 Test Type: semi-static test
 Test substance: WAF
 Method: OECD Test Guideline 203
 Remarks: Information given is based on data obtained from
 similar substances.

Toxicity to daphnia and other : EL50 (Daphnia magna (Water flea)): 10 mg/l
 aquatic invertebrates Exposure time: 48 h
 Test Type: static test
 Test substance: WAF
 Method: OECD Test Guideline 202
 Remarks: Information given is based on data obtained from
 similar substances.

Toxicity to algae : EL50 (Pseudokirchneriella subcapitata (green algae)): > 1 - 3
 mg/l
 End point: Growth inhibition
 Exposure time: 72 h
 Test Type: static test
 Test substance: WAF
 Method: OECD Test Guideline 201
 Remarks: Information given is based on data obtained from
 similar substances.

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Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Toxic to aquatic life.

Long-term (chronic) aquatic hazard : Toxic to aquatic life with long lasting effects.

NAPHTHALENE:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.91 - 2.82 mg/l
 Exposure time: 96 h
 Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1.09 - 3.4 mg/l
 Exposure time: 48 h
 Test Type: static test

Persistence and degradability

Components:

NAPHTHA (PETROLEUM), HYDROTREATED HEAVY:

Biodegradability : Remarks: Not readily biodegradable.

HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE:

Biodegradability : Result: Inherently biodegradable

NAPHTHALENE:

Biodegradability : Result: Not readily biodegradable.

No data available

Bioaccumulative potential

Components:

NAPHTHALENE:

Partition coefficient: n-octanol/water : log Pow: 3.30

No data available

Mobility in soil

Components:

No data available

Other adverse effects

No data available

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Very toxic to aquatic life with long lasting effects.

Components:

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice : The product should not be allowed to enter drains, water courses or the soil.
 Do not contaminate ponds, waterways or ditches with

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Contaminated packaging

chemical or used container.
Send to a licensed waste management company.
Dispose of in accordance with all applicable local, state and
federal regulations.
: Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste
handling site for recycling or disposal.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION**International transport regulations****REGULATION**

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

TDG_INWT_C

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

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UN	1993	FLAMMABLE LIQUID, N.O.S. (HYDROTREATED HEAVY NAPHTHA)	3	III	MARINE POLLUTANT:(POLYETHER AMINE)LIMITE D QUANTITY

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN	1993	FLAMMABLE LIQUID, N.O.S. (HYDROTREATED HEAVY NAPHTHA)	3	III

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

UN	1993	FLAMMABLE LIQUID, N.O.S. (HYDROTREATED HEAVY NAPHTHA)	3	III

MX DG

UN	1993	FLAMMABLE LIQUID, N.O.S. (HYDROTREATED HEAVY NAPHTHA)	3	III

*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Marine pollutant	yes

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act
CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
NAPHTHALENE	91-20-3	100	59137

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard
Chronic Health Hazard

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SARA 313

NAPHTHALENE

91-20-3

0.16 %

California Prop 65

This product does not contain any chemicals known to State
of California to cause cancer, birth defects, or any other
reproductive harm.

The components of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

ENCS : Not in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

TSCA : On TSCA Inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL
(Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION**Further information**

Revision Date: 06/25/2018

NFPA:	HMIS III:

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class II

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Full text of H-Statements

H226	Flammable liquid and vapor.
H227	Combustible liquid.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer if inhaled.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.



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ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System

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29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**Product identifier**

Trade name : Valvoline Professional Series™ INTAKE CLEANER
AEROSOL

™ Trademark, Valvoline or its subsidiaries, registered in
various countries

Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Cleaner.

Details of the supplier of the safety data sheet

Valvoline LLC
100 Valvoline Way
Lexington, KY 40509
United States of America (USA)
1-800-TEAMVAL (1-800-832-6825)

Emergency telephone number

1-800-VALVOLINE (1-800-825-8654)

Regulatory Information Number

1-800-TEAMVAL (1-800-832-6825)

Product Information

1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Flammable liquids : Category 2

Serious eye damage : Category 1

GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : Highly flammable liquid and vapor.
Causes serious eye damage.

Precautionary Statements : **Prevention:**
Keep away from heat/sparks/open flames/hot surfaces. No
smoking.

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Keep container tightly closed.
 Ground/bond container and receiving equipment.
 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
 Use only non-sparking tools.
 Take precautionary measures against static discharge.
 Wear protective gloves/ eye protection/ face protection.

Response:

IF ON SKIN (or hair): Take off immediately all contaminated
 clothing. Rinse skin with water/shower.
 IF IN EYES: Rinse cautiously with water for several minutes.
 Remove contact lenses, if present and easy to do. Continue
 rinsing. Immediately call a POISON CENTER/doctor.
 In case of fire: Use dry sand, dry chemical or alcohol-resistant
 foam to extinguish.

Storage:

Store in a well-ventilated place. Keep cool.

Disposal:

Dispose of contents/ container to an approved waste disposal
 plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture
 Chemical nature : Defatter

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
PROPANOIC ACID, PROPYL ESTER	106-36-5	Flam. Liq. 2; H225 Acute Tox. 4; H332	>=40.00 - < 50.00
ETHANOL	64-17-5	Flam. Liq. 2; H225 Eye Irrit. 2A; H319 STOT SE 3; H336	>=5.00 - < 10.00
N,N-dimethyl 9-decenamide	1356964-77-6	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 STOT SE 3; H335	>=5.00 - < 10.00

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ETHYL ACETATE	141-78-6	Flam. Liq. 2; H225 STOT SE 3; H336	>=5.00 - < 10.00
ETHOXYLATED ALCOHOL		Eye Irrit. 2B; H320	>=1.50 - < 5.00
QUATERNARY AMINE COMPOUND		Eye Dam. 1; H318	>=3.00 - < 5.00
GLYCERIN	56-81-5	Not a hazardous substance or mixture.	>=1.00 - < 1.50

SECTION 4. FIRST AID MEASURES

General advice	: Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.
If inhaled	: Move to fresh air. IF INHALED: Call a POISON CENTER/ doctor if you feel unwell. Keep patient warm and at rest. If unconscious, place in recovery position and seek medical advice.
In case of skin contact	: Remove contaminated clothing. If irritation develops, get medical attention. If on skin, rinse well with water. Wash contaminated clothing before re-use. If on clothes, remove clothes.
In case of eye contact	: In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Continue rinsing eyes during transport to hospital. Remove contact lenses. Protect unharmed eye.
If swallowed	: Obtain medical attention. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	: No symptoms known or expected. Causes serious eye damage.
Notes to physician	: No hazards which require special first aid measures.

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SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
 Water spray
 Foam
 Alcohol-resistant foam
 Carbon dioxide (CO₂)
 Dry chemical
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.
 Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
 Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Hydrocarbons
 carbon dioxide and carbon monoxide
 formaldehyde-like
 Aldehydes
 nitrogen oxides (NO_x)
- Specific extinguishing methods :
 Product is compatible with standard fire-fighting agents.
- Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
 Use a water spray to cool fully closed containers.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Evacuate personnel to safe areas.
 Remove all sources of ignition.
 Use personal protective equipment.
 Ensure adequate ventilation.
 Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
 Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
- Environmental precautions : Prevent product from entering drains.
 Prevent further leakage or spillage if safe to do so.
 If the product contaminates rivers and lakes or drains inform

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respective authorities.

Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Other information : Comply with all applicable federal, state, and local regulations. Suppress (knock down) gases/vapours/mists with a water spray jet.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Open drum carefully as content may be under pressure. Avoid formation of aerosol. Provide sufficient air exchange and/or exhaust in work rooms. Do not breathe vapours/dust. Do not smoke. Container hazardous when empty. Take precautionary measures against static discharges. Avoid contact with skin and eyes. Smoking, eating and drinking should be prohibited in the application area. For personal protection see section 8. Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. No smoking.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
ETHANOL	64-17-5	STEL	1,000 ppm	ACGIH
		TWA	1,000 ppm 1,900 mg/m3	NIOSH REL
		TWA	1,000 ppm 1,900 mg/m3	OSHA Z-1
		TWA	1,000 ppm	OSHA P0

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			1,900 mg/m3	
		PEL	1,000 ppm 1,900 mg/m3	CAL PEL
ETHYL ACETATE	141-78-6	TWA	400 ppm	ACGIH
		TWA	400 ppm 1,400 mg/m3	NIOSH REL
		TWA	400 ppm 1,400 mg/m3	OSHA Z-1
		TWA	400 ppm 1,400 mg/m3	OSHA P0
		PEL	400 ppm 1,400 mg/m3	CAL PEL
GLYCERIN	56-81-5	TWA	5 mg/m3 mist, respirable fraction	OSHA Z-1
		TWA	15 mg/m3 mist, total dust	OSHA Z-1
		PEL	10 mg/m3 Mist - total fraction	CAL PEL
		PEL	5 mg/m3 Mist - respirable fraction	CAL PEL
		TWA	10 mg/m3 Mist - total dust	OSHA P0
		TWA	5 mg/m3 Mist - respirable fraction	OSHA P0

Engineering measures : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.
 A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Wear chemical splash goggles and face shield when there is

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potential for exposure of the eyes or face to liquid, vapor or mist.
 Maintain eye wash station in immediate work area.

Skin and body protection : Wear as appropriate:
 Impervious clothing
 Safety shoes
 Flame-resistant clothing
 Choose body protection according to the amount and concentration of the dangerous substance at the work place.
 Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : Wash hands before breaks and at the end of workday.
 When using do not eat or drink.
 When using do not smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid
 Odour : citrus
 Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : > 95 °F / > 35 °C

Flash point : 72 °F / 22 °C
 Method: Pensky-Martens closed cup

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Self-ignition : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapour pressure : Expected 18 - 98 hPa

Relative vapour density : No data available

Relative density : No data available

Density : ca. 0.934 g/cm³ (68 °F / 20 °C)

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Solubility(ies)

Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-
octanol/water : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous
reactions : Vapours may form explosive mixture with air.Conditions to avoid : Heat, flames and sparks.
excessive heatIncompatible materials : Acids
Alkali metals
aluminum
Amines
Ammonia
Bases
halogens
inorganic materials
Lead
nitrates
Oxidizing agents
sodium
strong alkalis
Zinc
PeroxidesHazardous decomposition
products : No hazardous decomposition products are known.**SECTION 11. TOXICOLOGICAL INFORMATION**

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Information on likely routes of exposure

Inhalation

Skin contact

Eye Contact

Ingestion

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg
 Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: 26.89 mg/l
 Exposure time: 4 h
 Test atmosphere: vapour
 Method: Calculation method

Components:
PROPANOIC ACID, PROPYL ESTER:

Acute oral toxicity : LD50 (Rat): 10,331 mg/kg

Acute inhalation toxicity : Assessment: The component/mixture is classified as acute
 inhalation toxicity, category 4.

Acute dermal toxicity : LD50 (Rabbit): > 14,128 mg/kg

ETHANOL:

Acute oral toxicity : LD50 (Rat): 7,060 mg/kg

Acute inhalation toxicity : LC50 (Rat): 117 - 125 mg/l
 Exposure time: 4 h
 Test atmosphere: vapour

Acute dermal toxicity : LD Lo (Rabbit): 20 g/kg

N,N-dimethyl 9-decenamide:

Acute oral toxicity : LD50 (Rat): 550 mg/kg
 Method: OECD Test Guideline 425

Acute inhalation toxicity : LC50 (Rat): > 3.551 mg/l
 Exposure time: 4 h
 Test atmosphere: dust/mist
 Method: OECD Test Guideline 403
 Assessment: Not classified as acutely toxic by inhalation
 under GHS.

Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg
 Method: OECD Test Guideline 402

ETHYL ACETATE:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

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Acute inhalation toxicity : LC0 (Rat): > 6000 ppm
 Exposure time: 6 h
 Test atmosphere: vapour
 Assessment: Not classified as acutely toxic by inhalation
 under GHS.

Acute dermal toxicity : LD50 (Rabbit): > 20,000 mg/kg

GLYCERIN:

Acute oral toxicity : LD50 (Rat): 12,600 mg/kg
 Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): > 570 mg/m3
 Exposure time: 1 h
 Test atmosphere: vapour
 Assessment: Not classified as acutely toxic by inhalation
 under GHS.

Acute dermal toxicity : LD50 (Rabbit): > 10,000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Components:
ETHANOL:

Result : Slight, transient irritation

N,N-dimethyl 9-decenamide:

Method : OECD Test Guideline 439
 Result : Irritating to skin.

ETHYL ACETATE:

Species : Rabbit
 Result : Slight, transient irritation

GLYCERIN:

Species : Rabbit
 Result : No skin irritation

Serious eye damage/eye irritation

Causes serious eye damage.

Product:

Remarks : May cause irreversible eye damage.

Components:
ETHANOL:

Result : Irritating to eyes.

N,N-dimethyl 9-decenamide:

Result : Irritating to eyes.

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Method : OECD Test Guideline 437

ETHYL ACETATE:

Species : Rabbit
 Result : Slight, transient irritation

ETHOXYLATED ALCOHOL:

Result : Mild eye irritation

QUATERNARY AMINE COMPOUND:

Result : Corrosive

GLYCERIN:

Species : Rabbit
 Result : Slight, transient irritation

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

N,N-dimethyl 9-decenamide:

Test Type : Local lymph node assay
 Species : Mouse
 Assessment : Did not cause sensitisation on laboratory animals.
 Method : OECD Test Guideline 429

ETHYL ACETATE:

Test Type : Maximisation Test
 Result : Does not cause skin sensitisation.

Germ cell mutagenicity

Not classified based on available information.

Components:

N,N-dimethyl 9-decenamide:

Genotoxicity in vitro : Test Type: Ames test
 Test system: Salmonella typhimurium
 Metabolic activation: with and without metabolic activation
 Method: OECD Test Guideline 471
 Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test
 Species: Mouse
 Cell type: Bone marrow
 Method: OECD Test Guideline 474
 Result: negative

ETHYL ACETATE:

Genotoxicity in vitro : Test Type: Ames test

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Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Result: negative

GLYCERIN:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Result: negative

Carcinogenicity

Not classified based on available information.

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

Components:**ETHANOL:**

Assessment : May cause drowsiness or dizziness.

N,N-dimethyl 9-decenamide:

Exposure routes : Inhalation
Target Organs : Respiratory Tract
Assessment : May cause respiratory irritation.

ETHYL ACETATE:

Assessment : May cause drowsiness or dizziness.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Further information**Product:**

Remarks : Solvents may degrease the skin.

SECTION 12. ECOLOGICAL INFORMATION

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Ecotoxicity
Product:

Ecotoxicology Assessment

Short-term (acute) aquatic hazard

: Acute aquatic toxicity Category 2; Toxic to aquatic life.

Long-term (chronic) aquatic hazard

: Chronic aquatic toxicity Category 3; Harmful to aquatic life with long lasting effects.

Components:
ETHANOL:

Toxicity to fish

: LC50 (Oncorhynchus mykiss (rainbow trout)): 12,000 - 16,000 mg/l
 Exposure time: 96 h
 Test Type: static test

Toxicity to daphnia and other aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): > 10,000 mg/l
 Exposure time: 48 h
 Test Type: static test

N,N-dimethyl 9-decenamide:

Toxicity to fish

: LC50 (Pimephales promelas (fathead minnow)): > 7.5 mg/l
 Exposure time: 96 h
 Test Type: flow-through test
 Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 2.8 mg/l
 Exposure time: 48 h
 Test Type: flow-through test
 Method: OECD Test Guideline 202

Toxicity to algae

: EC50 (Pseudokirchneriella subcapitata (microalgae)): 6.3 mg/l
 End point: Biomass
 Exposure time: 96 h
 Test Type: static test
 Method: OECD Test Guideline 201

: NOEC (Pseudokirchneriella subcapitata (microalgae)): 1.1 mg/l
 End point: Biomass
 Exposure time: 96 h
 Test Type: static test
 Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity)

: NOEC (Danio rerio (zebra fish)): >= 0.71 mg/l
 Exposure time: 35 d
 Test Type: flow-through test
 Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates

: NOEC (Daphnia magna (Water flea)): > 0.37 mg/l
 Exposure time: 21 d

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(Chronic toxicity)

Test Type: semi-static test
 Method: OECD Test Guideline 211

ETHYL ACETATE:

Toxicity to fish

: LC50 (Pimephales promelas (fathead minnow)): 220 - 250
 mg/l
 Exposure time: 96 h
 Test Type: flow-through test

Toxicity to daphnia and other
aquatic invertebrates

: LC50 (Daphnia (water flea)): 154 mg/l
 Exposure time: 48 h
 Test Type: static test

Toxicity to algae

: NOEC (Desmodesmus subspicatus (green algae)): > 100 mg/l
 End point: Growth inhibition
 Exposure time: 72 h
 Test Type: static test
 Method: OECD Test Guideline 201
 GLP: yes

Toxicity to daphnia and other
 aquatic invertebrates
 (Chronic toxicity)

: NOEC (Daphnia (water flea)): 2.4 mg/l
 Exposure time: 21 d
 Test Type: semi-static test
 Method: OECD Test Guideline 211

ETHOXYLATED ALCOHOL:

Ecotoxicology Assessment

Short-term (acute) aquatic
 hazard : Toxic to aquatic life.

QUATERNARY AMINE COMPOUND:

Ecotoxicology Assessment

Short-term (acute) aquatic
 hazard : Toxic to aquatic life.

Long-term (chronic) aquatic
 hazard : Toxic to aquatic life with long lasting effects.

GLYCERIN:

Toxicity to fish

: LC50 (Oncorhynchus mykiss (rainbow trout)): 54,000 mg/l
 Exposure time: 96 h

Toxicity to daphnia and other
aquatic invertebrates

: LC50 (Daphnia magna (Water flea)): 1,955 mg/l
 Exposure time: 48 h
 Test Type: static test

Persistence and degradability

N,N-dimethyl 9-decenamide:

Biodegradability

: Result: Readily biodegradable.
 Biodegradation: 63.93 %
 Exposure time: 28 d
 Method: OECD Test Guideline 301B

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ETHYL ACETATE:

Biodegradability : Result: Readily biodegradable.

GLYCERIN:

Biodegradability : Result: Readily biodegradable.
 Biodegradation: 94 %
 Exposure time: 1 d

No data available

Bioaccumulative potential
ETHANOL:

Partition coefficient: n- : log Pow: -0.31
 octanol/water

N,N-dimethyl 9-decenamide:
 Partition coefficient: n- : log Pow: 3.17 (30 °C)
 octanol/water pH: 6.69

ETHYL ACETATE:

Bioaccumulation : Species: Green algae (Chlorella fusca vacuolata)
 Bioconcentration factor (BCF): 13,500
 Exposure time: 24 h
 Concentration: 0.05 mg/l
 Method: Static

Partition coefficient: n- : log Pow: 0.68
 octanol/water

GLYCERIN:

Partition coefficient: n- : log Pow: -1.76
 octanol/water

No data available

Mobility in soil

No data available

Other adverse effects

No data available

Product:

Additional ecological : An environmental hazard cannot be excluded in the event of
 information unprofessional handling or disposal., Toxic to aquatic life.,
 Harmful to aquatic life with long lasting effects.

SECTION 13. DISPOSAL CONSIDERATIONS
Disposal methods

General advice : The product should not be allowed to enter drains, water
 courses or the soil.
 Do not contaminate ponds, waterways or ditches with
 chemical or used container.
 Send to a licensed waste management company.
 Dispose of in accordance with all applicable local, state and
 federal regulations.

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Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste
handling site for recycling or disposal.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION**International transport regulations****REGULATION**

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

UN	1993	FLAMMABLE LIQUID, N.O.S. (PROPANOIC ACID, PROPYL ESTER)	3	II	LIMITED QUANTITY

CFR RAIL C

UN	1993	FLAMMABLE LIQUID, N.O.S. (PROPANOIC ACID, PROPYL ESTER)	3	II	LIMITED QUANTITY

U.S. DOT - INLAND WATERWAYS

UN	1993	FLAMMABLE LIQUID, N.O.S. (PROPANOIC ACID, PROPYL ESTER)	3	II	LIMITED QUANTITY

TDG ROAD C

UN	1993	FLAMMABLE LIQUID, N.O.S. (PROPANOIC ACID, PROPYL ESTER)	3	II	LIMITED QUANTITY

TDG RAIL C

UN	1993	FLAMMABLE LIQUID, N.O.S. (PROPANOIC ACID, PROPYL ESTER)	3	II	LIMITED QUANTITY

TDG INWT C

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UN	1993	FLAMMABLE LIQUID, N.O.S. (PROPANOIC ACID, PROPYL ESTER)	3	II	LIMITED QUANTITY

INTERNATIONAL MARITIME DANGEROUS GOODS

UN	1993	FLAMMABLE LIQUID, N.O.S. (PROPANOIC ACID, PROPYL ESTER)	3	II	LIMITED QUANTITY

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN	1993	FLAMMABLE LIQUID, N.O.S. (PROPANOIC ACID, PROPYL ESTER)	3	II	

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

UN	1993	FLAMMABLE LIQUID, N.O.S. (PROPANOIC ACID, PROPYL ESTER)	3	II	

MX DG

UN	1993	FLAMMABLE LIQUID, N.O.S. (PROPANOIC ACID, PROPYL ESTER)	3	II	

*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Marine pollutant	no

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
ETHYL ACETATE	141-78-6	5000	76221

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SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)
Serious eye damage or eye irritation

California Prop. 65

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for reproductive/developmental toxicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

The components of this product are reported in the following inventories:

DSL : This product contains one or several components that are not
on the Canadian DSL and have annual quantity limits.

AICS : Not in compliance with the inventory

ENCS : Not in compliance with the inventory

KECI : Not in compliance with the inventory

PICCS : Not in compliance with the inventory

IECSC : Not in compliance with the inventory

TCSI : Not in compliance with the inventory

TSCA : On TSCA Inventory

TSCA list

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION**Further information**

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NFPA:**HMIS III:**

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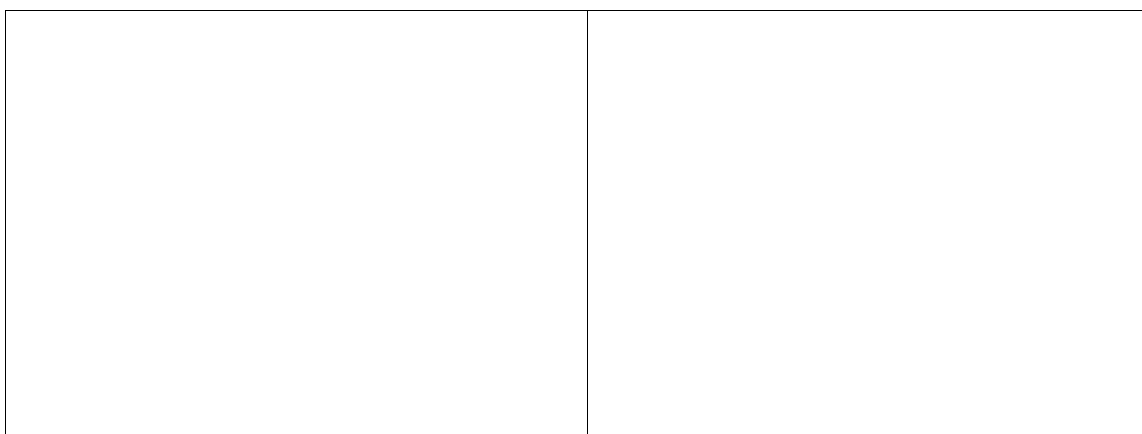
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**NFPA Flammable and Combustible Liquids Classification**

Flammable Liquid Class IA

Full text of H-Statements

H225	Highly flammable liquid and vapor.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H320	Causes eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

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CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System

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29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ Full Synthetic ATF+4 Automatic Transmission Fluid

™ Trademark, Valvoline or its subsidiaries, registered in various countries

Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Engine, gear & lubricating oil.

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL (1-800-832-6825)	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL (1-800-832-6825) Product Information 1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

GHS label elements

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)

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HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).	>=50.00 - < 60.00
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	Asp. Tox. 1; H304	>=30.00 - < 40.00
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	Asp. Tox. 1; H304	>=1.50 - < 5.00
Mineral Oil		Asp. Tox. 1; H304	>=1.50 - < 5.00
DODECYL HYDROXYPROPYL SULFIDE	67124-09-8	Skin Sens. 1; H317	>=0.50 - < 1.00

SECTION 4. FIRST AID MEASURES

- General advice : No hazards which require special first aid measures.
- If inhaled : If breathed in, move person into fresh air.
 If unconscious, place in recovery position and seek medical advice.
 If symptoms persist, call a physician.
- In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
- In case of eye contact : Remove contact lenses.
 Protect unharmed eye.
- If swallowed : Do not give milk or alcoholic beverages.
 Never give anything by mouth to an unconscious person.
 If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes



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appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:

acne
 stomach or intestinal upset (nausea, vomiting, diarrhea)
 irritation (nose, throat, airways)

Notes to physician

: No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Water spray
 Foam
 Carbon dioxide (CO₂)
 Dry chemical

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : carbon dioxide and carbon monoxide
 Hydrocarbons
 Aldehydes

Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

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emergency procedures

- Environmental precautions : Prevent product from entering drains.
 Prevent further leakage or spillage if safe to do so.
 If the product contaminates rivers and lakes or drains inform
 respective authorities.
- Methods and materials for
 containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel,
 acid binder, universal binder, sawdust).
 Keep in suitable, closed containers for disposal.
- Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Smoking, eating and drinking should be prohibited in the
 application area.
 For personal protection see section 8.
- Conditions for safe storage : Containers which are opened must be carefully resealed and
 kept upright to prevent leakage.
- Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1

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		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Engineering measures : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear resistant gloves (consult your safety equipment supplier).
Wear as appropriate:
Safety shoes

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

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Physical state : liquid

Colour : red

Odour : No data available

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : No data available

Flash point : > 390 °F / > 199 °C
 Method: Cleveland open cup

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Upper explosion limit : 6 %(V)
 Calculated Explosive Limit

Lower explosion limit : 1 %(V)
 Calculated Explosive Limit

Vapour pressure : 0.0133333 hPa (21.11 °C)
 Calculated Vapor Pressure

Relative vapour density : No data available

Relative density : 0.854 (15.6 °C)

Density : 0.8508 g/cm3 (15.56 °C)

Solubility(ies)

Water solubility : Not applicable

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Thermal decomposition : No data available

Viscosity

Viscosity, dynamic : < 10,000 mPa.sMethod: Brookfield

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Viscosity, kinematic : ca. 34 mm²/s (40 °C)

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : excessive heat

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : carbon dioxide and carbon monoxide
 Hydrocarbons

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation
 Skin contact
 Eye Contact
 Ingestion

Acute toxicity

Not classified based on available information.

Components:

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.58 mg/l
 Exposure time: 4 h
 Test atmosphere: dust/mist
 Assessment: Not classified as acutely toxic by inhalation under GHS.
 Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
 Remarks: No mortality observed at this dose.

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Distillates (Petroleum), Hydrotreated Heavy Paraffinic:
Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

DODECYL HYDROXYPROPYL SULFIDE:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
GLP: yes

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Assessment: Not classified as acutely toxic by dermal
absorption under GHS.

Skin corrosion/irritation

Not classified based on available information.

Components:

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Species: Rabbit

Result: No skin irritation

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Result: Slight, transient irritation

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Result: Slight, transient irritation

DODECYL HYDROXYPROPYL SULFIDE:

Species: Rabbit

Result: No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Result: Slight, transient irritation

Remarks: Expected based on components.

Remarks: Unlikely to cause eye irritation or injury.

Components:

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Species: Rabbit

Result: No eye irritation

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Result: No eye irritation

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Result: Slight, transient irritation

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DODECYL HYDROXYPROPYL SULFIDE:

Species: Rabbit

Result: No eye irritation

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

Components:

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Test Type: Buehler Test

Species: Guinea pig

Assessment: Does not cause skin sensitisation.

DODECYL HYDROXYPROPYL SULFIDE:

Test Type: Local lymph node assay

Species: Guinea pig

Assessment: May cause sensitisation by skin contact.

Method: OECD Test Guideline 429

Germ cell mutagenicity

Not classified based on available information.

Components:

DODECYL HYDROXYPROPYL SULFIDE:

Genotoxicity in vitro

: Test Type: Ames test

Test species: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Result: negative

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Components:

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

May be fatal if swallowed and enters airways.

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

May be fatal if swallowed and enters airways.

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

May be fatal if swallowed and enters airways.

Mineral Oil:



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May be fatal if swallowed and enters airways.

Further information

Product:

Remarks: No data available

Carcinogenicity:

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Acute aquatic toxicity : Acute aquatic toxicity Category 3; Harmful to aquatic life.

Chronic aquatic toxicity : Chronic aquatic toxicity Category 3; Harmful to aquatic life with long lasting effects.

Components:

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
 Exposure time: 96 h
 Test Type: static test
 Test substance: WAF
 Method: OECD Test Guideline 203
 Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l
 Exposure time: 48 h
 Test Type: static test
 Test substance: WAF
 Method: OECD Test Guideline 202

Toxicity to algae : NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l
 End point: Growth inhibition
 Exposure time: 72 h
 Test Type: static test

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Test substance: WAF
 Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOELR (Oncorhynchus mykiss (rainbow trout)): Calculated >= 1,000 mg/l
 Exposure time: 14 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEL (Daphnia (water flea)): 10 mg/l
 Exposure time: 21 d
 Test substance: WAF
 Method: OECD Test Guideline 211

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:
 Toxicity to fish : LL50 (Fish): > 100 mg/l
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
 Exposure time: 48 h

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
 Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

DODECYL HYDROXYPROPYL SULFIDE:
 Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.75 mg/l
 Exposure time: 96 h
 Test Type: semi-static test
 Method: OECD Test Guideline 203
 GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 0.58 mg/l
 Exposure time: 48 h
 Test Type: static test
 Test substance: WAF

Toxicity to algae : EL50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
 Exposure time: 96 h
 Test Type: static test
 Test substance: WAF

M-Factor (Acute aquatic toxicity) : 1

Toxicity to daphnia and other : NOEL (Daphnia magna (Water flea)): 0.32 mg/l

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aquatic invertebrates
 (Chronic toxicity)

Exposure time: 21 d
 Test Type: semi-static test
 Method: OECD Test Guideline 211
 GLP: yes

M-Factor (Chronic aquatic toxicity) : 1

Persistence and degradability
Components:

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Biodegradability : Result: Not readily biodegradable.
 Biodegradation: 2 - 4 %
 Exposure time: 28 d
 Method: OECD Test Guideline 301B

DODECYL HYDROXYPROPYL SULFIDE:

Biodegradability : Result: Not readily biodegradable.
 Biodegradation: 5 %
 Exposure time: 28 d
 Method: OECD Test Guideline 301F

No data available

Bioaccumulative potential
Components:

DODECYL HYDROXYPROPYL SULFIDE:

Partition coefficient: n-octanol/water : log Pow: 4.7 - 6.5

No data available

Mobility in soil
Components:

No data available

Other adverse effects

No data available

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Harmful to aquatic life with long lasting effects.

Components:
SECTION 13. DISPOSAL CONSIDERATIONS
Disposal methods

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

The product should not be allowed to enter drains, water courses or the soil.

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Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste
handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION**International transport regulations****REGULATION**

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

TDG_INWT_C

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

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Not dangerous goods

MX_DG

Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant

no

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act
CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
BENZENE	71-43-2	10	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
SULFUR DIOXIDE	7446-09-5	500	*
SULFUR DIOXIDE	7446-09-5		*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : No SARA Hazards**SARA 313**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

ENCS : Not in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory



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PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

TSCA : On TSCA Inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

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NFPA:	HMIS III:						
Flammability Health Instability Special hazard.	<table border="1"> <tr> <td>HEALTH</td><td>0</td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	0	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	0						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

H304 May be fatal if swallowed and enters airways.
 H317 May cause an allergic skin reaction.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

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The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists
 BEI : Biological Exposure Index
 CAS : Chemical Abstracts Service (Division of the American Chemical Society).
 CMR : Carcinogenic, Mutagenic or Toxic for Reproduction
 FG : Food grade
 GHS : Globally Harmonized System of Classification and Labeling of Chemicals.
 H-statement : Hazard Statement
 IATA : International Air Transport Association.
 IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization
 ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"
 IMDG : International Maritime Code for Dangerous Goods
 ISO : International Organization for Standardization
 logPow : octanol-water partition coefficient
 LCxx : Lethal Concentration, for xx percent of test population
 LDxx : Lethal Dose, for xx percent of test population.
 ICxx : Inhibitory Concentration for xx of a substance
 Ecxx : Effective Concentration of xx
 N.O.S.: Not Otherwise Specified
 OECD : Organization for Economic Co-operation and Development
 OEL : Occupational Exposure Limit
 P-Statement : Precautionary Statement
 PBT : Persistent , Bioaccumulative and Toxic
 PPE : Personal Protective Equipment
 STEL : Short-term exposure limit
 STOT : Specific Target Organ Toxicity
 TLV : Threshold Limit Value
 TWA : Time-weighted average
 vPvB : Very Persistent and Very Bioaccumulative
 WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
 DOT : Department of Transportation
 FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
 HMIRC : Hazardous Materials Information Review Commission
 HMIS : Hazardous Materials Identification System
 NFPA : National Fire Protection Association
 NIOSH : National Institute for Occupational Safety and Health
 OSHA : Occupational Safety and Health Administration
 PMRA : Health Canada Pest Management Regulatory Agency

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RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System

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1. Identification

Product number 31683, 30002
Product identifier **Windshield Washer Fluid**
Company information Service Champ
180 New Britain Blvd.
Chalfont, PA 18914 United States
Emergency telephone US 1-800-424-9300
Emergency telephone outside US 1-703-527-3887
Version # 01
Recommended use Not available.
Recommended restrictions None known.

2. Hazard(s) identification

Physical hazards Flammable liquids Category 4
Health hazards Not classified.
OSHA defined hazards Not classified.
Label elements
Hazard symbol None.
Signal word Warning
Hazard statement Combustible liquid.
Precautionary statement
Prevention Keep away from flames and hot surfaces-No smoking. Wear protective gloves/eye protection/face protection.
Response In case of fire: Use appropriate media to extinguish.
Storage Store in a well-ventilated place. Keep cool.
Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.
Environmental hazards Hazardous to the aquatic environment, acute Category 3 hazard
Hazard(s) not otherwise classified (HNOC) None known.
Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
2-Butoxyethanol		111-76-2	2.5 - 10
N-Alkyl-N,N-Dimethyl-N-Benzylammonium Chloride		68391-01-5	0.1 - 1
Other components below reportable levels			90 - 100

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact Rinse with water. Get medical attention if irritation develops and persists.
Ingestion Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Direct contact with eyes may cause temporary irritation.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically.

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

The product is combustible, and heating may generate vapors which may form explosive vapor/air mixtures. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards

Combustible liquid.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Prevent product from entering drains.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Keep away from open flames, hot surfaces and sources of ignition. When using do not smoke. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks and open flame. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	PEL	240 mg/m ³
		50 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	TWA	20 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	TWA	24 mg/m3
		5 ppm

Biological limit values**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
2-Butoxyethanol (CAS 111-76-2)	200 mg/g	Butoxyacetic acid (BAA), with hydrolysis	Creatinine in urine	*

* - For sampling details, please see the source document.

Exposure guidelines**US - California OELs: Skin designation**

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

2-Butoxyethanol (CAS 111-76-2) Skin designation applies.

US - Tennessee OELs: Skin designation

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection Hand protection Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Other Wear suitable protective clothing.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties**Appearance**

Physical state Liquid.
Form Liquid.
Color Not available.

Odor Not available.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range	212 °F (100 °C) estimated
Flash point	158.0 °F (70.0 °C) estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	21.78 psig @70F estimated
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	473 °F (245 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	0.86 g/cm3 estimated
Explosive properties	Not explosive.
Flammability class	Combustible IIIA estimated
Heat of combustion	6.97 kJ/g estimated
Heat of combustion (NFPA 30B)	1.68 kJ/g estimated
Oxidizing properties	Not oxidizing.
Percent volatile	86.9 % estimated
Specific gravity VOC	0.859 estimated
(Weight %)	5.18 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics

Direct contact with eyes may cause temporary irritation.

Information on toxicological effects**Acute toxicity**

Components	Species	Test Results
2-Butoxyethanol (CAS 111-76-2)		
<u>Acute</u>		
Dermal		
LD50	Guinea pig	7.3 ml/kg, 4 Days
		0.23 ml/kg, 24 Hours
	Rabbit	435 mg/kg, 24 Hours
		0.68 ml/kg, 24 Hours
	Rat	0.63 ml/kg
	Rat	> 2000 mg/kg, 24 Hours
Inhalation		
LC50	Rabbit	400 ppm, 7 Hours
	Rat	450 ppm, 4 Hours
Oral		
LD100	Rabbit	695 mg/kg
LD50	Dog	> 695 mg/kg
	Guinea pig	1414 mg/kg
	Mouse	1519 mg/kg
	Rat	1746 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.
Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

2-Butoxyethanol (CAS 111-76-2) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects May be harmful if absorbed through skin. Prolonged inhalation may be harmful.

2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

12. Ecological information

Ecotoxicity Harmful to aquatic life.

Components	Species	Test Results
2-Butoxyethanol (CAS 111-76-2)		
Aquatic		
Fish	LC50	Inland silverside (Menidia beryllina) 1250 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

2-Butoxyethanol 0.83

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number UN1993
UN proper shipping name Flammable liquids, n.o.s. (Glycol Ether EB)
Transport hazard class(es)
Class 3
Subsidiary risk -
Label(s) 3
Packing group III
Special precautions for user Not available.
Special provisions B1, B52, IB3, T4, TP1, TP29
Packaging exceptions 150
Packaging non bulk 203
Packaging bulk 242

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.



15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
2-Butoxyethanol	111-76-2	2.5 - 10

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

2-Butoxyethanol (CAS 111-76-2)

US. Massachusetts RTK - Substance List

2-Butoxyethanol (CAS 111-76-2)

US. New Jersey Worker and Community Right-to-Know Act

2-Butoxyethanol (CAS 111-76-2)

US. Pennsylvania Worker and Community Right-to-Know Law

2-Butoxyethanol (CAS 111-76-2)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

WARNING: This product can expose you to chemicals including Ethylene Oxide, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 09-14-2018

Version # 01

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.



SAFETY DATA SHEET

Product Name:	PPE
Honda VTM-4 Differential Fluid (U.S.), 6 X 1 Gallon Case	   

Revision Date: 19-Apr-2015

Revision Number: 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Product Name: Honda VTM-4 Differential Fluid (U.S.), 6 X 1 Gallon Case

Other means of identification

Product Code: 1665-059

Synonyms Not available

1.2 Recommended use of the chemical and restrictions on use

Recommended Use Automotive Lubricant

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Manufactured by Idemitsu Lubricants America Corporation
701 Port Rd.
Jeffersonville, IN. 47130
Telephone: 812-285-8234
Fax: 812-285-8243
Contact Name: Robin Hutchens
Email: sds@ilacorp.com

24 Hour Emergency Phone Number Within USA and Canada: 1-800-424-9300
Outside USA and Canada: + 1 703-741-5970 (collect calls accepted)

2. HAZARDS IDENTIFICATION

2.1 Classification

This material is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200) and WHMIS 2015

Acute toxicity - Oral	Not classified
Acute toxicity - Dermal	Not classified
Acute toxicity - Inhalation (Gases)	Not classified
Acute toxicity - Inhalation (Vapors)	Not classified
Acute toxicity - Inhalation (Dusts/Mists)	Not classified
Skin corrosion/irritation	Not classified
Serious eye damage/eye irritation	Not classified
Respiratory sensitization	Not classified
Skin sensitization	Category 1
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Category 2 Testes
Specific target organ toxicity (single exposure)	Not classified
Specific target organ toxicity (repeated exposure)	Not classified
Aspiration toxicity	Not classified
Physical hazards	None

2.2. Label elements



Signal word

Hazard statements

Precautionary Statements - Prevention:

Precautionary Statements - Response:

Skin

Warning

H317 - May cause an allergic skin reaction
H361 - Suspected of damaging fertility or the unborn child if swallowed

P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P272 - Contaminated work clothing should not be allowed out of the workplace

P308 + P313 - IF exposed or concerned: Get medical advice/attention
P321 - Specific treatment (see supplemental first aid instructions on this label)
P362 + P364 - Take off all contaminated clothing and wash it before reuse

P302 + 352 - IF ON SKIN: Wash with plenty of soap and water
P363 - Wash contaminated clothing before reuse
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention

Precautionary Statements - Storage:	P405 - Store locked up
Precautionary Statements - Disposal:	P501 - Dispose of contents/ container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)	Not applicable

2.3 Other information

Other hazards	• May be harmful in contact with skin • Harmful to aquatic life with long lasting effects
Unknown acute toxicity	12.69227% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

Hazardous components

Chemical Name	CAS-No	Weight %	Notes
Tricresylphosphate	1330-78-5	<1	
N-Phenyl-1-naphthylamine	90-30-2	<1	

Components that do not contribute to this product's hazards

Chemical Name	CAS-No	Weight %
Lubricating Base Stocks	Mixture	80-90

4. FIRST AID MEASURES

4.1 First Aid Measures

General Advice	If symptoms persist, call a physician. Get medical advice/attention if you feel unwell. Take a copy of the Safety Data Sheet when going for medical treatment.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
Inhalation	Move to fresh air in case of accidental inhalation of vapors. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician immediately.
Ingestion	Do not induce vomiting without medical advice. If vomiting occurs naturally, have casualty lean forward to reduce the risk of aspiration. Call a physician or Poison Control Center immediately.
Protection of First-aiders	Use personal protective equipment. Avoid contact with skin, eyes and clothing.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable Properties

NFPA: Class IIIB Combustible Liquid

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

Unsuitable Extinguishing Media

Do not use a solid water stream as it may scatter and spread fire.

5.2 Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition.

Hazardous combustion products:

During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and / or irritating. Combustion products may include and are not limited to, Carbon oxides, Calcium Oxides (CaOx), Oxides of Magnesium, Nitrogen oxides (NOx), Oxides of Phosphorus, Sulphur oxides.

5.3 Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions

Avoid contact with the skin and the eyes. Use personal protective equipment. Remove all sources of ignition. Avoid breathing vapors or mists. Ensure adequate ventilation.

6.2 Environmental Precautions

Environmental Precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system. Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

6.3 Methods and material for containment and cleaning up

Methods for Clean-up

Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Spill Management

LARGE SPILLS

Eliminate sources of ignition. Prevent additional discharge of material if possible to do so without hazard. For small spills implement cleanup procedures; for large spills implement cleanup procedures and, if in public area, keep public away and advise authorities. Also, if this product is subject to CERCLA reporting (see Section 15 Regulatory Information) notify the National Response Center.

WATER SPILLS

Prevent liquid entering sewers, watercourses, or low areas. Contain spilled liquid with sand or earth. Recover by pumping or with suitable absorbent. If liquid is too viscous for pumping, scrape up. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Handling

Wear personal protective equipment. Do not breathe vapors or spray mist. Remove and wash contaminated clothing before re-use. Keep away from open flames, hot surfaces and sources of ignition. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).

Safe Handling Advice

Handle in accordance with good industrial hygiene and safety practices.

7.2. Conditions for safe storage, including any incompatibilities

Storage

Keep in properly labeled containers. Keep container tightly closed in a dry and well-ventilated place.

Incompatible Materials and/or Coatings

No information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Exposure Guidelines

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Other Exposure Guidelines (If Generated)

Chemical Name	OSHA PEL	ACGIH TLV	ACGIH OEL (STEL)	NIOSH REL TWA	ILA IHG	ILA ROEG	ILA Internal Exposure Limit
Oil mist, mineral	TWA: 5 mg/m ³	TWA: 5 mg/m ³		TWA 5 mg/m ³ ST 10 mg/m ³			

8.2. Exposure controls

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas. Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Personal Protective Equipment

Eye/face protection

Tightly fitting safety goggles. Wear chemical splash goggles and face shield when eye and face contact is possible due to splashing or spraying of material.

Skin protection	Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate to prevent skin contact. Glove Type: Neoprene, Nitriles.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
General Hygiene Considerations	When using, do not eat, drink or smoke. Clean equipment, work area and clothing regularly. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Red / Clear
Physical State	Liquid
Odor	Mild
Odor Threshold	No information available
pH	Not applicable
Melting point / melting range	Not applicable
Boiling point / boiling range	No information available
Flash Point	> 170 °C / 338 °F COC ASTM D92
Evaporation Rate	No information available
Flammability Limit in Air	No information available
Explosion Limits	No information available
Vapor Pressure	No information available
Vapor Density (Air)	No information available
Density	0.86 g/cm ³ @15°C
Solubility	No information available
Partition Coefficient (n-octanol/water)	No information available
Autoignition Temperature	No information available
Decomposing Temperature	No information available
Viscosity	@ 40C = 30.91 cSt; @ 100C = 7.32 cSt

Other Information

10. STABILITY AND REACTIVITY

10.1 Reactivity

Reactivity	The product is chemically stable

10.2 Chemical stability

Chemical Stability	Stable under recommended storage conditions.

10.3 Possibility of Hazardous Reactions

Possibility of Hazardous Reactions	None under normal processing.

Hazardous Polymerization	Hazardous polymerisation does not occur.

10.4 Conditions to Avoid

Conditions to Avoid	Heat, flames and sparks.

10.5 Incompatible Materials

Incompatible Materials

Strong oxidizing agents.

10.6 Hazardous Decomposition Products

Hazardous decomposition products

Thermal decomposition can lead to release of irritating gases and vapors.

11. TOXICOLOGICAL INFORMATION

11.1 Information on likely routes of exposure

Inhalation	May cause irritation of respiratory tract.
Eye contact	May cause slight irritation.
Skin Contact	May cause an allergic skin reaction. May be harmful in contact with skin.
Ingestion	May be harmful if swallowed.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Tricresylphosphate 1330-78-5	3000 mg/kg (Rat)	1701 mg/kg (Rabbit)	
N-Phenyl-1-naphthylamine 90-30-2	= 1625 mg/kg (Rat)		

11.2 Information on toxicological effects

Symptoms	No information available

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Not classified.
Serious eye damage/eye irritation	Not classified.
Sensitization	May cause an allergic skin reaction.
Mutagenic effects	Not classified.

11.4 Carcinogenicity

Carcinogenicity	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, OSHA, or ACGIH.

Legend:

NTP: (National Toxicity Program), ACGIH: (American Conference of Governmental Industrial Hygienists), IARC: (International Agency for Research on Cancer), OSHA: (Occupational Safety & Health Administration)

Reproductive Effects	Suspected of damaging fertility or the unborn child if swallowed.
Developmental Effects	Not classified.
STOT - single exposure	Not classified.
STOT - repeated exposure	Not classified
Aspiration hazard	Not classified.

11.5 Acute Toxicity

Unknown acute toxicity 12.69227% of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

Product Information (Estimated):

ATEmix (oral) > 5,000 mg/kg
ATEmix (dermal) > 2,000 mg/kg
ATEmix (inhalation-dust/mist) > 5 mg/l

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Ecotoxicity effects

Harmful to aquatic life with long lasting effects. Plants and animals may experience harmful or fatal effects when coated with petroleum products. Petroleum-based (mineral) lubricating oils normally will float on water. In stagnant or slow-flowing waterways, an oil layer can cover a large surface area. As a result, this oil layer might limit or eliminate natural atmospheric oxygen transport into the water. With time, if not removed, oxygen depletion in the waterway may be sufficient to cause a fish kill or create an anaerobic environment.

Unknown aquatic toxicity

14.109724% of the mixture consists of components(s) of unknown hazards to the aquatic environment

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulation/Accumulation

No information available

12.4. Mobility in soil

No information available

PBT and vPvB assessment

No information available

12.5 Other adverse effects:

No information available

13. DISPOSAL CONSIDERATIONS

Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly, it is the responsibility of the user to determine the proper storage, transportation, treatment and/or disposal methodologies for spent materials and residues at the time of disposition.

To minimize exposure, see Section 8 (Exposure Controls/Personal Protection) of the SDS.

Waste Disposal Method

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging

Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

DOT

Not regulated

IATA

Not regulated

IMDG/IMO

Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	All ingredients are on the inventory or exempt from listing		
DSL	Not all ingredients are listed on the DSL Inventory List		
NDSL	There are ingredients listed on the NDSL Inventory List		
Chemical Name Tridecane, 1-chloro-	NDSL X	CAS-No 822-13-9	Weight % <0.01
EINECS	Does not comply		
ELINCS	Not Listed		
ENCS	Does not comply		
CHINA	All ingredients are on the inventory or exempt from listing		
KECL	Does not comply		
PICCS	Does not comply		
AICS	Does not comply		
NZIoC	Does not comply		
Mexico (INSQ)	Does not comply		

USA

Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

CERCLA/SARA 302 & 304

Section 302 & 304 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 355.

Chemical Name	CAS-No	Weight %	RQ	TPQ
Methyl methacrylate	80-62-6	<0.1	1000 lb final RQ 454 kg final RQ	
Fumaric acid	110-17-8	<0.1	5000 lb final RQ 2270 kg final RQ	
Ethylene diamine	107-15-3	<0.01	5000 lb final RQ 2270 kg final RQ	10000 lb TPQ
Aniline	62-53-3	<0.001	5000 lb final RQ 2270 kg final RQ	1000 lb TPQ

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following HAPs:

Chemical Name	CAS-No	Weight %	HAPS data
Methyl methacrylate	80-62-6	<0.1	X

Aniline	62-53-3	<0.001	X

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CAS-No	Weight %	U.S. - CWA (Clean Water Act)
9-Octadecenoic acid (Z)-, zinc salt	557-07-3	<1	X
Methyl methacrylate	80-62-6	<0.1	X
Fumaric acid	110-17-8	<0.1	X
Ethylene diamine	107-15-3	<0.01	X
Aniline	62-53-3	<0.001	X

State Regulations

California Proposition 65

This product contains a chemical known in the State of California to cause cancer

Chemical Name	CAS-No	Weight %	California Prop. 65	Maximum Allowable Dose for Reproductive Toxicity (MADLS)	Safe Harbor Limits for Cancer-causing Chemicals (NSRLs)
Aniline	62-53-3	<0.001	Carcinogen		100 µg/day

State Right-to-Know

Chemical Name	CAS-No	New Jersey
Petroleum distillates, hydrotreated heavy paraffinic	64742-54-7	X

New Jersey Worker and Community Right-to-Know Act:

Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows:
PETROLEUM OIL (Lubricating Oil)

Canada

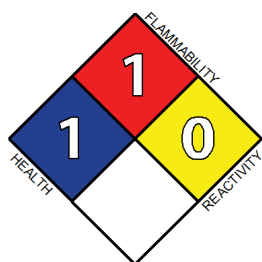
This material has been classified in accordance with the WHMIS 2015 regulation

Chemical Name	CAS-No	Weight %	NPRI
2,6-di-tert-butyl p-cresol	128-37-0	<1	Listed
Petroleum distillates, hydrotreated light	64742-47-8	<0.1	Listed
Methyl methacrylate	80-62-6	<0.1	Listed
Diphenylamine	122-39-4	<0.01	Listed
Aniline	62-53-3	<0.001	Listed

Legend

NPRI - National Pollutant Release Inventory

16. OTHER INFORMATION



NFPA

Health: 1

Flammability: 1

Instability 0

Prepared By
Revision Date:

Susie Bibb
19-Apr-2015

Revision Summary:

GHS SDS format

Disclaimer:

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET

MSDS: 47844-1227E41EEN

Date Prepared: 2010/07/01

Date Revised: 2014/02/03

Product Name: Honda DPF II

1. Identification of the substance/mixture and of the company/undertaking

Product Name: Honda DPF II
 Identification of the supplier: JX Nippon Oil & Energy USA Inc.
 Address: 20 N. Martingale Rd., Suite 325, Schaumburg, IL 60173
 Charge section: Lubricants Sales Department
 (TEL:+1-847-413-2188 FAX:+1-847-413-2199)

2. Hazards identification

hazard category	Category
Flammable liquids	No Classification
Acute toxicity (oral)	No Classification
Acute toxicity (dermal)	No Classification
Skin corrosion/irritation	No Classification
Specific target organ systemic toxicity following single exposure	No Classification
Specific target organ systemic toxicity following repeated exposure	No Classification

LABEL ELEMENTS

Precautionary pictograms:	Not applicable
Signal word:	Not applicable
Hazard Statement:	Not applicable
Precautionary Statements:	

Prevention Do not handle until all safety precautions have been read and understood.
 Wear protective gloves/protective clothing/eye protection/face protection.

Wash hands thoroughly after handling.

Do not eat, drink or smoke when using this product.

Response IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN: Wash with plenty of soap and water.

Storage The product must be stored in a cool, well-ventilated location where it will not be exposed to direct sunlight.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

3. Composition/information on ingredients

Substance/Mixture: Mixture

SAFETY DATA SHEET

MSDS: 47844-1227E41EEN

Date Prepared: 2010/07/01

Date Revised: 2014/02/03

Product Name: Honda DPF II

Ingredients and Concentration

Ingredient Name	Concentrationwt. %
Base Oil(s)	70-80
Kerosine	0.1-0.9
Additives	<30

4. First-aid measures

Inhalation:	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Cover the body with blankets to keep warm and quiet. If you feel unwell, seek medical advice.
Skin Contact:	Immediately flush skin with large amounts of water. Wash contaminated clothing before reuse.
Eye Contact:	If skin irritation occurs : Get medical advice/attention. Rinse with clean water carefully for several minutes. Remove contact lenses if present and if removal is easy, then continue rinsing. Rinse for 15 minutes at a minimum and seek medical attention.
Ingestion:	Do not induce vomiting. Drink [one glass] [two glasses] of water. Call a physician [or poison control center] immediately.

5. Fire-fighting measures

Suitable Extinguishing Media:	Mist of loaded liquid, dry chemicals, carbon dioxide, fire foam, and dry sand are effective.
Extinguishing Media to Avoid:	Use of straight steam of water can cause a risk of spreading fire.
Specific hazards arising from the chemical:	In some cases of fire, may release irritant gases.
Fire Fighting:	When burnt, may generate carbon monoxide and other toxic gases. Spray water to the surrounding facilities for cooling. Keep unauthorized persons off the site of occurrence of fire and the surroundings. Even after extinction, cool containers thoroughly with plenty of water.
Special protective equipment and precautions for fire fighters:	Wear fire/flare resistant/retardant clothing. Fight fire from windward direction while wearing protective equipment. If contact with skin is expected, wear impervious protective equipment and gloves. Use air-breathing apparatus and protective clothing whenever necessary.

6. Accidental release measures

SAFETY DATA SHEET

MSDS: 47844-1227E41EEN

Date Prepared: 2010/07/01

Date Revised: 2014/02/03

Product Name: Honda DPF II

Personal precautions, protective equipment and emergency procedures:	Wear protective equipment when working. Remove nearby potential ignition sources immediately. When mist is generated, use respiratory equipment to prevent inhalation of mist. Do not touch or walk through spillage.
Environmental precautions:	Pay attention to the site of spillage, which is slippery. Prevent spreading of oil spill with earth and sand, sandbags, or other proper materials and use care not to allow the oil spill to flow to street drains, sewer systems, and rivers. At sea, install oil spill containment booms to prevent spreading of spills and absorb with absorption mat or other proper materials.
Methods and materials for containment and cleaning up:	In case of spillage in small quantity, collect spillage by absorbing with earth, sand, sawdust, waste, or other proper materials. In case of spillage in large quantity, enclose with embankment to prevent spreading of spillage and collect spillage in empty containers to the extent possible.
Prevention of second accident:	In case of spillage, immediately inform the organizations concerned of the spillage to prevent possible accidents and spreading of spillage. Remove nearby potential ignition sources immediately and make fire-extinguishing agents available. Remove spillage completely, and ventilate and clean the site and the surroundings.

7. Handling and storage

Handling

Technical Measures:	Keep away from any possible contact with sparks, open flames, and high-temperature materials, and do not allow release of vapor without justification. Use pumps or other proper equipment for taking out from containers. Do not siphon with your mouth using a tube. Do not drink. When mist is generated, use respiratory equipment to prevent inhalation of mist. In case of vapor/mist dispersion, install a closed system, local ventilation system, and/or other proper equipment for the sources of vapor/mist generation. Avoid rough handling of containers such as falling, dropping, exposing to shock, and dragging.
Ventilation requirements:	Maintain adequate ventilation when handling indoors.
Precautions:	Wash hands and face thoroughly after handling. Be careful with fire.
Precautions for safe handling:	Avoid falling, dropping, exposing to shock, or dragging of containers. Wear protective gloves when opening containers to eliminate a risk of hand injury.

Storage

SAFETY DATA SHEET

MSDS: 47844-1227E41EEN

Date Prepared: 2010/07/01

Date Revised: 2014/02/03

Product Name: Honda DPF II

Storage Conditions: Store in a well ventilated, cool, dry, dark place, protecting from direct sunlight and keeping away from any potential ignition sources and high-temperature materials.
Store tightly stopped after use to prevent possible contamination with dust and moisture.
Preferably store locked up in a proper storage area.

Safety adequate container materials: Use spill-proof containers that are free of damage/corrosion.

8. Exposure controls/personal protection

Appropriate engineering controls: In case of mist generation, enclose the source of mist generation, or install a ventilation system.
Install eye cleaning and body cleaning equipment near the handling site.

Control parameters

Ingredient Name	Japan Society for Occupational Exposure Limits	ACGIH	
		TLV-STEL	TLV-TWA
Base Oil(s)	None established ppm, 3mg/m3 (Mineral Oil Mist)	None established ppm, None established mg/m3	None established ppm, 5mg/m3 (Mineral Oil Mist)
Kerosine	None established ppm, None established mg/m3	None established ppm, None established mg/m3	None established ppm, 200mg/m3 (Kerosine)

Personal Protective Equipment

Respiratory Protection: Not needed under normal conditions, but wear a gas mask (against organic gases) whenever required.

Hand protection: In case of prolonged or repeated exposure, wear oil-resistant hand protection.

Eye/face protection: In case of exposure to splashes, wear ordinary type goggles.

Skin Protection: In case of handling over a prolonged period of time or in case of exposure to oil, wear oil-resistant, long-sleeved work clothing.

Hygiene Measures: Take off contaminated clothing and wash thoroughly before reuse.
Wash hands thoroughly after handling.

9. Physical and chemical properties

Product

Physical state: Liquid

Form: Liquid

Color: Red

Odor: Slight odor

Melting point/freezing point: Pour Point-47.5(°C)

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MSDS: 47844-1227E41EEN

Date Prepared: 2010/07/01

Date Revised: 2014/02/03

Product Name: Honda DPF II

Initial boiling point and boiling range:	Initial boiling point - End point No data
Flash point:	180(°C)Cleveland Open Cup
Auto-ignition temperature:	Estimate200—410(°C)
Upper/lower flammability or explosive limits:	Explosion Limit (1-7%)
Vapour density:	No data.
Density(g/cm3):	0.851(15°C)
Solubility:	water : Insoluble.
Partition coefficient: n-octanol/water:	No data.
Decomposition temperature:	No data.

10. Stability and reactivity

Chemical stability:	Stable when stored or preserved in a dark place at room temperature.
Possibility of hazardous reactions:	Keep away from any possible contact with strong oxidizing agents.
Conditions to avoid:	Contact with incompatible hazard substances Prolonged heating, open flames, and ignition sources
Incompatible materials:	Use care to keep away from any possible contact with halogens, strong acids, alkalis, and acidifying substances.
Hazardous decomposition products:	When burnt, may release carbon monoxide and other gases.

11. Toxicological information

Product

Acute toxicity (oral):	For mixtures, hazard category was identified based on the classification criteria for mixtures.
Acute toxicity (dermal):	For mixtures, hazard category was identified based on the classification criteria for mixtures.
Acute toxicity (inhalation):	For mixtures, hazard category was identified based on the classification criteria for mixtures.
Skin corrosion/irritation:	For mixtures, hazard category was identified based on the classification criteria for mixtures.
Serious eye damage/irritation:	For mixtures, hazard category was identified based on the classification criteria for mixtures.
Respiratory sensitization:	For mixtures, hazard category was identified based on the classification criteria for mixtures.
Skin sensitization:	For mixtures, hazard category was identified based on the classification criteria for mixtures.
Mutagenicity:	For mixtures, hazard category was identified based on the classification criteria for mixtures.
Carcinogenicity:	For mixtures, hazard category was identified based on the classification criteria for mixtures.
Reproductive toxicity:	For mixtures, hazard category was identified based on the classification criteria for mixtures.

SAFETY DATA SHEET

MSDS: 47844-1227E41EEN

Date Prepared: 2010/07/01

Date Revised: 2014/02/03

Product Name: Honda DPF II

Target organ effect/Single exposure:	For mixtures, hazard category was identified based on the classification criteria for mixtures.
Target organ effect/Multi exposure:	For mixtures, hazard category was identified based on the classification criteria for mixtures.
Respiratory toxic:	For mixtures, hazard category was identified based on the classification criteria for mixtures.
Ingredient	
Base Oil(s)	
Acute toxicity (oral):	LD50: $\geq$ 5000 mg/kg[rat]
Acute toxicity (dermal):	LD50: $\geq$ 5000 mg/kg[rat]
Serious eye damage/irritation:	Practically None [rabbit]
Skin sensitization:	None Buehler method [guinea pig]
Mutagenicity:	Ames Test: Negative
Carcinogenicity:	EU: Category 2: R45 need not apply. (NOTE L is Applicable), IARC: 3
Kerosine	
Acute toxicity (oral):	LD50: $>$ 5000 mg/kg[rat]
Acute toxicity (dermal):	LD50: $>$ 2000 mg/kg[rabbit]
Acute toxicity (inhalation):	LC50: $>$ 5.28 mg/L[rat], LC50: $>$ 5.28 mg/L[rat]
Skin corrosion/irritation:	Moderate [rabbit], Effect on person: not entered
Serious eye damage/irritation:	None [rabbit], Effect on animals: not entered
Respiratory sensitization:	Effect on person: not entered
Skin sensitization:	None Buehler method [guinea pig]
Mutagenicity:	Negative, Negative
Carcinogenicity:	ACGIH: A3, ACGIH: A3
Respiratory toxic:	Effect on person: not entered

12. Ecological information

Product

Ecotoxicity	
Fish acute toxicity:	For mixtures, hazard category was identified based on the classification criteria for mixtures.
Algae acute toxicity:	For mixtures, hazard category was identified based on the classification criteria for mixtures.
Fish chronic toxicity:	For mixtures, hazard category was identified based on the classification criteria for mixtures.
Algae chronic toxicity:	For mixtures, hazard category was identified based on the classification criteria for mixtures.

Ingredient

Base Oil(s)

Ecotoxicity	
Fish acute toxicity:	96hLC50: $>$ 5000 mg/L[Oncorhynchus mykiss]
Daphnia acute toxicity:	48hEC50: $>$ 1000 mg/L[Daphnia magna]

13. Disposal considerations

SAFETY DATA SHEET

MSDS: 47844-1227E41EEN

Date Prepared: 2010/07/01

Date Revised: 2014/02/03

Product Name: Honda DPF II

Disposal methods: Dispose of contents/container in accordance with local/regional/national/international regulations.
 Every customer/user of the product should dispose of industrial waste on its own responsibility, otherwise it must rely on a company authorized by prefectural governor for treating industrial waste or a local public body involved in the disposal of industrial waste for proper disposal.
 Before disposal of used container, remove contents completely.

14. Transport information

IMDG UN classification: Not applicable
 Specific security precaution and condition of transportation: Transport containers without causing any significant friction or shaking.

15. Regulatory information

Korea (KECL) : All components are listed or exempted.
 Australia (AICS) : In the case where one or more components are not listed or, even if listed, in the case of importing to the country or area concerned, an application or notification is required.
 Canada (DSL) : All components are listed or exempted.
 China (IECSC) : All components are listed or exempted.
 EU (REACH) : In the case where one or more components are not listed or, even if listed, in the case of importing to the country or area concerned, an application or notification is required.
 New Zealand (NZIoC) : In the case where one or more components are not listed or, even if listed, in the case of importing to the country or area concerned, an application or notification is required.
 USA (TSCA) : In the case where one or more components are not listed or, even if listed, in the case of importing to the country or area concerned, an application or notification is required.
 Philippines (PICCS) : All components are listed or exempted.
 Taiwan : All components are listed or exempted.

16. Other information

Disclaimer We at JX Nippon Oil & Energy Corporation have prepared the copyrighted Safety Data Sheet to provide reference information on the hazardous chemical product of interest for our customers/users to ensure secure and safe handling.
 We would like every customer/user of the product to refer to the information and understand the necessity of taking appropriate measures for the actual handling conditions on their own responsibilities for optimum practical application of the product of interest.
 Consequently, the Safety Data Sheet is not intended to guarantee the safety of the product referenced to herein.



SAFETY DATA SHEET

Product Name:	PPE
Honda Manual Transmission Fluid, 12 x 1 Quart Case	 

Revision Date: 17-Apr-2015

Revision Number: 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Product Name: Honda Manual Transmission Fluid, 12 x 1 Quart Case

Other means of identification

Product Code: 1653-042

Synonyms Not available

1.2 Recommended use of the chemical and restrictions on use

Recommended Use Automotive Lubricant

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Manufactured by Idemitsu Lubricants America Corporation
701 Port Rd.
Jeffersonville, IN. 47130
Telephone: 812-285-8234
Fax: 812-285-8243
Contact Name: Robin Hutchens
Email: sds@ilacorp.com

24 Hour Emergency Phone Number Within USA and Canada: 1-800-424-9300
Outside USA and Canada: + 1 703-741-5970 (collect calls accepted)

2. HAZARDS IDENTIFICATION

2.1 Classification

This material is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200) and WHMIS 2015

Acute toxicity - Oral	Not classified
Acute toxicity - Dermal	Not classified
Acute toxicity - Inhalation (Gases)	Not classified
Acute toxicity - Inhalation (Vapors)	Not classified
Acute toxicity - Inhalation (Dusts/Mists)	Not classified
Skin corrosion/irritation	Not classified
Serious eye damage/eye irritation	Category 2A
Respiratory sensitization	Not classified
Skin sensitization	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
Specific target organ toxicity (single exposure)	Not classified
Specific target organ toxicity (repeated exposure)	Not classified
Aspiration toxicity	Not classified
Physical hazards	None

2.2. Label elements



Signal word

Warning

Hazard statements

H319 - Causes serious eye irritation

Precautionary Statements - Prevention:

P264 - Wash face, hands and any exposed skin thoroughly after handling
P280 - Wear protective gloves/protective clothing/eye protection/face protection

Eyes

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice or attention

Hazards not otherwise classified (HNOC)

Not applicable

2.3 Other information

Other hazards

- May be harmful in contact with skin
- Harmful to aquatic life with long lasting effects

Unknown acute toxicity

9.242% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

Hazardous components

Chemical Name	CAS-No	Weight %	Notes
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3	1-5	

Components that do not contribute to this product's hazards

Chemical Name	CAS-No	Weight %
Lubricating Base Stocks	Mixture	80-90

4. FIRST AID MEASURES

4.1 First Aid Measures

General Advice	If symptoms persist, call a physician. Take a copy of the Safety Data Sheet when going for medical treatment.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
Inhalation	Move to fresh air in case of accidental inhalation of vapors. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician immediately.
Ingestion	Do not induce vomiting without medical advice. If vomiting occurs naturally, have casualty lean forward to reduce the risk of aspiration. Call a physician or Poison Control Center immediately.
Protection of First-aiders	Use personal protective equipment. Avoid contact with skin, eyes and clothing.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable Properties	NFPA: Class IIIB Combustible Liquid

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

Unsuitable Extinguishing Media

Do not use a solid water stream as it may scatter and spread fire.

5.2 Specific Hazards Arising from the Chemical

Hazardous combustion products:

Keep product and empty container away from heat and sources of ignition.

During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and / or irritating. Combustion products may include and are not limited to, Carbon oxides, Calcium Oxides (CaOx), Hydrogen Sulfide, Nitrogen oxides (NOx), Oxides of Phosphorus, Sulphur oxides, Zinc oxides.

5.3 Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions

Avoid contact with the skin and the eyes. Use personal protective equipment. Remove all sources of ignition. Avoid breathing vapors or mists. Ensure adequate ventilation.

6.2 Environmental Precautions

Environmental Precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system. Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

6.3 Methods and material for containment and cleaning up

Methods for Clean-up

Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Spill Management

LARGE SPILLS

Eliminate sources of ignition. Prevent additional discharge of material if possible to do so without hazard. For small spills implement cleanup procedures; for large spills implement cleanup procedures and, if in public area, keep public away and advise authorities. Also, if this product is subject to CERCLA reporting (see Section 15 Regulatory Information) notify the National Response Center.

WATER SPILLS

Prevent liquid entering sewers, watercourses, or low areas. Contain spilled liquid with sand or earth. Recover by pumping or with suitable absorbent. If liquid is too viscous for pumping, scrape up. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Handling

Wear personal protective equipment. Do not breathe vapors or spray mist. Remove and wash contaminated clothing before re-use. Keep away from open flames, hot surfaces and sources of ignition. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).

Safe Handling Advice

Handle in accordance with good industrial hygiene and safety practices.

7.2. Conditions for safe storage, including any incompatibilities

Storage

Keep in properly labeled containers. Keep container tightly closed in a dry and well-ventilated place.

Technical measures/Precautions

Sulfur compounds in this material may decompose when heated to release hydrogen sulfide gas which may accumulate to potentially lethal concentrations in enclosed air spaces. Vapor concentrations of hydrogen sulfide above 50 ppm, or prolonged exposure at lower concentrations, may saturate human odor perceptions so that the smell of gas may not be apparent. Exposure to concentrations of hydrogen sulfide vapor above 500 ppm may cause rapid death. Do not rely on the sense of smell to detect hydrogen sulfide.

Incompatible Materials and/or Coatings

No information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Exposure Guidelines

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Other Exposure Guidelines (If Generated)

Chemical Name	OSHA PEL	ACGIH TLV	ACGIH OEL (STEL)	NIOSH REL TWA	ILA IHG	ILA ROEG	ILA Internal Exposure Limit
Hydrogen sulfide	Ceiling: 20 ppm	TWA: 1 ppm STEL: 5 ppm	5 ppm				
Oil mist, mineral	TWA: 5 mg/m ³	TWA: 5 mg/m ³		TWA 5 mg/m ³ ST 10 mg/m ³			

8.2. Exposure controls

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas. Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Personal Protective Equipment

Eye/face protection

Tightly fitting safety goggles. Wear chemical splash goggles and face shield when eye and face contact is possible due to splashing or spraying of material.

Skin protection

Use clean protective clothing if splashing or spraying conditions are present. Protective clothing may include long-sleeve outer garment, apron, or lab coat. **Glove Type:** Neoprene, Nitriles.

Respiratory protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations

When using, do not eat, drink or smoke. Clean equipment, work area and clothing regularly.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Clear / Dark Brown
Physical State	Liquid
Odor	Mild
Odor Threshold	No information available
pH	Not applicable
Melting point / melting range	Not applicable
Boiling point / boiling range	No information available
Flash Point	> 170 °C / 338 °F COC ASTM D92
Evaporation Rate	No information available
Flammability Limit in Air	No information available
Explosion Limits	No information available
Vapor Pressure	No information available
Vapor Density (Air)	No information available
Density	0.86 g/cm ³ @15°C
Solubility	No information available
Partition Coefficient (n-octanol/water)	No information available
Autoignition Temperature	No information available
Decomposing Temperature	No information available
Viscosity	@ 40C = 30.70 cSt; @ 100C = 7.265 cSt

Other Information

10. STABILITY AND REACTIVITY

10.1 Reactivity

Reactivity

The product is chemically stable

10.2 Chemical stability

Chemical Stability

Stable under recommended storage conditions.

10.3 Possibility of Hazardous Reactions

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerisation does not occur.

10.4 Conditions to Avoid

Conditions to Avoid

Heat, flames and sparks.

10.5 Incompatible Materials

Incompatible Materials

Strong oxidizing agents.

10.6 Hazardous Decomposition Products

Hazardous decomposition products

Thermal decomposition may produce hydrogen sulfide and other sulfur-containing gases at temperatures greater than 150F.

11. TOXICOLOGICAL INFORMATION

11.1 Information on likely routes of exposure

Inhalation	May cause irritation of respiratory tract.
Eye contact	Causes serious eye irritation.
Skin Contact	May be harmful in contact with skin.
Ingestion	May be harmful if swallowed.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts 68649-42-3	3080 mg/kg (rat)	>2000 mg/kg (rat)	

11.2 Information on toxicological effects

Symptoms	No information available

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Not classified.
Serious eye damage/eye irritation	Causes serious eye irritation.
Sensitization	Not classified.
Mutagenic effects	Not classified.

11.4 Carcinogenicity

Carcinogenicity	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, OSHA, or ACGIH.

Legend:

NTP: (National Toxicity Program), ACGIH: (American Conference of Governmental Industrial Hygienists), IARC: (International Agency for Research on Cancer), OSHA: (Occupational Safety & Health Administration)

Reproductive Effects	Not classified.
STOT - single exposure	Not classified.
STOT - repeated exposure	Not classified
Aspiration hazard	Not classified.

11.5 Acute Toxicity

Unknown acute toxicity	9.242% of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

Product Information (Estimated):

ATEmix (oral)	> 5,000 mg/kg
ATEmix (dermal)	> 2,000 mg/kg
ATEmix (inhalation-dust/mist)	> 5 mg/l

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Ecotoxicity effects

Harmful to aquatic life with long lasting effects. Plants and animals may experience harmful or fatal effects when coated with petroleum products. Petroleum-based (mineral) lubricating oils normally will float on water. In stagnant or slow-flowing waterways, an oil layer can cover a large surface area. As a result, this oil layer might limit or eliminate natural atmospheric oxygen transport into the water. With time, if not removed, oxygen depletion in the waterway may be sufficient to cause a fish kill or create an anaerobic environment.

Unknown aquatic toxicity

11.1448% of the mixture consists of component(s) of unknown hazards to the aquatic environment

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulation/Accumulation

No information available

12.4. Mobility in soil

No information available

PBT and vPvB assessment

No information available

12.5 Other adverse effects:

No information available

13. DISPOSAL CONSIDERATIONS

Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly, it is the responsibility of the user to determine the proper storage, transportation, treatment and/or disposal methodologies for spent materials and residues at the time of disposition.

To minimize exposure, see Section 8 (Exposure Controls/Personal Protection) of the SDS.

Waste Disposal Method

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging

Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

DOT

Not regulated

IATA

Not regulated

IMDG/IMO

Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	All ingredients are on the inventory or exempt from listing		
DSL	Not all ingredients are listed on the DSL Inventory List		
NDSL	There are ingredients listed on the NDSL Inventory List		
<u>Chemical Name</u>	<u>NDSL</u>	<u>CAS-No</u>	<u>Weight %</u>
Benzene, 1,4-dimethyl-2-(1-phenylethyl)-	X	6165-51-1	<0.01
Benzene, 2,4-dimethyl-1-(1-phenylethyl)-	X	6165-52-2	<0.01
EINECS	Does not comply		
ELINCS	Not Listed		
ENCS	Does not comply		
CHINA	All ingredients are on the inventory or exempt from listing		
KECL	Does not comply		
PICCS	All ingredients are on the inventory or exempt from listing		
AICS	All ingredients are on the inventory or exempt from listing		
NZIoC	Does not comply		
Mexico (INSQ)	Does not comply		

USA

Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values	de minimus %
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3	1-5	1.0	

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

CERCLA/SARA 302 & 304

Section 302 & 304 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 355.

Chemical Name	CAS-No	Weight %	RQ	TPQ
Methyl methacrylate	80-62-6	<0.1	1000 lb final RQ 454 kg final RQ	

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following HAPs:

Chemical Name	CAS-No	Weight %	HAPS data
Methyl methacrylate	80-62-6	<0.1	X

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CAS-No	Weight %	U.S. - CWA (Clean Water Act)
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3	1-5	X
Methyl methacrylate	80-62-6	<0.1	X

State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

State Right-to-Know

Chemical Name	CAS-No	New Jersey
Petroleum distillates, hydrotreated heavy paraffinic	64742-54-7	X
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3	X
Petroleum distillates, solvent-refined heavy paraffinic	64741-88-4	X

Chemical Name	CAS-No	Pennsylvania
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3	X

New Jersey Worker and Community Right-to-Know Act:

Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows:
PETROLEUM OIL (Lubricating Oil)

Canada

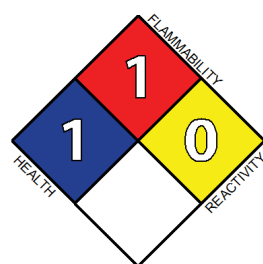
This material has been classified in accordance with the WHMIS 2015 regulation

Chemical Name	CAS-No	Weight %	NPRI
distillates (petroleum), hydrotreated light	64742-47-8	<1	Listed
Methyl methacrylate	80-62-6	<0.1	Listed
Phenol, dinonyl-	1323-65-5	<0.01	Listed
C.I. Solvent orange 7	3118-97-6	<0.001	Listed

Legend

NPRI - National Pollutant Release Inventory

16. OTHER INFORMATION



NFPA

Health: 1

Flammability: 1

Instability 0

Prepared By
Revision Date:

Susie Bibb
17-Apr-2015

Revision Summary: GHS SDS format

Disclaimer:

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet



SAFETY DATA SHEET

LEAD-ACID BATTERY FILLED WITH ACID

1. IDENTIFICATION

PRODUCT NAME: Lead/acid Battery, Wet, filled with acid / Wet cell battery / Flooded battery

Distributor: Interstate Batteries, Inc.

EMERGENCY PHONE: 24 hours – (800) 255-3924; Chemtel

12770 Merit Drive

INFORMATION PHONE: (800) 541-8419, Ext. 6672 or 6663

Dallas, Texas 75251

Recommended Use: Electric storage battery for starting a piston engine

SDS NUMBER: 1 **REVISION NUMBER:** 7

DATE OF PREPARATION/REVISION: 12/11/2017

2. HAZARDS IDENTIFICATION

NOTE: Under normal conditions of battery use, internal components will not present a health hazard. The following information is provided for battery electrolyte (acid) and lead for exposure that may occur during container breakage or under extreme heat conditions such as fire or rupture/explosion.

A. HAZARD CLASSIFICATION

PHYSICAL HAZARDS: Not Classified.

HEALTH HAZARDS

Acute toxicity Category 4 (inhalation)

Skin corrosion/irritation Category 1

Serious eye damage/eye irritation Category 1

Carcinogenicity Category 1B

Germ cell mutagenicity Category 2

Specific target organ toxicity – single exposure Category 1

Specific target organ toxicity – repeated exposure Category 1

ENVIRONMENTAL HAZARDS: Not Classified.

B. GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS AND PICTOGRAMS :



SIGNAL WORD : DANGER.

HAZARD STATEMENTS

H332 Harmful if inhaled.

H314 Causes severe skin burns and eye damage.

- H318 Causes serious eye damage.
- H350 May cause cancer (inhalation).
- H341 Suspected of causing genetic defects.
- H370 Specific target organ toxicity – single exposure; Respiratory tract irritation
- H372 Causes damage to organs (Hematopoietic system, kidney, central nervous system, peripheral nervous system, cardiovascular system, immune system, respiratory).

PRECAUTIONARY STATEMENTS:

[Prevention]

- P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
- P271 Use only outdoors or in a well-ventilated area.
- P260 Do not breathe dust/fume/gas/mist/vapors/spray.
- P264 Wash hands thoroughly after handling.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P281 Use personal protective equipment.
- P270 Do not eat, drink or smoke when using this product.

[Response]

- P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
- P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P363 Wash contaminated clothing before reuse.
- P310 Immediately call a POISON CENTER or doctor/physician.
- P321 Specific treatment (see warning label).
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and if it is easy to do. Continue rinsing.
- P308 + P313 IF exposed or concerned: Get medical advice/attention.
- P307+P311 IF exposed: Call a POISON CENTER or doctor/physician.
- P314 Get medical advice/attention if you feel unwell.
- Storage P405 Store locked up.
- Disposal P501 Dispose of contents/container in accordance with local/regional/national regulations.

C. OTHER HAZARDS WHICH DO NOT RESULT IN CLASSIFICATION (e.g. Dust explosion hazards)

NFPA/HMIS Rating for pure, undiluted sulfuric acid

:

Do not breathe dust/fume/gas/mist/vapors/spray.

Health=3, Flammability=0, Instability=1

(0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Material	% by Wt.	CAS Number	Eight Hour Exposure Limits		
			OSHA PEL	ACGIH TLV	NIOSH REL
Lead	34	7439-92-1	50 µg/m ³	150 µg/m ³	100 µg/m ³
Lead Peroxide	31	1309-60-0	50 µg/m ³	150 µg/m ³	100 µg/m ³
Lead Sulfate	1	7446-14-2	50 µg/m ³	150 µg/m ³	100 µg/m ³
Sulfuric Acid (35%)	34	7664-93-9	1mg/m ³	0.2 mg/m ³ (respirable thoracic fraction)	1 mg/m ³

4. FIRST AID MEASURES

A. EYE CONTACT If a battery ruptures/explodes, do not rub or scratch exposed eye. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. GET MEDICAL ATTENTION AS SOON AS POSSIBLE.

B. SKIN CONTACT If a battery ruptures/explodes, do not rub or scratch exposed skin. If liquid gets on the skin, immediately flush the contaminated skin with water for at least 15 minutes. If liquid penetrates through the clothing, immediately remove the clothing and shoes under a safety shower and continue to wash the skin for at least 15 minutes. GET MEDICAL ATTENTION IMMEDIATELY.

C. INHALATION If a battery ruptures/explodes, move to fresh air in case of accidental inhalation of mist. If breathing has stopped, perform artificial respiration. If breathing is difficult, give oxygen. GET MEDICAL ATTENTION AS SOON AS POSSIBLE.

D. INGESTION If solutions of a battery chemicals have been swallowed and the person is conscious, give one glass of water. Vomiting may occur spontaneously, but Do NOT induce vomiting. Never give anything by mouth to an unconscious person. GET MEDICAL ATTENTION IMMEDIATELY.

E. MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE OR DELAYED:

EYES: If a battery ruptures/explodes, direct contact with the liquid or exposure to vapors or mists may cause tearing, redness, swelling, corneal damage and irreversible eye damage. Splashes of acid in the eyes will cause severe burns.

SKIN: Direct contact with acid inside of a battery can be severely irritating to the skin and may result in redness, swelling, burns and severe skin damage. Skin contact may aggravate an existing dermatitis condition.

INHALATION: Not a likely route of exposure. If a battery ruptures/explodes, the acid or gas may be harmful or fatal if inhaled in a confined area. May cause severe irritation and burns of the nose, throat and respiratory tract.

INGESTION: If ingested, the acid in the battery causes serious burns of the mouth or perforation of the esophagus or stomach. May be fatal if swallowed. The lead in the battery can be ingested if particles of lead are ingested through the particles entering

an open container of food or liquid is. Also, particles of acid on a person's hands can contaminate food, drink, or cigarettes that are handled, so hands should be thoroughly washed after touching a battery.

Lead may be toxic to blood, kidneys, and the central nervous system (CNS). Repeated or prolonged exposure to lead can produce target organs damage.

F. INDICATION OF IMMEDIATE MEDICAL ATTENTION AND NOTES FOR PHYSICIAN

Based on the individual reactions of the patient, the physician's judgment should be used to control symptoms and clinical condition.

5. FIRE FIGHTING MEASURES

A. SUITABLE (AND UNSUITABLE) EXTINGUISHING MEDIA

Use extinguishing media appropriate for surrounding fire.

If a battery ruptures/explodes, use dry chemical, soda ash, lime, sand or carbon dioxide.

B. SPECIFIC HAZARDS ARISING FROM THE CHEMICAL

Lead, lead compounds and sulfuric acid fume may be released during a fire involving the product.

C. SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE FIGHTERS

Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective clothing.

D. FIRE AND EXPLOSION HAZARD

Not flammable.

Battery may rupture due to pressure buildup when exposed to excessive heat and may be result in the release of corrosive materials.

Lead, lead compounds and sulfuric acid fume may be released during a fire involving the product.

6. ACCIDENTAL RELEASE MEASURES

A. NECESSARY MEASURES AND PROTECTIVE GEAR TO PROTECT HUMANS

If a battery ruptures, avoid contact with skin, eyes and clothing. Do not touch spilled material. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection).

B. NECESSARY MEASURES TO PROTECT ENVIRONMENT

Notify authorities and appropriate federal, state, and local agencies. Prevent the product from spreading into the environment. Avoid direct discharge into drains.

C. METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

SMALL SPILLS: Collect all released material in a plastic lined metal container.

If necessary neutralize the residue with a dilute solution of sodium carbonate.

Wash affected area.

LARGE SPILLS: Contain liquid using absorbent material, by digging trenches or by building a dike. Absorb with dry earth, sand or other non-combustible material. Neutralize the residue with a dilute solution of sodium carbonate.

Dispose of all contaminated materials in accordance with current local regulations.

7. HANDLING AND STORAGE

A. PRECAUTIONS FOR SAFE HANDLING

Protect from physical damage.

B. CONDITIONS FOR SAFE STORAGE (INCLUDING ANY INCOMPATIBILITIES)

Avoid contact with eyes. Store in a cool, dry, ventilated area away from sources of heat, moisture, incompatibilities, and direct sunlight. Have emergency equipment (for fires, spills, leaks, etc.) readily available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

A. OCCUPATIONAL EXPOSURE LIMIT(S), BIOLOGICAL EXPOSURE STANDARD

OSHA-PEL 0.05 mg/m³ (Lead), 1 mg/m³ (Sulfuric acid), 0.5 mg/m³ (Antimony)

ACGIH-TLV TWA 0.05 mg/m³ (Lead), TWA 0.2 mg/m³ (Sulfuric acid), TWA 0.5 mg/m³ (Antimony)

B. APPROPRIATE ENGINEERING CONTROLS

Use local exhaust ventilation if necessary to control airborne mist and vapor.

C. INDIVIDUAL PROTECTION MEASURES

Respiratory protection: If significant mists or aerosols are generated an approved respirator is recommended. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

Eye protection Wear safety glasses with side shields (or goggles).

Hand protection: Wear chemical resistant gloves. Gloves should be replaced immediately if signs of degradation are observed.

Body protection: Use good work and personal hygiene practices to avoid exposure. Consider the provision in the work area of a safety shower and eyewash. Always wash thoroughly after handling chemicals.

9. PHYSICAL AND CHEMICAL PROPERTIES

A. APPEARANCE (PHYSICAL STATE, COLOUR etc.): Off-white cloudy liquid with solid object.

B. Odor: Characteristics.

C. ODOR THRESHOLD: Not available.

D. pH: pH < 1 (Sulfuric acid)

E. MELTING POINT/FREEZING POINT: Not available.

F. INITIAL BOILING POINT AND BOILING RANGE: Not available.

G. FLASH POINT: Non-flammable.

H. EVAPORATION RATE: Not available.

I. FLAMMABILITY (SOLID, GAS): Not applicable.

J. UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS: Non-Flammable

K. VAPOR PRESSURE: Not available

L. SOLUBILITY: Soluble in water.

M. VAPOR DENSITY: Not available

N. SPECIFIC GRAVITY: Not available

O. PARTITION COEFFICIENT OF n-OCTANOL/WATER: Not available.

P. AUTO-IGNITION TEMPERATURE: Not applicable.

Q. DECOMPOSITION TEMPERATURE: Not available.

R. VISCOSITY: Not available.

S. MOLECULAR WEIGHT: Mixture.

Note: These physical properties are typical values for this product.

A. APPEARANCE (PHYSICAL STATE, COLOUR etc.): Bluish white, silvery gray.

B. Odor: None.

C. ODOR THRESHOLD: Not available.

D. pH: Not applicable.

E. MELTING POINT/FREEZING POINT 327.5 C

F. INITIAL BOILING POINT AND BOILING RANGE 1740 C (1013hPa)

G. FLASH POINT: Non-flammable.
H. EVAPORATION RATE: Not applicable.
I. FLAMMABILITY (SOLID, GAS): Not applicable.
J. UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS
: Non-flammable.
K. VAPOR PRESSURE: 1.33 hPa (973°C)
L. SOLUBILITY: Insoluble in water.
M. VAPOR DENSITY: Not applicable
N. SPECIFIC GRAVITY: 11.34 g/cm³
O. PARTITION COEFFICIENT OF n-OCTANOL/WATER: Not applicable.
P. AUTO-IGNITION TEMPERATURE: Not applicable.
Q. DECOMPOSITION TEMPERATURE: Not applicable.
R. VISCOSITY: Not applicable
S. MOLECULAR WEIGHT: 207.2
Note: These physical properties are typical values for Lead (Pb).

10. STABILITY AND REACTIVITY

- A. CHEMICAL STABILITY: Stable at normal temperatures and storage conditions.
- B. POSSIBILITY OF HAZARDOUS REACTIONS: Hazardous polymerization will not occur.
- C. CONDITIONS TO AVOID (STATIC DISCHARGE, SHOCK, VIBRATION etc.): Overcharging. Sources of ignition. Mechanical impact. Contact with incompatible chemicals.
- D. SUBSTANCES TO AVOID
If a battery ruptures, avoid contact with organic materials and alkaline materials.
- E. HAZARDOUS DECOMPOSITION PRODUCTS: Lead, Lead compounds and sulfuric acid fumes may be released during a fire involving the product.

11. TOXICOLOGICAL INFORMATION

- A. Information on the likely routes of exposure
- Inhalation: Corrosive. severe irritation and burns.
- Ingestion: Serious burns
- Eye/Skin
- Eye: Tearing, redness, swelling, corneal damage, irreversible eye damage and severe burns.
- Skin: Redness, swelling, burns and severe skin damage.
- B. Delayed and immediate effects and also chronic effects from short and long term exposure
Acute toxicity (possible route of exposure):
- Oral (LD₅₀): Rat 2140 mg/kg (Sulfuric acid),
7000 mg/kg (Antimony)
- Skin (LD₅₀): Not available.
- Inhalation (LC₅₀): Rat 0.347 mg/L(4hr) (dust/mist)
- Skin corrosion/irritation: cat 1
- Serious eye damage/irritation: cat 1
- Respiratory sensitization: Not available.
- Skin sensitization: Not available

Carcinogenicity: cat 1B
ACGIH Group A2, IARC Group 1 (Mist containing sulfuric acid)
* Note: Sulfuric acid mist is not expected under normal use of the product.
ACGIH Group A3, IARC Group 2B (Lead), IARC Group 3 (Polypropylene)

Germ cell mutagenicity: cat 2

Reproductive toxicity: Not available.

STOST-single exposure: cat 1
Respiratory.

STOST-repeated exposure: cat 1
Hematopoietic system, kidney, central nervous system, peripheral nervous system, cardiovascular system, immune system, respiratory.

Aspiration hazard: Not available.

C. Numeric measure of toxicity (such as acute toxicity estimates) - ATEmix
Oral (LD50): Rat > 5,000 mg/kg

Skin (LD50): Not available.

Inhalation (LC50): Rat 2.51 mg/L (4hr) (dust//mist)

12. ECOLOGICAL INFORMATION

A. Aquatic/terrestrial ecology toxicity
Fish (LC50): Not available.
Daphnia (EC50): Not available.
Algae (EC50):
B. Persistence and degradability
Persistence: Not available
Degradability:
C. Bioaccumulative potential: Not available
D. Mobility in soil: Not available
E. Other hazardous effects: Not available.

13. DISPOSAL CONSIDERATIONS

A. DISPOSAL METHODS

Dispose of in accordance with local, state, and federal regulations. Hazardous wastes must be transported by a licensed hazardous waste transporter and disposed of or treated in a properly licensed hazardous waste treatment, storage, disposal or recycling facility. Consult local, state, and federal regulations for specific requirements.
Not available.

B. PRECAUTIONS (INCLUDING DISPOSAL OF CONTAMINATED CONTAINER OR PACKAGE)
Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (BL).

US DOT SHIPPING NAME: UN2794, Batteries, Wet, Filled with acid, Class 8

DOT LABEL: Corrosive

49 Code of Federal Regulations 173.159(e) applies shipments of UN 2794 lead-acid batteries that are securely wrapped and palletized if all of the following 4 conditions are met or when the only cargo in the truck is UN2794 and UN2800 Hazardous material. Compliance with 49 173.159(e) eliminates the need to put corrosive placards on the truck and the need for shipping papers.

[§173.159 Batteries, wet.](#)

(e) When transported by highway or rail, electric storage batteries containing electrolyte, acid, or alkaline corrosive battery fluid and electric storage batteries packed with electrolyte, acid, or alkaline corrosive battery fluid, are not subject to any other requirements of this subchapter, if all of the following are met:

- (1) No other hazardous materials may be transported in the same vehicle;
- (2) The batteries must be loaded or braced so as to prevent damage and short circuits in transit;
- (3) Any other material loaded in the same vehicle must be blocked, braced, or otherwise secured to prevent contact with or damage to the batteries. In addition, batteries on pallets, must be stacked to not cause damage to another pallet in transportation;
- (4) A carrier may accept shipments of batteries from multiple locations for the purpose of consolidating shipments of batteries for recycling; and
- (5) Shipments made under this paragraph are subject to the incident reporting requirements in §171.15.

IATA SHIPPING NAME: UN2794, Batteries, Wet, Filled with acid, Class 8, 49 Code of Federal Regulations 173.159(b)(1):

(b) For transportation by aircraft: (1) The packaging for wet batteries must incorporate an acid- or alkali-proof liner, or include a supplementary packaging with sufficient strength and adequately sealed to prevent leakage of electrolyte fluid in the event of spillage;

IATA LABEL: Corrosive.

TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS

SHIPPING NAME: UN2794, Batteries, Wet, Filled with acid, Class 8

LABEL: Corrosive

E. MARINE POLLUTANT SUBSTANCES: Not Applicable.

F. SPECIAL PRECAUTIONS FOR USER: Not available.

15. REGULATORY INFORMATION

EU. Directive 67/548/EEC on the classification, packaging, and labeling of dangerous substances, Annex I

Classification: C; R35

Risk Phrases: R35

Safety Phrases: S1/2, S26, S30, S45

U.S. Federal, Health and Environment) and U.S. Federal, Right-To-Know
CERCLA Section 103 (40 CFR 302.4)

10lb (4.535 kg) (Lead), 1000 lb (453.599 kg) (Sulfuric acid)

EPCRA (SARA Title III) Section 302 (EHS -TPQ)
1000 lb (453.599 kg) (Sulfuric acid)

EPCRA (SARA Title III) Section 304 (EHS - Reporting Quantities)
1000 lb (453.599 kg) (Sulfuric acid)

EPCRA (SARA Title III) Section 313 - Toxic chemical release reporting
Sulfuric acid (acid aerosols including mists, vapors, gas, fog, and other

airborne forms of any particle size)

OSHA Specifically Regulated Substances (29 CFR 1910.1001-.1052)
Not applicable.

CANADA REGULATORY INFORMATION
WHMIS Ingredient Disclosure List: Regulated

NOTE: The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the Safety Data Sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

A. SOURCE OF DATA:

Guideline for Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

EC-ECB, International Uniform Chemical Information Database (IUCLID)

Hazardous Substances Data Bank (HSDB)

Registry of Toxic Effects of Chemical Substances (RTECS)

NFPA 704 Standard System for the Identification of the Hazards of Materials for Emergency Response.

International Chemical Safety Cards (ICSC)(<http://www.nihs.go.jp/ICSC>)

3E Company/Ariel WebInsight DB.

B. THE DATE OF PREPARATION OF THE SDS: December 11, 2017

C. THE NUMBER OF TIMES REVISED AND THE DATE OF PREPARATION OF THE LATEST REVISION

Seventh Revision: December 11, 2017

D. OTHER INFORMATION:

The above information is believed to be correct but does not propose to be all inclusive and shall be used only as a guide. Interstate Batteries, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product. Each individual should make a determination as to the suitability of the information for their particular purpose(s). Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this SDS. The user is responsible for full compliance.

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Pyroil™ POWER STEERING FLUID

Version	Revision Date:	SDS Number:	Date of last issue: 08/27/2018
4.0	09/06/2018	600000000310	Date of first issue: 05/23/2016

SECTION 1. IDENTIFICATION

Product name : PYROIL PSF 12/12 FOZ

Product code : PYPSF12P

Manufacturer or supplier's details

Company name of supplier : Niteo Products, LLC

Address : Dallas TX 75225

Email Address : EHS@niteoproducts.com

Telephone : 1-844-696-4836

Emergency telephone number : 1-800-424-9300 / 1-703-741-5970

Recommended use of the chemical and restrictions on use

Recommended use : POWER STEERING FLUID

Restrictions on use : Use only outdoors or in a well-ventilated area.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
Distillates (petroleum)	64742-54-7	>= 90 - < 100
Zinc Dialkyldithiophosphate	68649-42-3	>= 0.1 - <= 1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

SECTION 4. FIRST AID MEASURES

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-
General advice	:	No hazards which require special first aid measures.
If inhaled	:	If breathed in, move person into fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	:	If on clothes, remove clothes. Remove contaminated clothing. If irritation develops, get medical attention. If on skin, rinse well with water. Wash contaminated clothing before re-use. If skin irritation persists, call a physician.
In case of eye contact	:	Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing.
If swallowed	:	Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	:	None known.
-

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Water spray Carbon dioxide (CO ₂)
Unsuitable extinguishing media	:	High volume water jet
Hazardous combustion products	:	Carbon oxides
Specific extinguishing methods	:	Product is compatible with standard fire-fighting agents.
Further information	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus.
-

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Avoid breathing dust. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
Environmental precautions	:	Prevent further leakage or spillage if safe to do so.
-

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Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Advice on safe handling : Avoid contact with skin and eyes.
Dispose of rinse water in accordance with local and national regulations.
Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.

Further information on storage stability : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates (petroleum)	64742-54-7	TWA (Mist)	5 mg/m ³	OSHA Z-1
		TWA (Inhalable fraction)	5 mg/m ³	ACGIH
		TWA (Mist)	5 mg/m ³	OSHA P0
		TWA (Mist)	5 mg/m ³	NIOSH REL
		ST (Mist)	10 mg/m ³	NIOSH REL

Hazardous components without workplace control parameters

Components	CAS-No.
Zinc Dialkyldithiophosphate	68649-42-3

Engineering measures : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Hand protection

Remarks : Wear resistant gloves (consult your safety equipment supplier). The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Not required under normal conditions of use. Wear splash-

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- proof safety goggles if material could be misted or splashed into eyes.
- Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Wear as appropriate:
Impervious clothing
Safety shoes
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
When using do not smoke.
When using do not eat or drink.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : liquid
- Colour : light yellow
- Odour : hydrocarbon-like
- pH : No data available
- Melting point/freezing point : No data available
- Boiling point/boiling range : No data available
- Flash point : > 195 °C
Method: ASTM D 92
- Evaporation rate : No data available
- Flammability (solid, gas) : No data available
- Self-ignition : No data available
- Upper explosion limit / Upper flammability limit : No data available
- Lower explosion limit / Lower flammability limit : No data available
- Vapour pressure : 1.33 hPa
The value is calculated
- Density : 0.86 g/cm³ (15.5 °C)
- Solubility(ies)
Water solubility : No data available
- Partition coefficient: n-octanol/water : No data available
- Viscosity
Viscosity, dynamic : No data available

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Viscosity, kinematic : 41.4 - 50.6 mm²/s (40 °C)

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : No decomposition if stored and applied as directed.

Possibility of hazardous reactions : No decomposition if stored and applied as directed.
Hazardous polymerisation does not occur.

Conditions to avoid : No data available

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : Carbon oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation
Skin contact
Eye contact
Ingestion

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Components:

Distillates (petroleum):

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Zinc Dialkyldithiophosphate:

Acute oral toxicity : LD50 (Rat): > 2,000 - 5,000 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Assessment: No adverse effect has been observed in acute dermal toxicity tests.
Remarks: Information given is based on data obtained from similar substances.

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Skin corrosion/irritation

Not classified based on available information.

Product:

Remarks: May irritate skin.

Components:**Distillates (petroleum):**

Result: Possibly irritating to skin

Zinc Dialkyldithiophosphate:

Result: Irritating to skin.

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin.

Components:**Distillates (petroleum):**

Result: No eye irritation

Assessment: No eye irritation

Zinc Dialkyldithiophosphate:

Result: Possibly irritating to eyes

Respiratory or skin sensitisation**Skin sensitisation**

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

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Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

Dangerous goods descriptions (if indicated below) may not reflect quantity, end-use, or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

Not regulated as a dangerous good

49 CFR

Not regulated as a dangerous good

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SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sulfur dioxide	7446-09-5	500	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : No SARA Hazards

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

Zinc Dialkyldithiophosphate 68649-42-3 $\geq 0.1 - \leq 1\%$

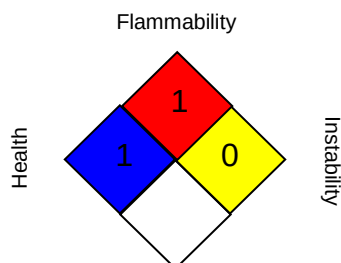
California Prop. 65

WARNING: This product can expose you to chemicals including Sulfur dioxide, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

SECTION 16. OTHER INFORMATION

Further information

NFPA:



Special hazard.

Revision Date : 09/06/2018

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / EN

Genetron® 134a**000000009876**

Version 2.6

Revision Date 06/06/2014

Print Date 07/04/2014

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Genetron® 134a

MSDS Number : 000000009876

Product Use Description : Refrigerant, Propellant

Manufacturer or supplier's details : Honeywell International Inc.
101 Columbia Road
Morristown, NJ 07962-1057

For more information call : 800-522-8001
+1-973-455-6300
(Monday-Friday, 9:00am-5:00pm)

In case of emergency call : **Medical: 1-800-498-5701 or +1-303-389-1414**
: **Transportation (CHEMTREC): 1-800-424-9300 or +1-703-527-3887**
:
: (24 hours/day, 7 days/week)

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Form : Liquefied gas

Color : colourless

Odor : weak

Classification of the substance or mixture

Classification of the substance or mixture : Gases under pressure, Liquefied gas
Simple Asphyxiant

GHS Label elements, including precautionary statements

Genetron® 134a**000000009876**

Version 2.6

Revision Date 06/06/2014

Print Date 07/04/2014

Symbol(s)

:



Signal word

: Warning

Hazard statements

: Contains gas under pressure; may explode if heated.
May displace oxygen and cause rapid suffocation.

Precautionary statements

: **Storage:**
Protect from sunlight. Store in a well-ventilated place.Hazards not otherwise
classified: May cause cardiac arrhythmia.
May cause frostbite.**Carcinogenicity**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula

: CF₃CH₂F

Chemical nature

: Substance

Chemical Name	CAS-No.	Concentration
1,1,1,2-Tetrafluoroethane	811-97-2	99.80 %

SECTION 4. FIRST AID MEASURES

Inhalation

: Move to fresh air. If breathing is irregular or stopped, administer artificial respiration. Use oxygen as required, provided a qualified operator is present. Call a physician. Do not give drugs from adrenaline-ephedrine group.

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- Skin contact : After contact with skin, wash immediately with plenty of water. If there is evidence of frostbite, bathe (do not rub) with lukewarm (not hot) water. If water is not available, cover with a clean, soft cloth or similar covering. If symptoms persist, call a physician.
- Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In case of frostbite water should be lukewarm, not hot. If symptoms persist, call a physician.
- Ingestion : Unlikely route of exposure. As this product is a gas, refer to the inhalation section. Do not induce vomiting without medical advice. Call a physician immediately.

Notes to physician

- Treatment : Because of the possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, should be used with special caution and only in situations of emergency life support. Treatment of overexposure should be directed at the control of symptoms and the clinical conditions. Treat frost-bitten areas as needed.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : The product is not flammable.
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Specific hazards during firefighting : Contents under pressure.
This product is not flammable at ambient temperatures and atmospheric pressure.
However, this material can ignite when mixed with air under pressure and exposed to strong ignition sources.
Container may rupture on heating.
Cool closed containers exposed to fire with water spray.
Do not allow run-off from fire fighting to enter drains or water courses.
Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing.
In case of fire hazardous decomposition products may be

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produced such as:
Hydrogen halides
Hydrogen fluoride
Carbon monoxide
Carbon dioxide (CO₂)
Carbonyl halides

Special protective equipment for firefighters : In the event of fire and/or explosion do not breathe fumes.
Wear self-contained breathing apparatus and protective suit.
No unprotected exposed skin areas.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Immediately evacuate personnel to safe areas.
Keep people away from and upwind of spill/leak.
Wear personal protective equipment. Unprotected persons must be kept away.
Remove all sources of ignition.
Avoid skin contact with leaking liquid (danger of frostbite).
Ventilate the area.
After release, disperses into the air.
Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing.
Avoid accumulation of vapours in low areas.
Unprotected personnel should not return until air has been tested and determined safe.
Ensure that the oxygen content is $\geq 19.5\%$.

Environmental precautions : Prevent further leakage or spillage if safe to do so.
The product evaporates readily.

Methods for cleaning up : Ventilate the area.

SECTION 7. HANDLING AND STORAGE**Handling**

Handling : Handle with care.
Avoid inhalation of vapour or mist.
Do not get in eyes, on skin, or on clothing.

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Wear personal protective equipment.
Use only in well-ventilated areas.
Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50 °C.
Follow all standard safety precautions for handling and use of compressed gas cylinders.
Use authorized cylinders only.
Protect cylinders from physical damage.
Do not puncture or drop cylinders, expose them to open flame or excessive heat.
Do not pierce or burn, even after use. Do not spray on a naked flame or any incandescent material.
Do not remove screw cap until immediately ready for use.
Always replace cap after use.

Advice on protection
against fire and explosion

: The product is not flammable.
Can form a combustible mixture with air at pressures above atmospheric pressure.

Storage

Requirements for storage
areas and containers

: Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use.
Keep containers tightly closed in a dry, cool and well-ventilated place.
Storage rooms must be properly ventilated.
Ensure adequate ventilation, especially in confined areas.
Protect cylinders from physical damage.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Protective measures

: Do not breathe vapour.
Avoid contact with skin, eyes and clothing.
Ensure that eyewash stations and safety showers are close to the workstation location.

Engineering measures

: General room ventilation is adequate for storage and handling.
Perform filling operations only at stations with exhaust ventilation facilities.

Eye protection

: Wear as appropriate:

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- Safety glasses with side-shields
If splashes are likely to occur, wear:
Goggles or face shield, giving complete protection to eyes
- Hand protection : Leather gloves
In case of contact through splashing:
Protective gloves
Neoprene gloves
Polyvinyl alcohol or nitrile- butyl-rubber gloves
- Skin and body protection : Avoid skin contact with leaking liquid (danger of frostbite).
Wear cold insulating gloves/ face shield/ eye protection.
- Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.
Wear a positive-pressure supplied-air respirator.
Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing.
For rescue and maintenance work in storage tanks use self-contained breathing apparatus.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
Ensure adequate ventilation, especially in confined areas.
Avoid contact with skin, eyes and clothing.
Remove and wash contaminated clothing before re-use.
Keep working clothes separately.

Exposure Guidelines

Components	CAS-No.	Value	Control parameters	Update	Basis
1,1,1,2-Tetrafluoroethane	811-97-2	TWA : time weighted average	(1,000 ppm)		Honeywell:Limit established by Honeywell International Inc.
1,1,1,2-Tetrafluoroethane	811-97-2	TWA : time weighted average	4,240 mg/m3 (1,000 ppm)	2007	WEEL:US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: Liquefied gas
Color	: colourless
Odor	: weak
pH	: Note: neutral
Melting point/freezing point	: -101 °C
Boiling point/boiling range	: -26.2 °C
Flash point	: Note: not applicable
Evaporation rate	: > 1 Method: Compared to CCl4.
Lower explosion limit	: Note: None
Upper explosion limit	: Note: None
Vapor pressure	: 5,915 hPa at 21.1 °C(70.0 °F) 14,713 hPa at 54.4 °C(129.9 °F)
Vapor density	: 3.5
Density	: 1.2 g/cm3
Water solubility	: 1.5 g/l

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Partition coefficient: n-octanol/water	: log Pow: 1.06 Note: The product is more soluble in octanol.
Ignition temperature	: > 750 °C
Auto-ignition temperature	: > 750 °C
Decomposition temperature	: > 250 °C Note: To avoid thermal decomposition, do not overheat.
Molecular weight	: 102.02 g/mol
Global warming potential (GWP)	: 1,300
Ozone depletion potential (ODP)	: 0

SECTION 10. STABILITY AND REACTIVITY

Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Hazardous polymerisation does not occur.
Conditions to avoid	: Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50 °C. Decomposes under high temperature. Some risk may be expected of corrosive and toxic decomposition products. Can form a combustible mixture with air at pressures above atmospheric pressure. Do not mix with oxygen or air above atmospheric pressure.
Incompatible materials to avoid	: Potassium Calcium Powdered metals Finely divided aluminium Magnesium Zinc
Hazardous decomposition	: Halogenated compounds

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products

Hydrogen fluoride
Carbonyl halides
Carbon oxides**SECTION 11. TOXICOLOGICAL INFORMATION**

Acute inhalation toxicity : LC50: > 500000 ppm
Exposure time: 4 h
Species: rat

Sensitisation : Cardiac sensitization
Species: dogs
Note: No-observed-effect level 50 000 ppm Lowest
observable effect level 75 000 ppm

Repeated dose toxicity : Species: rat
NOEL: 40000 ppm

Genotoxicity in vitro : Note: In vitro tests did not show mutagenic effects

Further information : Note: Vapours are heavier than air and can cause suffocation
by reducing oxygen available for breathing. Rapid
evaporation of the liquid may cause frostbite. Avoid skin
contact with leaking liquid (danger of frostbite).

SECTION 12. ECOLOGICAL INFORMATION**Further information on ecology**

Additional ecological information : Accumulation in aquatic organisms is unlikely.
This product contains greenhouse gases which may
contribute to global warming. Do NOT vent to the atmosphere.
To comply with provisions of the U.S. Clean Air Act, any
residual must be recovered.

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SECTION 13. DISPOSAL CONSIDERATIONS

- Disposal methods : Observe all Federal, State, and Local Environmental regulations.
- Note : This product is subject to U.S. Environmental Protection Agency Clean Air Act Regulations Section 608 in 40 CFR Part 82 regarding refrigerant recycling.

SECTION 14. TRANSPORT INFORMATION

- DOT**
- | | |
|----------------------|-----------------------------|
| UN/ID No. | : UN 3159 |
| Proper shipping name | : 1,1,1,2-Tetrafluoroethane |
| Class | : 2.2 |
| Packing group | |
| Hazard Labels | : 2.2 |
- IATA**
- | | |
|--|-----------------------------|
| UN/ID No. | : UN 3159 |
| Description of the goods | : 1,1,1,2-Tetrafluoroethane |
| Class | : 2.2 |
| Hazard Labels | : 2.2 |
| Packing instruction (cargo aircraft) | : 200 |
| Packing instruction (passenger aircraft) | : 200 |
- IMDG**
- | | |
|--------------------------|-----------------------------|
| UN/ID No. | : UN 3159 |
| Description of the goods | : 1,1,1,2-Tetrafluoroethane |
| Class | : 2.2 |
| Hazard Labels | : 2.2 |
| EmS Number | : F-C, S-V |
| Marine pollutant | : no |

SECTION 15. REGULATORY INFORMATION**Inventories**

- US. Toxic Substances : On TSCA Inventory

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Control Act

Australia. Industrial Chemical (Notification and Assessment) Act : On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL) : All components of this product are on the Canadian DSL.

Japan. Kashin-Hou Law List : On the inventory, or in compliance with the inventory

Korea. Toxic Chemical Control Law (TCCL) List : On the inventory, or in compliance with the inventory

Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act : On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances : On the inventory, or in compliance with the inventory

NZIOC - New Zealand : On the inventory, or in compliance with the inventory

National regulatory information

SARA 302 Components : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components : SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards : Acute Health Hazard
Sudden Release of Pressure Hazard

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California Prop. 65 : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

New Jersey RTK : 1,1,1,2-Tetrafluoroethane 811-97-2

Pennsylvania RTK : 1,1,1,2-Tetrafluoroethane 811-97-2

WHMIS Classification : A: Compressed Gas
This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

Global warming potential : 1,300

Ozone depletion potential (ODP) : 0

SECTION 16. OTHER INFORMATION

	HMIS III	NFPA
Health hazard	: 1	2
Flammability	: 1	1
Physical Hazard	: 0	
Instability	:	0

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge,

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information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

Previous Issue Date: 12/06/2012

Prepared by Honeywell Performance Materials and Technologies Product Stewardship Group



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Version: 1.11

Revision Date: 12/02/2019

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29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ SAE 10W-30
Motor Oil

Product code : VV1290

Details of the supplier of the safety data sheet

Valvoline LLC
100 Valvoline Way
Lexington, KY 40509
United States of America (USA)
1-800-TEAMVAL (1-800-832-6825)

SDS@valvoline.com

Emergency telephone number

1-800-VALVOLINE (1-800-825-8654)

Regulatory Information Number

1-800-TEAMVAL (1-800-832-6825)

Product Information

1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Eye irritation : Category 2A

GHS label elements

Hazard pictograms :



Signal Word : Warning

Hazard Statements : Causes serious eye irritation.

Precautionary Statements : **Prevention:**
Wear eye protection/ face protection.
Wash skin thoroughly after handling.
Response:
If eye irritation persists: Get medical advice/ attention.
IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.



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Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	Not a hazardous substance or mixture.	>=80.00 - < 90.00
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	Asp. Tox. 1; H304	>=1.50 - < 5.00
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC		Not a hazardous substance or mixture.	>=1.50 - < 5.00
Zinc O,O,O',O'-tetrakis(1,3- dimethylbutyl) bis(phosphorodithioate	2215-35-2	Skin Irrit. 2; H315 Eye Dam. 1; H318	>=1.00 - < 1.50

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

- General advice : No hazards which require special first aid measures.
- If inhaled : If breathed in, move person into fresh air.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
- In case of eye contact : Remove contact lenses.
Protect unharmed eye.
- If swallowed : Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.



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Most important symptoms and effects, both acute and delayed : No symptoms known or expected.
Causes serious eye irritation.

Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
Carbon dioxide (CO₂)
Dry chemical

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : carbon dioxide and carbon monoxide
Hydrocarbons

Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.

Further information : Standard procedure for chemical fires.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions : Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

Other information : Comply with all applicable federal, state, and local regulations.



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SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.

Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable particulate matter	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable particulate matter	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC		TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3	ACGIH



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			Inhalable particulate matter	
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Engineering measures : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear as appropriate:
Safety shoes
Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Odour : No data available

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : No data available

Flash point : 394 - 480 °F / 201 - 249 °C



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Method: Cleveland open cup

Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	0.0133333 hPa (70.00 °F / 21.11 °C) Calculated Vapor Pressure
Relative vapour density	:	No data available
Relative density	:	0.868 (60.01 °F / 15.56 °C)
Density	:	0.864 g/cm3
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Decomposition temperature	:	
		No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	70 mm2/s (104 °F / 40 °C)
Oxidizing properties	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	Stable under recommended storage conditions.



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Possibility of hazardous reactions	: Product will not undergo hazardous polymerization.
Conditions to avoid	: None known.
Incompatible materials	: Strong oxidizing agents
Hazardous decomposition products	No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation
Skin contact
Eye Contact
Ingestion

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Zinc O,O,O',O'-tetrakis(1,3-dimethylbutyl) bis(phosphorodithioate:

Acute oral toxicity : LD50 (Rat): 2,230 mg/kg
GLP: no

Acute inhalation toxicity : LC50 (Rat): > 2.3 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: Not classified as acutely toxic by inhalation under GHS.
Remarks: Information given is based on data obtained from similar substances.

Acute dermal toxicity : LD50 (Rabbit): > 3,160 mg/kg
Method: OECD Test Guideline 402
Assessment: Not classified as acutely toxic by dermal absorption under GHS.

Skin corrosion/irritation

Not classified based on available information.



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Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation
Result : Slight, transient irritation

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Assessment : Slight, transient irritation
Result : Slight, transient irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation
Result : Slight, transient irritation

Zinc O,O,O',O'-tetrakis(1,3-dimethylbutyl) bis(phosphorodithioate):

Species : Rabbit
Method : OECD Test Guideline 404
Result : Irritating to skin.
GLP : yes

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Remarks : Unlikely to cause eye irritation or injury.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : No eye irritation
Assessment : No eye irritation

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Result : Slight, transient irritation
Assessment : Slight, transient irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : Slight, transient irritation
Assessment : Slight, transient irritation

Zinc O,O,O',O'-tetrakis(1,3-dimethylbutyl) bis(phosphorodithioate):

Result : Corrosive

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

Zinc O,O,O',O'-tetrakis(1,3-dimethylbutyl) bis(phosphorodithioate):

Species : Guinea pig
Assessment : Did not cause sensitisation on laboratory animals.
Method : OECD Test Guideline 406



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Result : Did not cause sensitisation on laboratory animals.
GLP : yes

Germ cell mutagenicity

Not classified based on available information.

Components:

Zinc O,O,O',O'-tetrakis(1,3-dimethylbutyl) bis(phosphorodithioate:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Result: negative

Carcinogenicity

Not classified based on available information.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification



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Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

No aspiration toxicity classification

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Toxicity to fish : LL50 (Fish): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
Exposure time: 48 h

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Zinc O,O,O',O'-tetrakis(1,3-dimethylbutyl) bis(phosphorodithioate:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 4.5 mg/l



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Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203
Remarks: Information given is based on data obtained from similar substances.

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 23 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae : NOEL (Desmodesmus subspicatus (green algae)): 10 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 201
Remarks: Information given is based on data obtained from similar substances.

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.4 mg/l
Exposure time: 21 d
Test substance: WAF
Method: OECD Test Guideline 211
Remarks: Information given is based on data obtained from similar substances.

Persistence and degradability

Components:

Zinc O,O,O',O'-tetrakis(1,3-dimethylbutyl) bis(phosphorodithioate:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 1.5 %
Exposure time: 28 d
Method: OECD Test Guideline 301B
Remarks: Information given is based on data obtained from similar substances.

No data available

Bioaccumulative potential

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Partition coefficient: n-octanol/water : log Pow: Expected > 7

No data available

Mobility in soil

Components:

No data available

Other adverse effects

No data available



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Product:

Additional ecological information : No data available

Components:

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

Not regulated as a dangerous good

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.



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SARA 311/312 Hazards : Serious eye damage or eye irritation

California Prop. 65

 **WARNING:** Cancer - www.P65Warnings.ca.gov.

The components of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

TCSI : On the inventory, or in compliance with the inventory

TSCA : On TSCA Inventory

TSCA list

No substances are subject to TSCA 12(b) export notification requirements.

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

Internal information : R0170829

NFPA:

HMIS III:



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Flammability Health Instability Special hazard	<table border="1"><tr><td>HEALTH</td><td>2</td></tr><tr><td>FLAMMABILITY</td><td>1</td></tr><tr><td>PHYSICAL HAZARD</td><td>0</td></tr></table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	2	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	2						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H318	Causes serious eye damage.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.



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IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System

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29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ MaxLife™ High Mileage SAE 5W-30 Motor Oil

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL (1-800-832-6825) SDS@valvoline.com	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL (1-800-832-6825) Product Information 1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
Distillates, petroleum, solvent-refined heavy paraffinic	64741-88-4	Not a hazardous substance or mixture.	>=50.00 - < 60.00
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	Not a hazardous substance or mixture.	>=10.00 - < 15.00

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DISTILLATES (PETROLEUM),
HYDROTREATED HEAVY
PARAFFINICNot a hazardous
substance or mixture.

>=1.50 - < 5.00

SECTION 4. FIRST AID MEASURES

- General advice : No hazards which require special first aid measures.
- If inhaled : If breathed in, move person into fresh air.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
- In case of eye contact : Remove contact lenses.
Protect unharmed eye.
- If swallowed : Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : No symptoms known or expected.
- Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
Carbon dioxide (CO2)
Dry chemical
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : carbon dioxide and carbon monoxide
Hydrocarbons
- Specific extinguishing methods :

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Product is compatible with standard fire-fighting agents.

Further information : Standard procedure for chemical fires.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions : Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.

Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates, petroleum, solvent-refined heavy paraffinic	64741-88-4	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3	NIOSH REL

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			Mist	
		PEL	5 mg/m3 particulate	CAL PEL
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC		TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Engineering measures : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : Respiratory protection is not required under normal conditions of use.

No personal respiratory protective equipment normally required.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear resistant gloves (consult your safety equipment

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supplier).
Wear as appropriate:
Safety shoes

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : amber

Odour : mild

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : > 424 °F / > 218 °C
(1013 hPa)

Flash point : 394 - 480 °F / 201 - 249 °C
Method: Cleveland open cup

Evaporation rate : < 1

Flammability (solid, gas) : No data available

Self-ignition : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapour pressure : < 1.0 mmHg (68 °F / 20 °C)

Relative vapour density : > 1
AIR=1

Relative density : No data available

Density : 0.8582 g/cm³ (60.1 °F / 15.6 °C)

Solubility(ies)
Water solubility : No data available

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Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : 62.7 mm²/s (104 °F / 40 °C)

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : None known.

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation

Skin contact

Eye Contact

Ingestion

Acute toxicity

Not classified based on available information.

Components:**Distillates, petroleum, solvent-refined heavy paraffinic:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.58 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: Not classified as acutely toxic by inhalation

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VV1550

under GHS.

Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Remarks: No mortality observed at this dose.

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Skin corrosion/irritation

Not classified based on available information.

Product:

Result : Slight, transient irritation

Components:**Distillates, petroleum, solvent-refined heavy paraffinic:**

Species : Rabbit

Result : No skin irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation

Result : Slight, transient irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation

Result : Slight, transient irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Result : Slight, transient irritation

Remarks : Expected based on components.

Remarks : Unlikely to cause eye irritation or injury.

Components:**Distillates, petroleum, solvent-refined heavy paraffinic:**

Species : Rabbit

Result : No eye irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : No eye irritation

Assessment : No eye irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : Slight, transient irritation

Assessment : Slight, transient irritation

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Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

Distillates, petroleum, solvent-refined heavy paraffinic:

Test Type : Buehler Test
Species : Guinea pig
Assessment : Does not cause skin sensitisation.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Components:

Distillates, petroleum, solvent-refined heavy paraffinic:

No aspiration toxicity classification

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

No aspiration toxicity classification

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Further information**Product:**

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Components:

Distillates, petroleum, solvent-refined heavy paraffinic:

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 203
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 202

Toxicity to algae : NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOELR (Oncorhynchus mykiss (rainbow trout)): Calculated >= 1,000 mg/l
Exposure time: 14 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEL (Daphnia (water flea)): 10 mg/l
Exposure time: 21 d
Test substance: WAF
Method: OECD Test Guideline 211

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Toxicity to fish : LL50 (Fish): > 100 mg/l

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Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
Exposure time: 48 h

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Ecotoxicology Assessment Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Persistence and degradability

Components:

Distillates, petroleum, solvent-refined heavy paraffinic:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 2 - 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

No data available

Bioaccumulative potential

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Partition coefficient: n-octanol/water : log Pow: Expected > 7

No data available

Mobility in soil

Components:

No data available

Other adverse effects

No data available

Product:

Additional ecological information : No data available

Components:

SECTION 13. DISPOSAL CONSIDERATIONS

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Disposal methods

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

Not regulated as a dangerous good

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

California Prop. 65

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for carcinogenicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

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This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for reproductive/developmental toxicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

The components of this product are reported in the following inventories:

DSL	: All components of this product are on the Canadian DSL
AICS	: On the inventory, or in compliance with the inventory
ENCS	: On the inventory, or in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
TCSI	: On the inventory, or in compliance with the inventory
TSCA	: On TSCA Inventory

TSCA list

No substances are subject to TSCA 12(b) export notification requirements.

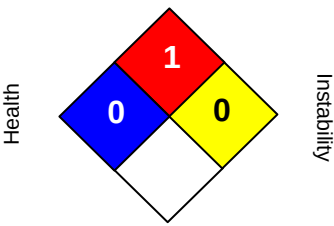
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

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NFPA:	HMIS III:						
Flammability  Health Instability Special hazard.	<table border="1"> <tr> <td>HEALTH</td><td>0</td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	0	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	0						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

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Valvoline™ MaxLife™ High Mileage SAE 5W-30 Motor Oil VV1550	Version: 1.13

Combustible Liquid Class IIIB

Full text of H-Statements

Sources of key data used to compile the Safety Data Sheet
Valvoline internal data including own and sponsored test reports
The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists
BEI : Biological Exposure Index
CAS : Chemical Abstracts Service (Division of the American Chemical Society).
CMR : Carcinogenic, Mutagenic or Toxic for Reproduction
FG : Food grade
GHS : Globally Harmonized System of Classification and Labeling of Chemicals.
H-statement : Hazard Statement
IATA : International Air Transport Association.
IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization
ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"
IMDG : International Maritime Code for Dangerous Goods
ISO : International Organization for Standardization
logPow : octanol-water partition coefficient
LCxx : Lethal Concentration, for xx percent of test population
LDxx : Lethal Dose, for xx percent of test population.
ICxx : Inhibitory Concentration for xx of a substance
Ecxx : Effective Concentration of xx
N.O.S.: Not Otherwise Specified
OECD : Organization for Economic Co-operation and Development
OEL : Occupational Exposure Limit
P-Statement : Precautionary Statement
PBT : Persistent , Bioaccumulative and Toxic
PPE : Personal Protective Equipment
STEL : Short-term exposure limit
STOT : Specific Target Organ Toxicity
TLV : Threshold Limit Value

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TWA : Time-weighted average
 vPvB : Very Persistent and Very Bioaccumulative
 WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
 DOT : Department of Transportation
 FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
 HMIRC : Hazardous Materials Information Review Commission
 HMIS : Hazardous Materials Identification System
 NFPA : National Fire Protection Association
 NIOSH : National Institute for Occupational Safety and Health
 OSHA : Occupational Safety and Health Administration
 PMRA : Health Canada Pest Management Regulatory Agency
 RTK : Right to Know
 WHMIS : Workplace Hazardous Materials Information System

**SAFETY DATA SHEET**

Revision Date: 06/12/2019

Print Date: 7/23/2019

SDS Number: R0409688

Version: 1.10

Valvoline™ MaxLife™ High Mileage SAE 5W-20 Motor Oil

VV1700

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**Product identifier**

Trade name : Valvoline™ MaxLife™ High Mileage SAE 5W-20
Motor Oil

Details of the supplier of the safety data sheet

Valvoline LLC
100 Valvoline Way
Lexington, KY 40509
United States of America (USA)
1-800-TEAMVAL (1-800-832-6825)

SDS@valvoline.com

Emergency telephone number

1-800-VALVOLINE (1-800-825-8654)

Regulatory Information Number

1-800-TEAMVAL (1-800-832-6825)

Product Information

1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
Distillates, petroleum, solvent-refined heavy paraffinic	64741-88-4	Not a hazardous substance or mixture.	>=50.00 - < 60.00
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	Not a hazardous substance or mixture.	>=20.00 - < 30.00
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY		Not a hazardous substance or mixture.	>=1.50 - < 5.00

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VV1700

PARAFFINIC

SECTION 4. FIRST AID MEASURES

- General advice : No hazards which require special first aid measures.
- If inhaled : If breathed in, move person into fresh air.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
- In case of eye contact : Remove contact lenses.
Protect unharmed eye.
- If swallowed : Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : No symptoms known or expected.
- Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
Carbon dioxide (CO₂)
Dry chemical
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : carbon dioxide and carbon monoxide
Hydrocarbons
- Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.

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Further information : Standard procedure for chemical fires.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions : Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.

Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates, petroleum, solvent-refined heavy paraffinic	64741-88-4	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3	CAL PEL

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VV1700

			particulate	
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
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		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Engineering measures : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear resistant gloves (consult your safety equipment supplier).
Wear as appropriate:
Safety shoes

Hygiene measures : General industrial hygiene practice.

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VV1700

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Odour	: No data available
Odour Threshold	: No data available
pH	: No data available
Melting point/freezing point	: No data available
Boiling point/boiling range	: No data available
Flash point	: > 390 °F / > 199 °C Method: Cleveland open cup
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Self-ignition	: No data available
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: No data available
Vapour pressure	: 1.3333333 hPa (68 °F / 20 °C) Calculated Vapor Pressure
Relative vapour density	: No data available
Relative density	: 0.8607 (60.00 °F / 15.56 °C)
Density	: 0.8607 g/cm ³ (60.1 °F / 15.6 °C)
Solubility(ies)	
Water solubility	: No data available
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Decomposition temperature	: No data available
Viscosity	

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Viscosity, dynamic : No data available

Viscosity, kinematic : ca. 50 mm²/s (104 °F / 40 °C)

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : None known.

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation

Skin contact

Eye Contact

Ingestion

Acute toxicity

Not classified based on available information.

Components:**Distillates, petroleum, solvent-refined heavy paraffinic:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.58 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: Not classified as acutely toxic by inhalation under GHS.
Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Remarks: No mortality observed at this dose.

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

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Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Skin corrosion/irritation

Not classified based on available information.

Product:

Result : Slight, transient irritation

Remarks : Expected

Components:
Distillates, petroleum, solvent-refined heavy paraffinic:

Species : Rabbit

Result : No skin irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation

Result : Slight, transient irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation

Result : Slight, transient irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Result : Slight, transient irritation

Remarks : Expected based on components.

Remarks : Unlikely to cause eye irritation or injury.

Components:
Distillates, petroleum, solvent-refined heavy paraffinic:

Species : Rabbit

Result : No eye irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : No eye irritation

Assessment : No eye irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : Slight, transient irritation

Assessment : Slight, transient irritation

Respiratory or skin sensitisation
Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:
Distillates, petroleum, solvent-refined heavy paraffinic:

Test Type : Buehler Test

Species : Guinea pig

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Assessment : Does not cause skin sensitisation.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Components:

Distillates, petroleum, solvent-refined heavy paraffinic:

No aspiration toxicity classification

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

No aspiration toxicity classification

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

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Ecotoxicity
Product:

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Components:

Distillates, petroleum, solvent-refined heavy paraffinic:

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 203
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 202

Toxicity to algae : NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOELR (Oncorhynchus mykiss (rainbow trout)): Calculated >= 1,000 mg/l
Exposure time: 14 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEL (Daphnia (water flea)): 10 mg/l
Exposure time: 21 d
Test substance: WAF
Method: OECD Test Guideline 211

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Toxicity to fish : LL50 (Fish): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
Exposure time: 48 h

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
Exposure time: 72 h

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Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Ecotoxicology Assessment Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Persistence and degradability**Components:**

Distillates, petroleum, solvent-refined heavy paraffinic:

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 2 - 4 %

Exposure time: 28 d

Method: OECD Test Guideline 301B

No data available

Bioaccumulative potential**Components:**

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Partition coefficient: n-octanol/water : log Pow: Expected > 7

No data available

Mobility in soil**Components:**

No data available

Other adverse effects

No data available

Product:

Additional ecological information : No data available

Components:

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.

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SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

Not regulated as a dangerous good

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

California Prop. 65

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for carcinogenicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for reproductive/developmental toxicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

The components of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

ENCS : Contact your sales representative for additional information.

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KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

TCSI : On the inventory, or in compliance with the inventory

TSCA : On TSCA Inventory

TSCA list

No substances are subject to TSCA 12(b) export notification requirements.

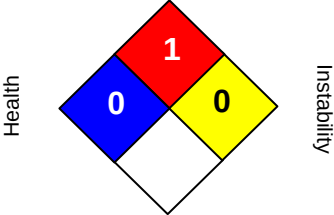
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

Revision Date: 06/12/2019

NFPA:	HMIS III:						
Flammability Health Instability  Special hazard.	<table border="1"> <tr> <td>HEALTH</td><td>0</td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	0	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	0						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

Sources of key data used to compile the Safety Data Sheet

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H-statement : Hazard Statement
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ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"
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TLV : Threshold Limit Value
TWA : Time-weighted average
vPvB : Very Persistent and Very Bioaccumulative
WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
DOT : Department of Transportation
FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
HMIRC : Hazardous Materials Information Review Commission
HMIS : Hazardous Materials Identification System
NFPA : National Fire Protection Association

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NIOSH : National Institute for Occupational Safety and Health
 OSHA : Occupational Safety and Health Administration
 PMRA : Health Canada Pest Management Regulatory Agency
 RTK : Right to Know
 WHMIS : Workplace Hazardous Materials Information System

**SAFETY DATA SHEET**

Revision Date: 05/28/2019

Print Date: 7/23/2019

SDS Number: R0366793

Version: 1.5

Valvoline™ SAE 5W-20 Motor Oil
™ Trademark, Valvoline or its subsidiaries, registered in various countries
VV1740

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**Product identifier**

Trade name : Valvoline™ SAE 5W-20
Motor Oil
™ Trademark, Valvoline or its subsidiaries, registered in various countries

Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Motor Oil

Details of the supplier of the safety data sheet

Valvoline LLC
100 Valvoline Way
Lexington, KY 40509
United States of America (USA)
1-800-TEAMVAL (1-800-832-6825)

SDS@valvoline.com

Emergency telephone number

1-800-VALVOLINE (1-800-825-8654)

Regulatory Information Number

1-800-TEAMVAL (1-800-832-6825)

Product Information

1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	Not a hazardous substance or mixture.	>=50.00 - < 60.00

SAFETY DATA SHEET

Revision Date: 05/28/2019

Print Date: 7/23/2019

SDS Number: R0366793

Version: 1.5

Valvoline™ SAE 5W-20 Motor Oil
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Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	Asp. Tox. 1; H304	>=20.00 - < 30.00
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	Asp. Tox. 1; H304	>=5.00 - < 10.00
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC		Not a hazardous substance or mixture.	>=1.50 - < 5.00
DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC	64742-65-0	Asp. Tox. 1; H304	>=1.50 - < 5.00

SECTION 4. FIRST AID MEASURES

General advice	: No hazards which require special first aid measures.
If inhaled	: If breathed in, move person into fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	: First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
In case of eye contact	: Remove contact lenses. Protect unharmed eye.
If swallowed	: Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	: No symptoms known or expected.
Notes to physician	: No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray Foam Carbon dioxide (CO2)

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Dry chemical

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : carbon dioxide and carbon monoxide
Hydrocarbons

Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.

Further information : Standard procedure for chemical fires.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions : Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.

Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Value type	Control	Basis

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		(Form of exposure)	parameters / Permissible concentration	
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Engineering measures : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear as appropriate:
 Safety shoes
 Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Odour : No data available

Odour Threshold : No data available

pH : No data available



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Melting point/freezing point : No data available

Boiling point/boiling range : No data available

Flash point : > 390 °F / > 199 °C
 Method: Cleveland open cup

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Self-ignition : No data available

Upper explosion limit / Upper flammability limit : 6 %(V)
 Calculated Explosive Limit

Lower explosion limit / Lower flammability limit : 1 %(V)
 Calculated Explosive Limit

Vapour pressure : 0.0012 hPa (68 °F / 20 °C)
 Calculated Vapor Pressure

Relative vapour density : No data available

Relative density : No data available

Density : 0.8620 g/cm³ (60.01 °F / 15.56 °C)

Solubility(ies)
 Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Decomposition temperature : No data available

Viscosity
 Viscosity, dynamic : No data available

Viscosity, kinematic : 50 mm²/s (104 °F / 40 °C)

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

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Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : excessive heat

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation
Skin contact
Eye Contact
Ingestion

Acute toxicity

Not classified based on available information.

Components:**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Components:**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

Assessment : Slight, transient irritation

Result : Slight, transient irritation

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Assessment : Slight, transient irritation

Result : Slight, transient irritation

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HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Assessment : Slight, transient irritation

Result : Slight, transient irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation

Result : Slight, transient irritation

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation

Result : Slight, transient irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks : Unlikely to cause eye irritation or injury.

Components:
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : No eye irritation

Assessment : No eye irritation

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Result : No eye irritation

Assessment : No eye irritation

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Result : Slight, transient irritation

Assessment : Slight, transient irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : Slight, transient irritation

Assessment : Slight, transient irritation

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC:

Result : Slight, transient irritation

Assessment : Slight, transient irritation

Respiratory or skin sensitisation
Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

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Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

No aspiration toxicity classification

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

May be fatal if swallowed and enters airways.

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

May be fatal if swallowed and enters airways.

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks : No data available

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SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Toxicity to fish : LL50 (Fish): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
Exposure time: 48 h

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Toxicity to fish : LL50 (Fish): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
Exposure time: 48 h

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

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Toxicity to daphnia and other aquatic invertebrates
(Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Ecotoxicology Assessment
Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Persistence and degradability**Components:**

No data available

Bioaccumulative potential**Components:**

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Partition coefficient: n-octanol/water : log Pow: Expected > 7

No data available

Mobility in soil**Components:**

No data available

Other adverse effects

No data available

Product:

Additional ecological information : No data available

Components:

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.

SECTION 14. TRANSPORT INFORMATION**International Regulations****UNRTDG**

Not regulated as a dangerous good

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IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

Not regulated as a dangerous good

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

California Prop. 65

 **WARNING:** Reproductive Harm - www.P65Warnings.ca.gov.

The components of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

ENCS : Contact your sales representative for additional information.

KECI : On the inventory, or in compliance with the inventory

IECSC : Contact your sales representative for additional information.

PICCS : On the inventory, or in compliance with the inventory

TCSI : Not in compliance with the inventory

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TSCA : On TSCA Inventory

TSCA list

No substances are subject to TSCA 12(b) export notification requirements.

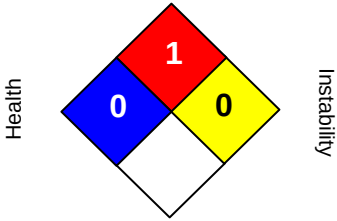
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

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NFPA:	HMIS III:						
Flammability  Health Instability Special hazard.	<table border="1"> <tr> <td>HEALTH</td><td>0</td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	0	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	0						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

H304 May be fatal if swallowed and enters airways.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

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The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists
BEI : Biological Exposure Index
CAS : Chemical Abstracts Service (Division of the American Chemical Society).
CMR : Carcinogenic, Mutagenic or Toxic for Reproduction
FG : Food grade
GHS : Globally Harmonized System of Classification and Labeling of Chemicals.
H-statement : Hazard Statement
IATA : International Air Transport Association.
IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization
ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"
IMDG : International Maritime Code for Dangerous Goods
ISO : International Organization for Standardization
logPow : octanol-water partition coefficient
LCxx : Lethal Concentration, for xx percent of test population
LDxx : Lethal Dose, for xx percent of test population.
ICxx : Inhibitory Concentration for xx of a substance
Ecxx : Effective Concentration of xx
N.O.S.: Not Otherwise Specified
OECD : Organization for Economic Co-operation and Development
OEL : Occupational Exposure Limit
P-Statement : Precautionary Statement
PBT : Persistent , Bioaccumulative and Toxic
PPE : Personal Protective Equipment
STEL : Short-term exposure limit
STOT : Specific Target Organ Toxicity
TLV : Threshold Limit Value
TWA : Time-weighted average
vPvB : Very Persistent and Very Bioaccumulative
WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
DOT : Department of Transportation
FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
HMIRC : Hazardous Materials Information Review Commission
HMIS : Hazardous Materials Identification System
NFPA : National Fire Protection Association
NIOSH : National Institute for Occupational Safety and Health
OSHA : Occupational Safety and Health Administration
PMRA : Health Canada Pest Management Regulatory Agency
RTK : Right to Know

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WHMIS : Workplace Hazardous Materials Information System

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29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**Product identifier**

Trade name : Valvoline™ SAE 5W-30
Motor Oil
™ Trademark, Valvoline or its subsidiaries, registered in various countries

Details of the supplier of the safety data sheet

Valvoline LLC
100 Valvoline Way
Lexington, KY 40509
United States of America (USA)
1-800-TEAMVAL (1-800-832-6825)

SDS@valvoline.com

Emergency telephone number

1-800-VALVOLINE (1-800-825-8654)

Regulatory Information Number

1-800-TEAMVAL (1-800-832-6825)

Product Information

1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	Not a hazardous substance or mixture.	>=50.00 - < 60.00
Distillates (Petroleum),	64742-54-7	Asp. Tox. 1; H304	>=30.00 - < 40.00

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Hydrotreated Heavy Paraffinic			
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	Asp. Tox. 1; H304	>=5.00 - < 10.00
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC		Not a hazardous substance or mixture.	>=1.50 - < 5.00
DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC	64742-65-0	Asp. Tox. 1; H304	>=1.50 - < 5.00

SECTION 4. FIRST AID MEASURES

- General advice : No hazards which require special first aid measures.
- If inhaled : If breathed in, move person into fresh air.
 If unconscious, place in recovery position and seek medical advice.
 If symptoms persist, call a physician.
- In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
- In case of eye contact : Remove contact lenses.
 Protect unharmed eye.
- If swallowed : Do not give milk or alcoholic beverages.
 Never give anything by mouth to an unconscious person.
 If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : No symptoms known or expected.
- Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
 Water spray
 Foam
 Carbon dioxide (CO2)
 Dry chemical

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Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : carbon dioxide and carbon monoxide
Hydrocarbons

Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.

Further information : Standard procedure for chemical fires.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions : Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.

Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Value type (Form of	Control parameters /	Basis

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		exposure)	Permissible concentration	
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC	64742-65-0	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Engineering measures : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear as appropriate:
 Safety shoes
 Wear resistant gloves (consult your safety equipment supplier).

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Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Odour : No data available

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : No data available

Flash point : 394 - 480 °F / 201 - 249 °C
Method: Cleveland open cup

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Self-ignition : No data available

Upper explosion limit / Upper flammability limit : 6 %(V)
Calculated Explosive Limit

Lower explosion limit / Lower flammability limit : 1 %(V)
Calculated Explosive Limit

Vapour pressure : 1.3333333 hPa (68 °F / 20 °C)
Calculated Vapor Pressure

Relative vapour density : No data available

Relative density : 0.876 (60.1 °F / 15.6 °C)

Density : 0.8599 g/cm³ (60.1 °F / 15.6 °C)

Solubility(ies)
Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

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Decomposition temperature :
No data available

Viscosity
Viscosity, dynamic : No data available
Viscosity, kinematic : 63 mm²/s (104 °F / 40 °C)

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.
Chemical stability : Stable under recommended storage conditions.
Possibility of hazardous reactions : Product will not undergo hazardous polymerization.
Conditions to avoid : excessive heat
Incompatible materials : Strong oxidizing agents
Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation
Skin contact
Eye Contact
Ingestion

Acute toxicity

Not classified based on available information.

Components:**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

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DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Components:
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation

Result : Slight, transient irritation

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Assessment : Slight, transient irritation

Result : Slight, transient irritation

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Assessment : Slight, transient irritation

Result : Slight, transient irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation

Result : Slight, transient irritation

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation

Result : Slight, transient irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks : Unlikely to cause eye irritation or injury.

Components:
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : No eye irritation

Assessment : No eye irritation

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Result : No eye irritation

Assessment : No eye irritation

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Result : Slight, transient irritation

Assessment : Slight, transient irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : Slight, transient irritation

Assessment : Slight, transient irritation

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DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC:

Result : Slight, transient irritation
Assessment : Slight, transient irritation

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

No aspiration toxicity classification



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Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

May be fatal if swallowed and enters airways.

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

May be fatal if swallowed and enters airways.

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Toxicity to fish : LL50 (Fish): > 100 mg/l
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
 Exposure time: 48 h

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
 Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Ecotoxicology Assessment

Short-term (acute) aquatic hazard

: Not classified based on available information.

Long-term (chronic) aquatic hazard

: Not classified based on available information.

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Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Toxicity to fish : LL50 (Fish): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other : EL50 (Aquatic invertebrates): > 10,000 mg/l
aquatic invertebrates Exposure time: 48 h

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
Exposure time: 72 h

Toxicity to fish (Chronic : NOEC (Fish): 10 mg/l
toxicity)

Toxicity to daphnia and other : NOEC (Aquatic invertebrates): 10 mg/l
aquatic invertebrates
(Chronic toxicity)

Ecotoxicology Assessment
Short-term (acute) aquatic : Not classified based on available information.
hazard

Long-term (chronic) aquatic : Not classified based on available information.
hazard

Persistence and degradability**Components:**

No data available

Bioaccumulative potential**Components:**

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Partition coefficient: n- : log Pow: Expected > 7
octanol/water

No data available

Mobility in soil**Components:**

No data available

Other adverse effects

No data available

Product:

Additional ecological : No data available
information

Components:

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

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General advice : Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

Not regulated as a dangerous good

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

California Prop. 65

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for carcinogenicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

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This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for reproductive/developmental toxicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

The components of this product are reported in the following inventories:

DSL	: All components of this product are on the Canadian DSL
AICS	: On the inventory, or in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
TCSI	: Not in compliance with the inventory
TSCA	: On TSCA Inventory

TSCA list

No substances are subject to TSCA 12(b) export notification requirements.

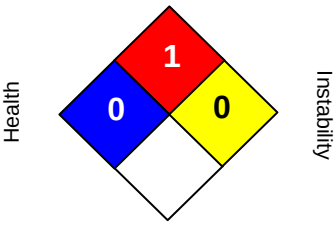
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

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NFPA:	HMIS III:						
Flammability  Health Instability Special hazard.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: blue; color: white; text-align: center;">HEALTH</td><td style="text-align: center;">0</td></tr> <tr> <td style="background-color: red; color: white; text-align: center;">FLAMMABILITY</td><td style="text-align: center;">1</td></tr> <tr> <td style="background-color: yellow; text-align: center;">PHYSICAL HAZARD</td><td style="text-align: center;">0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	0	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	0						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

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Full text of H-Statements

H304 May be fatal if swallowed and enters airways.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

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vPvB : Very Persistent and Very Bioaccumulative
WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
DOT : Department of Transportation
FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
HMIRC : Hazardous Materials Information Review Commission
HMIS : Hazardous Materials Identification System
NFPA : National Fire Protection Association
NIOSH : National Institute for Occupational Safety and Health
OSHA : Occupational Safety and Health Administration
PMRA : Health Canada Pest Management Regulatory Agency
RTK : Right to Know
WHMIS : Workplace Hazardous Materials Information System

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29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ Full Synthetic with MaxLife™ Technology SAE 5W-30 Motor Oil

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL (1-800-832-6825)	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL (1-800-832-6825) Product Information 1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

GHS label elements

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	Asp. Tox. 1; H304	29.466
Mineral Oil		Asp. Tox. 1; H304	6.039

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SECTION 4. FIRST AID MEASURES

General advice	: No hazards which require special first aid measures.
If inhaled	: If breathed in, move person into fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	: First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
In case of eye contact	: Remove contact lenses. Protect unharmed eye.
If swallowed	: Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	: Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities. Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: acne stomach or intestinal upset (nausea, vomiting, diarrhea) irritation (nose, throat, airways)
Notes to physician	: No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray

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Foam
Carbon dioxide (CO₂)
Dry chemical

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : carbon dioxide and carbon monoxide
Hydrocarbons
nitrogen oxides (NO_x)

Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.

Further information : Standard procedure for chemical fires.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions : Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.

Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Hazardous components without workplace control parameters

Components	CAS-No.
Mineral Oil	

Engineering measures : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear resistant gloves (consult your safety equipment supplier).
Wear as appropriate:
Safety shoes

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

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Physical state : liquid

Odour : No data available

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : 626 °F / 330 °C
(1,013.333333 hPa)
Calculated Phase Transition Liquid/Gas

Flash point : 394 - < 482 °F / 201 - < 250 °C
Method: Cleveland open cup

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Upper explosion limit : 6 %(V)
Calculated Explosive Limit

Lower explosion limit : 1 %(V)
Calculated Explosive Limit

Vapour pressure : 1.3333333 hPa (20 °C)
Calculated Vapor Pressure

Relative vapour density : No data available

Relative density : No data available

Density : 0.853 g/cm3

Solubility(ies)

Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Thermal decomposition : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : ca. 63 mm2/s (40 °C)

Oxidizing properties : No data available

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SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : None known.

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : carbon dioxide and carbon monoxide
Hydrocarbons
Nitrogen oxides (NOx)**SECTION 11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure : Inhalation
Skin contact
Eye Contact
Ingestion**Acute toxicity**

Not classified based on available information.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Skin corrosion/irritation

Not classified based on available information.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Result: Slight, transient irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Result: Slight, transient irritation

Remarks: Expected based on components.

Remarks: Unlikely to cause eye irritation or injury.

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Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Result: No eye irritation

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

May be fatal if swallowed and enters airways.

Mineral Oil:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks: No data available

Carcinogenicity:

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 12. ECOLOGICAL INFORMATION

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Ecotoxicity**Product:**

Ecotoxicology Assessment

Acute aquatic toxicity : Not classified based on available information.

Chronic aquatic toxicity : Not classified based on available information.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Toxicity to fish : LL50 (Fish): > 100 mg/l
Exposure time: 96 hToxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
Exposure time: 48 hToxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Persistence and degradability**Components:**

No data available

Bioaccumulative potential**Components:**

No data available

Mobility in soil**Components:**

No data available

Other adverse effects

No data available

Product:

Additional ecological information : No data available

Components:**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

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Contaminated packaging : Empty remaining contents.

SECTION 14. TRANSPORT INFORMATION**International transport regulations****REGULATION**

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

TDG_INWT_C

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MX_DG

**SAFETY DATA SHEET**

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Valvoline™ Full Synthetic with MaxLife™ Technology SAE 5W-30 Motor Oil

VV1790

Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant

no

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act
CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
TOLUENE	108-88-3	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
SULFUR DIOXIDE	7446-09-5	500	*
SULFUR DIOXIDE	7446-09-5		*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : No SARA Hazards**SARA 313**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

The components of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AICS : Not in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

IECSC : q (quantity restricted)

PICCS : Not in compliance with the inventory

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TSCA : On TSCA Inventory

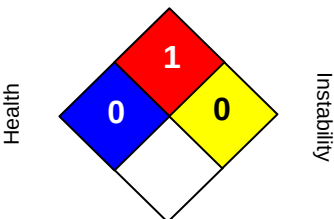
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

Revision Date: 01/17/2018

NFPA:	HMIS III:						
Flammability Health Instability  Special hazard.	<table border="1"> <tr> <td>HEALTH</td><td>0</td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	0	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	0						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

H304 May be fatal if swallowed and enters airways.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

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List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System

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	SDS Number: R0367943
MaxLife™ DEX/MERC Synthetic Automatic Transmission Fluid ™ Trademark, Valvoline or its subsidiaries, registered in various countries VV3240	Version: 1.17

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : MaxLife™ DEX/MERC Synthetic Automatic Transmission Fluid

™ Trademark, Valvoline or its subsidiaries, registered in various countries

Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Lubricant

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL (1-800-832-6825) SDS@valvoline.com	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL (1-800-832-6825) Product Information 1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-	72623-87-1	Asp. Tox. 1; H304	>=80.00 - < 90.00

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Based			
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	Asp. Tox. 1; H304	>=1.50 - < 5.00
DODECYL HYDROXYPROPYL SULFIDE	67124-09-8	Skin Sens. 1; H317	>=0.10 - < 0.50

SECTION 4. FIRST AID MEASURES

General advice	: No hazards which require special first aid measures.
If inhaled	: If breathed in, move person into fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	: First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
In case of eye contact	: Remove contact lenses. Protect unharmed eye.
If swallowed	: Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	: No symptoms known or expected.
Notes to physician	: No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray Foam Carbon dioxide (CO2) Dry chemical
Specific hazards during firefighting	: Do not allow run-off from fire fighting to enter drains or water courses.

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Hazardous combustion products : carbon dioxide and carbon monoxide
 Hydrocarbons

Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions : Prevent product from entering drains.
 Prevent further leakage or spillage if safe to do so.
 If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
 Keep in suitable, closed containers for disposal.

Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.
 For personal protection see section 8.

Conditions for safe storage : Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based	72623-87-1	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Engineering measures : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : Respiratory protection is not required under normal conditions of use.

No personal respiratory protective equipment normally required.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear resistant gloves (consult your safety equipment supplier).

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Wear as appropriate:
Safety shoes

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Colour	: red
Odour	: mild
Odour Threshold	: No data available
pH	: No data available
Melting point/freezing point	: No data available
Boiling point/boiling range	: > 424 °F / 218 °C (1013 hPa)
Flash point	: 394 - 480 °F / 201 - 249 °C Method: Cleveland open cup
Evaporation rate	: < 1 Ethyl Ether
Flammability (solid, gas)	: No data available
Self-ignition	: No data available
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: No data available
Vapour pressure	: 1 hPa Calculated Vapor Pressure
Relative vapour density	: > 1 AIR=1
Relative density	: No data available
Density	: 0.850 g/cm ³ (60.01 °F / 15.56 °C)

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Solubility(ies)

Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-
octanol/water : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : 28.8 mm²/s (104 °F / 40 °C)

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous
reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : excessive heat

Incompatible materials : alkalis
Strong acids
Strong oxidizing agentsHazardous decomposition
products : No hazardous decomposition products are known.**SECTION 11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure**

Inhalation

Skin contact

Eye Contact

Ingestion

Acute toxicity

Not classified based on available information.

Components:**Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

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Acute inhalation toxicity : LC50 (Rat): > 5.58 mg/l
 Exposure time: 4 h
 Test atmosphere: dust/mist
 Assessment: Not classified as acutely toxic by inhalation
 under GHS.
 Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
 Remarks: No mortality observed at this dose.

DODECYL HYDROXYPROPYL SULFIDE:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
 GLP: yes

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
 Assessment: Not classified as acutely toxic by dermal
 absorption under GHS.

Skin corrosion/irritation

Not classified based on available information.

Components:
Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Species : Rabbit
 Result : No skin irritation

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Assessment : Slight, transient irritation
 Result : Slight, transient irritation

DODECYL HYDROXYPROPYL SULFIDE:

Species : Rabbit
 Result : No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Result : Slight, transient irritation
 Remarks : Expected based on components.

Remarks : Unlikely to cause eye irritation or injury.

Components:
Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Species : Rabbit
 Result : No eye irritation

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Result : Slight, transient irritation
 Assessment : Slight, transient irritation

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DODECYL HYDROXYPROPYL SULFIDE:

Species : Rabbit
 Result : No eye irritation

Respiratory or skin sensitisation
Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:
Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Test Type : Buehler Test
 Species : Guinea pig
 Assessment : Does not cause skin sensitisation.

DODECYL HYDROXYPROPYL SULFIDE:

Test Type : Local lymph node assay
 Species : Guinea pig
 Assessment : May cause sensitisation by skin contact.
 Method : OECD Test Guideline 429

Germ cell mutagenicity

Not classified based on available information.

Components:
DODECYL HYDROXYPROPYL SULFIDE:

Genotoxicity in vitro : Test Type: Ames test
 Test system: Salmonella typhimurium
 Metabolic activation: with and without metabolic activation
 Result: negative

Carcinogenicity

Not classified based on available information.

Components:
Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
 Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
 Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

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Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Components:**Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:**

May be fatal if swallowed and enters airways.

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

May be fatal if swallowed and enters airways.

Further information**Product:**

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Acute aquatic toxicity Category 3; Harmful to aquatic life.

Long-term (chronic) aquatic hazard : Chronic aquatic toxicity Category 3; Harmful to aquatic life with long lasting effects.

Components:

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 203
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 202

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Toxicity to algae : NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l
 End point: Growth inhibition
 Exposure time: 72 h
 Test Type: static test
 Test substance: WAF
 Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOELR (Oncorhynchus mykiss (rainbow trout)): >= 1,000 mg/l
 Exposure time: 14 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEL (Daphnia (water flea)): 10 mg/l
 Exposure time: 21 d
 Test substance: WAF
 Method: OECD Test Guideline 211

DODECYL HYDROXYPROPYL SULFIDE:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.75 mg/l
 Exposure time: 96 h
 Test Type: semi-static test
 Method: OECD Test Guideline 203
 GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 0.58 mg/l
 Exposure time: 48 h
 Test Type: static test
 Test substance: WAF

Toxicity to algae : EL50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
 Exposure time: 96 h
 Test Type: static test
 Test substance: WAF

M-Factor (Short-term (acute) aquatic hazard) : 1

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEL (Daphnia magna (Water flea)): 0.32 mg/l
 Exposure time: 21 d
 Test Type: semi-static test
 Method: OECD Test Guideline 211
 GLP: yes

M-Factor (Long-term (chronic) aquatic hazard) : 1

Persistence and degradability
Components:

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:
 Biodegradability : Result: Not readily biodegradable.

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Biodegradation: 2 - 4 %
 Exposure time: 28 d
 Method: OECD Test Guideline 301B

DODECYL HYDROXYPROPYL SULFIDE:

Biodegradability : Result: Not readily biodegradable.
 Biodegradation: 5 %
 Exposure time: 28 d
 Method: OECD Test Guideline 301F

No data available

Bioaccumulative potential
Components:
DODECYL HYDROXYPROPYL SULFIDE:

Partition coefficient: n- : log Pow: 4.7 - 6.5
 octanol/water

No data available

Mobility in soil
Components:

No data available

Other adverse effects

No data available

Product:

Additional ecological : An environmental hazard cannot be excluded in the event of
 information unprofessional handling or disposal., Harmful to aquatic life
 with long lasting effects.

Components:

SECTION 13. DISPOSAL CONSIDERATIONS
Disposal methods

General advice : Dispose of in accordance with all applicable local, state and
 federal regulations.

The product should not be allowed to enter drains, water
 courses or the soil.

Contaminated packaging : Empty remaining contents.
 Dispose of as unused product.
 Empty containers should be taken to an approved waste
 handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION
International Regulations
UNRTDG

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Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations**49 CFR**

Not regulated as a dangerous good

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
BENZENE	71-43-2	10	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
SULFUR DIOXIDE	7446-09-5	500	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : No SARA Hazards

California Prop. 65

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for carcinogenicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for reproductive/developmental toxicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

The components of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

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ENCS : Not in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

TCSI : On the inventory, or in compliance with the inventory

TSCA : On TSCA Inventory

TSCA list

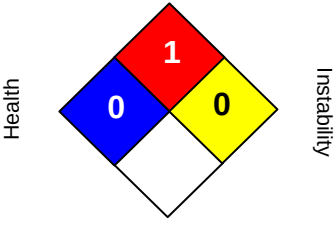
No substances are subject to TSCA 12(b) export notification requirements.

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION
Further information

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NFPA:	HMIS III:						
Flammability Health Instability Special hazard. 	<table border="1"> <tr> <td>HEALTH</td><td>0</td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	0	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	0						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

H304 May be fatal if swallowed and enters airways.

H317 May cause an allergic skin reaction.

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	SDS Number: R0367943
MaxLife™ DEX/MERC Synthetic Automatic Transmission Fluid ™ Trademark, Valvoline or its subsidiaries, registered in various countries VV3240	Version: 1.17

Sources of key data used to compile the Safety Data Sheet
Valvoline internal data including own and sponsored test reports
The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists
BEI : Biological Exposure Index
CAS : Chemical Abstracts Service (Division of the American Chemical Society).
CMR : Carcinogenic, Mutagenic or Toxic for Reproduction
FG : Food grade
GHS : Globally Harmonized System of Classification and Labeling of Chemicals.
H-statement : Hazard Statement
IATA : International Air Transport Association.
IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization
ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"
IMDG : International Maritime Code for Dangerous Goods
ISO : International Organization for Standardization
logPow : octanol-water partition coefficient
LCxx : Lethal Concentration, for xx percent of test population
LDxx : Lethal Dose, for xx percent of test population.
ICxx : Inhibitory Concentration for xx of a substance
Ecxx : Effective Concentration of xx
N.O.S.: Not Otherwise Specified
OECD : Organization for Economic Co-operation and Development
OEL : Occupational Exposure Limit
P-Statement : Precautionary Statement
PBT : Persistent , Bioaccumulative and Toxic
PPE : Personal Protective Equipment
STEL : Short-term exposure limit
STOT : Specific Target Organ Toxicity
TLV : Threshold Limit Value
TWA : Time-weighted average
vPvB : Very Persistent and Very Bioaccumulative
WEL : Workplace Exposure Level

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CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
 DOT : Department of Transportation
 FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
 HMIRC : Hazardous Materials Information Review Commission
 HMIS : Hazardous Materials Identification System
 NFPA : National Fire Protection Association
 NIOSH : National Institute for Occupational Safety and Health
 OSHA : Occupational Safety and Health Administration
 PMRA : Health Canada Pest Management Regulatory Agency
 RTK : Right to Know
 WHMIS : Workplace Hazardous Materials Information System

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SAFETY DATA SHEET	Revision Date: 08/01/2019
	Print Date: 9/10/2019
	SDS Number: R0076417
Valvoline™ General Multipurpose Grease VV605	Version: 1.5

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ General Multipurpose Grease

Details of the supplier of the safety data sheet

Valvoline LLC
100 Valvoline Way
Lexington, KY 40509
United States of America (USA)
1-800-TEAMVAL (1-800-832-6825)

SDS@valvoline.com

Emergency telephone number

1-800-VALVOLINE (1-800-825-8654)

Regulatory Information Number

1-800-TEAMVAL (1-800-832-6825)

Product Information

1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

Hazardous components

No hazardous ingredients

SECTION 4. FIRST AID MEASURES

General advice : No hazards which require special first aid measures.

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- If inhaled : If breathed in, move person into fresh air.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
- In case of eye contact : Remove contact lenses.
Protect unharmed eye.
- If swallowed : Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : No symptoms known or expected.
- Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
Carbon dioxide (CO₂)
Dry chemical
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : No hazardous combustion products are known
- Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.
- Further information : Standard procedure for chemical fires.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

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Personal precautions, protective equipment and emergency procedures : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions : Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.

Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC (<3 % DMSO EXTRACT)	64742-65-0	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHT	64742-52-5	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3	ACGIH

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			Inhalable fraction	
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Engineering measures : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear resistant gloves (consult your safety equipment supplier).
Wear as appropriate:
Safety shoes

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : paste

Colour : amber

Odour : petroleum distillates

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : 640 °F / 338 °C

Flash point : 435 °F / 224 °C

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Flammability (solid, gas) : No data available
 Self-ignition : 599 °F / 315 °C
 Upper explosion limit / Upper flammability limit : No data available
 Lower explosion limit / Lower flammability limit : No data available
 Vapour pressure : Not applicable
 Relative density :
 No data available
 Density : 0.897 g/cm³ (68 °F / 20 °C)
 Solubility(ies)
 Water solubility : negligible
 Solubility in other solvents : No data available
 Partition coefficient: n-octanol/water : No data available
 Ignition temperature : > 599 °F / > 315 °C
 Decomposition temperature : No data available
 Viscosity
 Viscosity, dynamic : No data available
 Viscosity, kinematic : > 20.5 mm²/s (104 °F / 40 °C)
 Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.
 Chemical stability : Stable under recommended storage conditions.
 Possibility of hazardous reactions : Product will not undergo hazardous polymerization.
 Conditions to avoid : None known.

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Incompatible materials : None known.

Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation

Skin contact

Eye Contact

Ingestion

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate (Rat): 34,014 mg/kg

Acute inhalation toxicity : Acute toxicity estimate (Rat): 1,560 mg/l
Exposure time: 4 h

Acute dermal toxicity : Acute toxicity estimate (Rabbit): 8,261 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Product:

Result : No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Result : No eye irritation

Remarks : Unlikely to cause eye irritation or injury.

Respiratory or skin sensitisation**Skin sensitisation**

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

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NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

Product:

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

Product:

Additional ecological information : No data available

SECTION 13. DISPOSAL CONSIDERATIONS

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Disposal methods

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.

SECTION 14. TRANSPORT INFORMATION**International Regulations****UNRTDG**

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations**49 CFR**

Not regulated as a dangerous good

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

DSL : On the inventory, or in compliance with the inventory

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AICS	: Not in compliance with the inventory
ENCS	: Not in compliance with the inventory
KECI	: Not in compliance with the inventory
PICCS	: Not in compliance with the inventory
IECSC	: Not in compliance with the inventory
TCSI	: Not in compliance with the inventory
TSCA	: On TSCA Inventory

TSCA list

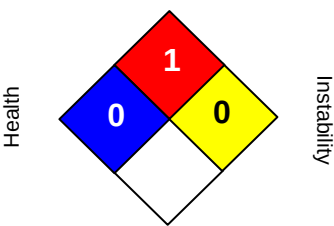
No substances are subject to TSCA 12(b) export notification requirements.

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION
Further information

Revision Date: 08/01/2019

NFPA:	HMIS III:						
Flammability Health Instability Special hazard. 	<table border="1"> <tr> <td>HEALTH</td><td>0</td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	0	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	0						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

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STOT : Specific Target Organ Toxicity
TLV : Threshold Limit Value
TWA : Time-weighted average
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WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
DOT : Department of Transportation

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FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
 HMIRC : Hazardous Materials Information Review Commission
 HMIS : Hazardous Materials Identification System
 NFPA : National Fire Protection Association
 NIOSH : National Institute for Occupational Safety and Health
 OSHA : Occupational Safety and Health Administration
 PMRA : Health Canada Pest Management Regulatory Agency
 RTK : Right to Know
 WHMIS : Workplace Hazardous Materials Information System

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SAFETY DATA SHEET	Revision Date: 05/22/2017
	Print Date: 9/18/2019
	SDS Number: R0321818
Valvoline™ Syn Gard™ Gear Oil 75W-90 VV70027	Version: 1.3

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ Syn Gard™ Gear Oil 75W-90

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL Product Information 1-800-TEAMVAL

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin sensitization : Category 1

GHS label elements

Hazard pictograms :



Signal Word : Warning

Hazard Statements : May cause an allergic skin reaction.

Precautionary Statements : If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.

Prevention:

Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves.

Response:

IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/ attention.
Wash contaminated clothing before reuse.

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Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
OLEFINSULFIDE	68937-96-2	Skin Sens. 1B; H317	5.00
N-PHENYL-1-NAPHTHYLAMINE	90-30-2	Acute Tox. 4; H302 Skin Sens. 1; H317 STOT RE 2; H373	0.9999

SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : If breathed in, move person into fresh air.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : Remove contaminated clothing. If irritation develops, get medical attention.
If on skin, rinse well with water.
First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
Wash contaminated clothing before re-use.
- In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
If eye irritation persists, consult a specialist.

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If swallowed : IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed : May cause an allergic skin reaction.
Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.
Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:
stomach or intestinal upset (nausea, vomiting, diarrhea)
irritation (nose, throat, airways)

Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
Carbon dioxide (CO₂)
Dry chemical

Unsuitable extinguishing media : High volume water jet

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : carbon dioxide and carbon monoxide
oxides of sulfur, nitrogen and phosphorus
Sulphur oxides

Specific extinguishing :

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methods

Product is compatible with standard fire-fighting agents.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Do not breathe vapours/dust.
Do not smoke.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Container hazardous when empty.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.
Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Hazardous components without workplace control parameters

Components	CAS-No.
OLEFINSULFIDE	68937-96-2
N-PHENYL-1-NAPHTHYLAMINE	90-30-2

Engineering measures : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear as appropriate:
Impervious clothing
Safety shoes
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Discard gloves that show tears, pinholes, or signs of wear.
Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : Wash hands before breaks and at the end of workday.
When using do not eat or drink.
When using do not smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : liquid

Colour : amber

Odour : pungent

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Odour Threshold	: No data available
pH	: No data available
	:
Melting point/freezing point	No data available
Boiling point/boiling range	: No data available
Flash point	: 419 °F / 215 °C Method: closed cup
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: No data available
Relative vapour density	: No data available
Relative density	: No data available
Density	: 0.879 g/cm ³ (15.56 °C)
Solubility(ies)	
Water solubility	: insoluble
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Thermal decomposition	: No data available
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: 122 mm ² /s (40 °C)
Oxidizing properties	: No data available

SECTION 10. STABILITY AND REACTIVITY

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Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : excessive heat

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : carbon dioxide and carbon monoxide
oxides of sulfur, nitrogen and phosphorus
Sodium oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation
Skin contact
Eye Contact
Ingestion

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Remarks: Not toxic, not known to be toxic, not expected to be toxic by Ingestion

Acute inhalation toxicity : Remarks: Not toxic, not known to be toxic, not expected to be toxic by Inhalation
Mild respiratory irritant

Components:
OLEFINSULFIDE:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 401
Assessment: Not classified as acutely toxic by ingestion under GHS.
Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: Not classified as acutely toxic by dermal absorption under GHS.
Remarks: No mortality observed at this dose.

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N-PHENYL-1-NAPHTHYLAMINE:

Acute oral toxicity : LD50 (Rat, Male): ca. 1,625 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Product:

Result: No skin irritation

Remarks: May cause skin irritation in susceptible persons.

Components:

OLEFINSULFIDE:

Result: Mild skin irritation

N-PHENYL-1-NAPHTHYLAMINE:

Species: Rabbit

Method: OECD Test Guideline 404

Result: Slight, transient irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Result: Slight, transient irritation

Remarks: Unlikely to cause eye irritation or injury.

Components:

OLEFINSULFIDE:

Result: Slight, transient irritation

N-PHENYL-1-NAPHTHYLAMINE:

Result: Slight, transient irritation

Method: OECD Test Guideline 405

Respiratory or skin sensitisation

Skin sensitisation: May cause an allergic skin reaction.

Respiratory sensitisation: Not classified based on available information.

Components:

OLEFINSULFIDE:

Test Type: Maximisation Test

Species: Guinea pig

Assessment: The product is a skin sensitiser, sub-category 1B.

Method: OECD Test Guideline 406

N-PHENYL-1-NAPHTHYLAMINE:

Test Type: Maximisation Test

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Species: Guinea pig
Assessment: May cause sensitisation by skin contact.
Method: OECD Test Guideline 406

Germ cell mutagenicity
Not classified based on available information.

Components:

OLEFINSULFIDE:

Genotoxicity in vitro : Test Type: in vitro assay
Result: Positive results were obtained in some in vitro tests.

Genotoxicity in vivo : Test Type: Micronucleus test
Test species: Mouse
Cell type: Bone marrow
Method: OECD Test Guideline 474
Result: negative

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Components:

N-PHENYL-1-NAPHTHYLAMINE:

Exposure routes: Ingestion

Target Organs: Blood

Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

Aspiration toxicity

Not classified based on available information.

Further information
Product:

Remarks: No data available

Carcinogenicity:
IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

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SECTION 12. ECOLOGICAL INFORMATION
Ecotoxicity
Product:

Ecotoxicology Assessment

Acute aquatic toxicity : Acute aquatic toxicity Category 3; Harmful to aquatic life.

Chronic aquatic toxicity : Chronic aquatic toxicity Category 3; Harmful to aquatic life with long lasting effects.

Components:

OLEFINSULFIDE:

Ecotoxicology Assessment

Acute aquatic toxicity : Harmful to aquatic life.

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

N-PHENYL-1-NAPHTHYLAMINE:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.44 - 0.74 mg/l
Exposure time: 96 h
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Water flea (Daphnia magna)): 0.3 - 0.68 mg/l
Exposure time: 48 h
Test Type: static test

Persistence and degradability
Components:

OLEFINSULFIDE:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 13 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

N-PHENYL-1-NAPHTHYLAMINE:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301C

No data available

Bioaccumulative potential
Components:

N-PHENYL-1-NAPHTHYLAMINE:

Partition coefficient: n-octanol/water : log Pow: 4.20

No data available

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Mobility in soil**Components:**

No data available

Other adverse effects

No data available

Product:Additional ecological
information: An environmental hazard cannot be excluded in the event of
unprofessional handling or disposal., Harmful to aquatic life
with long lasting effects.**Components:****SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods****General advice**: The product should not be allowed to enter drains, water
courses or the soil.
Do not contaminate ponds, waterways or ditches with
chemical or used container.
Send to a licensed waste management company.Dispose of in accordance with all applicable local, state and
federal regulations.**Contaminated packaging**: Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste
handling site for recycling or disposal.
Do not re-use empty containers.**SECTION 14. TRANSPORT INFORMATION****International transport regulations****REGULATION**

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

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TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

TDG_INWT_C

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MX_DG

Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant

no

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards

: Acute Health Hazard

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SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65

WARNING! This product contains a chemical known to the State of California to cause cancer.
2-NAPHTHALENAMINE 91-59-8

The components of this product are reported in the following inventories:

TSCA	: On TSCA Inventory
DSL	: All components of this product are on the Canadian DSL
AICS	: Not in compliance with the inventory
NZIOC	: Not in compliance with the inventory
ENCS	: Not in compliance with the inventory
KECI	: Not in compliance with the inventory
PICCS	: Not in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

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NFPA:	HMIS III:

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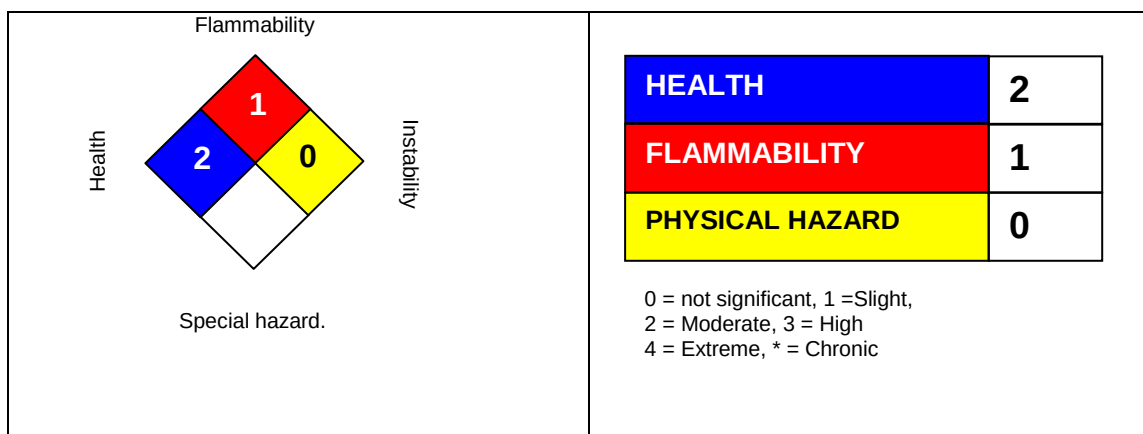
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NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.
H373 May cause damage to organs through prolonged or repeated exposure if swallowed.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

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IATA-DGR : Dangerous Goods Regulation by the “International Air Transport Association” (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the “International Civil Aviation Organization”

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System

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29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Premium Blue™ EXTREME Full Synthetic Heavy Duty SAE 5W-40 Diesel Engine Oil

™ Trademark, Valvoline or its subsidiaries, registered in various countries

Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Lubricant

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL (1-800-832-6825)	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL (1-800-832-6825) Product Information 1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Reproductive toxicity : Category 2

GHS label elements

Hazard pictograms :



Signal Word : Warning

Hazard Statements : Suspected of damaging fertility or the unborn child.

Precautionary Statements : **Prevention:**
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Wear protective gloves/ protective clothing/ eye protection/ face protection.

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Response:

IF exposed or concerned: Get medical advice/ attention.

Storage:

Store locked up.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	Asp. Tox. 1; H304	50.2739
DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC (<3 % DMSO EXTRACT)	64742-65-0	This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).	6.0393
ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE)	93819-94-4	Skin Irrit. 2; H315 Eye Dam. 1; H318	1.0871
DISTILLATES (PETROLEUM), SOLVENT-REFINED LIGHT PA	64741-89-5	This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).	1.0065
CATALYTIC DE WAXED HEAVY PARAFFINIC OIL (PETROLEUM)	64742-70-7	Not a hazardous substance or mixture.	1.0065
Dodecylphenol, mixed isomers	74499-35-7	Skin Irrit. 2; H315	0.2012

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(branched)

Eye Irrit. 2A; H319

Repr. 2; H361

SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
 Show this safety data sheet to the doctor in attendance.
 Do not leave the victim unattended.
- If inhaled : If unconscious, place in recovery position and seek medical advice.
 If symptoms persist, call a physician.
- In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
- In case of eye contact : Flush eyes with water as a precaution.
 Remove contact lenses.
 Protect unharmed eye.
 If eye irritation persists, consult a specialist.
- If swallowed : Obtain medical attention.
 Do not give milk or alcoholic beverages.
 Never give anything by mouth to an unconscious person.
 If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:
 acne
 stomach or intestinal upset (nausea, vomiting, diarrhea)
 irritation (nose, throat, airways)
 Suspected of damaging fertility or the unborn child.
 Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum

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occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
 Water spray
 Foam
 Carbon dioxide (CO₂)
 Dry chemical
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : carbon dioxide and carbon monoxide
 Hydrocarbons
 nitrogen oxides (NO_x)
 zinc oxide
 Sulphur oxides
 hydrogen sulfide
 mercaptans
 Aldehydes
- Specific extinguishing methods :
 Product is compatible with standard fire-fighting agents.
- Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and : Use personal protective equipment.
 Ensure adequate ventilation.

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- emergency procedures Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
- Environmental precautions : Prevent product from entering drains.
 Prevent further leakage or spillage if safe to do so.
 If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
 Keep in suitable, closed containers for disposal.
- Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Do not breathe vapours/dust.
 Do not smoke.
 Container hazardous when empty.
 Avoid exposure - obtain special instructions before use.
 Avoid contact with skin and eyes.
 Smoking, eating and drinking should be prohibited in the application area.
 For personal protection see section 8.
 Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
 Containers which are opened must be carefully resealed and kept upright to prevent leakage.
 Observe label precautions.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH

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		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC (<3 % DMSO EXTRACT)	64742-65-0	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
DISTILLATES (PETROLEUM), SOLVENT-REFINED LIGHT PA	64741-89-5	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
CATALYTIC DE WAXED HEAVY PARAFFINIC OIL (PETROLEUM)	64742-70-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Hazardous components without workplace control parameters

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Components	CAS-No.
ZINC BIS[O-(6-METHYLHELPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE)	93819-94-4
Dodecylphenol, mixed isomers (branched)	74499-35-7

Engineering measures : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection

: Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection

: Wear resistant gloves (consult your safety equipment supplier).
 Wear as appropriate:
 Impervious clothing
 Safety shoes
 Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

: Wash hands before breaks and at the end of workday.
 When using do not eat or drink.
 When using do not smoke.



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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: liquid
Odour	: No data available
Odour Threshold	: No data available
pH	: No data available
Melting point/freezing point	: No data available
	No data available
Boiling point/boiling range	: 392 °F / 200 °C Calculated Phase Transition Liquid/Gas
Flash point	: > 390 °F / > 199 °C
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Upper explosion limit	: 6 %(V) GLP: Calculated Explosive Limit
Lower explosion limit	: 1 %(V) GLP: Calculated Explosive Limit
Vapour pressure	: 1.3333333 hPa (20 °C) Calculated Vapor Pressure
Relative vapour density	: No data available
Relative density	: 0.8556 (20 °C)
Density	: No data available
Solubility(ies)	
Water solubility	: insoluble
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Thermal decomposition	: No data available

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Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : 100 mm²/s (40 °C)**Oxidizing properties**

: No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : excessive heat

Incompatible materials : Acids
Strong oxidizing agents

Strong oxidizing agents

Hazardous decomposition products

Aldehydes
carbon dioxide and carbon monoxide
Hydrocarbons
hydrogen sulfide
Nitrogen oxides (NO_x)
Sulphur oxides
zinc oxide fumes
mercaptans

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation
Skin contact
Eye Contact
Ingestion

Acute toxicity

Not classified based on available information.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

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 ™ Trademark, Valvoline or its subsidiaries, registered in various countries
 VV70516

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC (<3 % DMSO EXTRACT):

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Acute oral toxicity : LD50 (Rat): 2,600 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 3,160 mg/kg
 Method: OECD Test Guideline 402
 Assessment: Not classified as acutely toxic by dermal absorption under GHS.

DISTILLATES (PETROLEUM), SOLVENT-REFINED LIGHT PA:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

CATALYTIC DE WAXED HEAVY PARAFFINIC OIL (PETROLEUM):

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
 Assessment: Not classified as acutely toxic by ingestion under GHS.

Remarks: Information given is based on data obtained from similar substances.

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
 Assessment: Not classified as acutely toxic by dermal absorption under GHS.
 Remarks: Information given is based on data obtained from similar substances.

Skin corrosion/irritation

Not classified based on available information.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Result: Slight, transient irritation

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC (<3 % DMSO EXTRACT):

Result: Slight, transient irritation

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ZINC BIS[O-(6-METHYLHELPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPATE):

Species: Guinea pig

Method: OECD Test Guideline 404

Result: Irritating to skin.

Remarks: Information given is based on data obtained from similar substances.

DISTILLATES (PETROLEUM), SOLVENT-REFINED LIGHT PA:

Result: Slight, transient irritation

CATALYTIC DE WAXED HEAVY PARAFFINIC OIL (PETROLEUM):

Result: Slight, transient irritation

Dodecylphenol, mixed isomers (branched):

Result: Irritating to skin.

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks: Unlikely to cause eye irritation or injury.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Result: No eye irritation

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC (<3 % DMSO EXTRACT):

Result: Slight, transient irritation

ZINC BIS[O-(6-METHYLHELPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPATE):

Species: Rabbit

Result: Corrosive

Remarks: Information given is based on data obtained from similar substances.

DISTILLATES (PETROLEUM), SOLVENT-REFINED LIGHT PA:

Result: Slight, transient irritation

CATALYTIC DE WAXED HEAVY PARAFFINIC OIL (PETROLEUM):

Result: Slight, transient irritation

Dodecylphenol, mixed isomers (branched):

Result: Irritating to eyes.

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Components:

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DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC (<3 % DMSO EXTRACT):

Genotoxicity in vitro : Test Type: Ames test
Result: negative

ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Genotoxicity in vitro : Test Type: Ames test
Test species: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Remarks: Information given is based on data obtained from similar substances.

Genotoxicity in vivo : Test Type: Micronucleus test
Test species: Mouse
Method: OECD Test Guideline 474
Result: negative
Remarks: Information given is based on data obtained from similar substances.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Suspected of damaging fertility or the unborn child.

Components:

Dodecylphenol, mixed isomers (branched):

Reproductive toxicity - : Some evidence of adverse effects on sexual function and
Assessment fertility, and/or on development, based on animal experiments.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks: No data available

Carcinogenicity:

IARC

No component of this product present at levels greater than or

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equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Ecotoxicology Assessment

Acute aquatic toxicity : Acute aquatic toxicity Category 3; Harmful to aquatic life.

Chronic aquatic toxicity : Chronic aquatic toxicity Category 3; Harmful to aquatic life with long lasting effects.

Components:

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Toxicity to fish : LL50 (Fish): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
Exposure time: 48 h

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 4.5 mg/l
Exposure time: 96 h
Test Type: semi-static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Water flea (Daphnia magna)): 5.4 mg/l
Exposure time: 48 h
Test Type: static test

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Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): 2.1 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test

Dodecylphenol, mixed isomers (branched):

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Persistence and degradability**Components:**

ZINC BIS[O-(6-METHYLHELPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 1.5 %

Exposure time: 28 d

Method: OECD Test Guideline 301B

No data available

Bioaccumulative potential**Components:**

ZINC BIS[O-(6-METHYLHELPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Partition coefficient: n- : log Pow: 0.59 - 1.2 (23 °C)
octanol/water

CATALYTIC DE WAXED HEAVY PARAFFINIC OIL (PETROLEUM):

Partition coefficient: n- : log Pow: > 3.5
octanol/water

No data available

Mobility in soil**Components:**

No data available

Other adverse effects

No data available

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Harmful to aquatic life with long lasting effects.

Components:

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

General advice : The product should not be allowed to enter drains, water courses or the soil.

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Do not contaminate ponds, waterways or ditches with
chemical or used container.

Send to a licensed waste management company.

Dispose of in accordance with all applicable local, state and
federal regulations.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste
handling site for recycling or disposal.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION**International transport regulations****REGULATION**

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

TDG_INWT_C

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

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Not dangerous goods

MARINE
POLLUTANT:(
LEAD)**INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO**

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MX_DG

Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant

no

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act
CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
ETHYLENEDIAMINE	107-15-3	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
ETHYLENEDIAMINE	107-15-3	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : Chronic Health Hazard**SARA 313**

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ZINC BIS[O-(6-METHYLHELPTYL)]BIS[O-SEC-BUTYL)]BIS(DITHIOPHOS PATE) 93819-94-4 1.08 %

California Prop 65

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

The components of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

ENCS : Not in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

TSCA : On TSCA Inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

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NFPA:	HMIS III:

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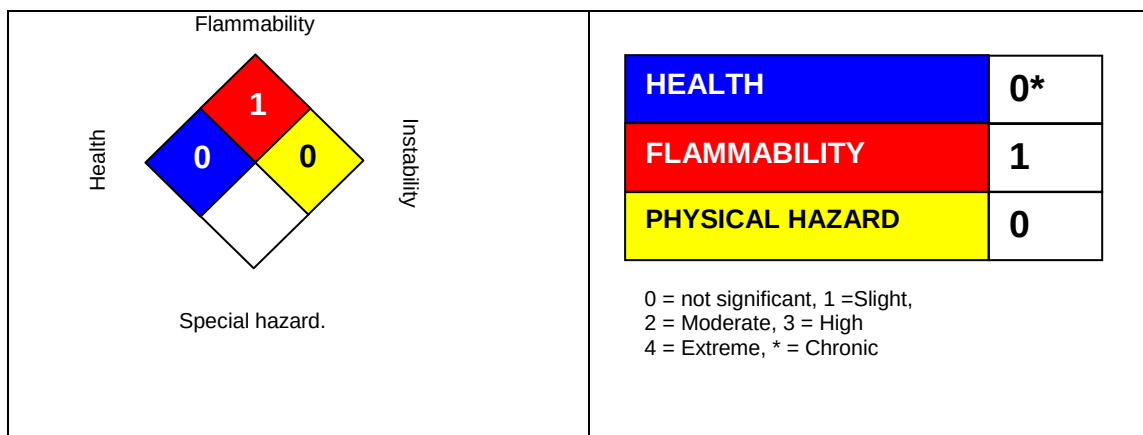
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NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H361	Suspected of damaging fertility or the unborn child.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

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H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the “International Air Transport Association” (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the “International Civil Aviation Organization”

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System

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29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ SAE 80W-90
HP GEAR OIL

Details of the supplier of the safety data sheet

Valvoline LLC
100 Valvoline Way
Lexington, KY 40509
United States of America (USA)
1-800-TEAMVAL (1-800-832-6825)

SDS@valvoline.com

Emergency telephone number

1-800-VALVOLINE (1-800-825-8654)

Regulatory Information Number

1-800-TEAMVAL (1-800-832-6825)

Product Information

1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin sensitization : Category 1

GHS label elements

Hazard pictograms :



Signal Word : Warning

Hazard Statements : May cause an allergic skin reaction.

Precautionary Statements : **Prevention:**
Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves.
Response:
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/ attention.
Wash contaminated clothing before reuse.
Disposal:

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Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	Not a hazardous substance or mixture.	>=60.00 - < 70.00
OLEFINSULFIDE	68937-96-2	Skin Sens. 1B; H317	>=1.50 - < 5.00
React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)		Flam. Liq. 4; H227 Acute Tox. 4; H302 Eye Dam. 1; H318 Skin Sens. 1; H317	>=0.50 - < 1.00

SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : If breathed in, move person into fresh air.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : Remove contaminated clothing. If irritation develops, get medical attention.
If on skin, rinse well with water.
First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
Wash contaminated clothing before re-use.
- In case of eye contact : Flush eyes with water as a precaution.

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Remove contact lenses.
Protect unharmed eye.
If eye irritation persists, consult a specialist.

If swallowed : Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed : No symptoms known or expected.
May cause an allergic skin reaction.

Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
Carbon dioxide (CO₂)
Dry chemical

Unsuitable extinguishing media : High volume water jet

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : carbon dioxide and carbon monoxide
Hydrocarbons
Sulphur oxides

Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and : Use personal protective equipment.
Persons not wearing protective equipment should be excluded

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- emergency procedures : from area of spill until clean-up has been completed.
- Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.
- Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Do not breathe vapours/dust.
Do not smoke.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Container hazardous when empty.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3	ACGIH

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			Inhalable fraction	
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Engineering measures : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : Respiratory protection is not required under normal conditions of use.

Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear as appropriate:
Impervious clothing
Safety shoes
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Discard gloves that show tears, pinholes, or signs of wear.
Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : liquid

Colour : amber

Odour : No data available

Odour Threshold : No data available

pH : No data available

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Melting point/freezing point	: No data available
Boiling point/boiling range	: > 424.9 °F / 218.3 °C (1013.333 hPa)
Flash point	: 394 - 480 °F / 201 - 249 °C Method: Cleveland open cup
Evaporation rate	: > 1 Ethyl Ether
Flammability (solid, gas)	: No data available
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: < 0.1000000 mmHg
Relative vapour density	: > 1AIR=1
Relative density	: 0.89 (60.00 °F)
Density	: 0.8916 g/cm ³ (15.56 °C)
Solubility(ies)	
Water solubility	: No data available
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Thermal decomposition	: No data available
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: 146 mm ² /s (40 °C)
Oxidizing properties	: No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No decomposition if stored and applied as directed.
Chemical stability	: Stable under recommended storage conditions.

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Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : None known.

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : carbon dioxide and carbon monoxide
Sodium oxides

SECTION 11. TOXICOLOGICAL INFORMATION
Information on likely routes of exposure

Inhalation
Skin contact
Eye Contact
Ingestion

Acute toxicity

Not classified based on available information.

Product:

Acute dermal toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Components:
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

OLEFINSULFIDE:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 401
Assessment: Not classified as acutely toxic by ingestion under GHS.
Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: Not classified as acutely toxic by dermal absorption under GHS.
Remarks: No mortality observed at this dose.

React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched):

Acute oral toxicity : LD50 (Rat): ca. 2,000 mg/kg
Method: OECD Test Guideline 401
Assessment: The component/mixture is classified as acute

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oral toxicity, category 4.

Skin corrosion/irritation

Not classified based on available information.

Product:

Remarks : May cause skin irritation in susceptible persons.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation

Result : Slight, transient irritation

OLEFINSULFIDE:

Result : Mild skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks : Vapours may cause irritation to the eyes, respiratory system and the skin.

Remarks : Unlikely to cause eye irritation or injury.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : No eye irritation

Assessment : No eye irritation

OLEFINSULFIDE:

Result : Slight, transient irritation

React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched):

Result : Corrosive

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Product:

Remarks : May cause allergic skin reaction.

Components:

OLEFINSULFIDE:

Test Type : Maximisation Test

Species : Guinea pig

Assessment : The product is a skin sensitizer, sub-category 1B.

Method : OECD Test Guideline 406

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React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched):

Test Type : Local lymph node assay
Species : Mouse
Method : OECD Test Guideline 429
Result : May cause sensitisation by skin contact.

Germ cell mutagenicity

Not classified based on available information.

Components:

OLEFINSULFIDE:

Genotoxicity in vitro : Test Type: in vitro assay
Result: Positive results were obtained in some in vitro tests.

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse
Cell type: Bone marrow
Method: OECD Test Guideline 474
Result: negative

Carcinogenicity

Not classified based on available information.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

No aspiration toxicity classification

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Further information
Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION
Ecotoxicity
Product:

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Acute aquatic toxicity Category 3; Harmful to aquatic life.

Long-term (chronic) aquatic hazard : Chronic aquatic toxicity Category 3; Harmful to aquatic life with long lasting effects.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Toxicity to fish : LL50 (Fish): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
Exposure time: 48 h

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

OLEFINSULFIDE:

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Harmful to aquatic life.

Long-term (chronic) aquatic hazard : Harmful to aquatic life with long lasting effects.

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React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched):

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): ca. 24 mg/l
Exposure time: 96 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): ca. 91.4 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 202

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): 15 mg/l
End point: Growth inhibition
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 3.3 mg/l
End point: Growth inhibition
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.12 mg/l
Exposure time: 21 d
End point: Reproduction Test
Test Type: semi-static test
Test substance: WAF
Method: OECD Test Guideline 211

Ecotoxicology Assessment
Short-term (acute) aquatic hazard : Toxic to aquatic life.

Long-term (chronic) aquatic hazard : Toxic to aquatic life with long lasting effects.

Persistence and degradability

Components:

OLEFINSULFIDE:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 13 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

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React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched):

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 7.4 %
Exposure time: 28 d
Method: Modified Sturm Test

No data available

Bioaccumulative potential

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Partition coefficient: n-octanol/water : log Pow: Expected > 7

React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched):

Partition coefficient: n-octanol/water : Remarks: No data available

No data available

Mobility in soil

Components:

No data available

Other adverse effects

No data available

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Harmful to aquatic life with long lasting effects.

Components:

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

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SECTION 14. TRANSPORT INFORMATION**International transport regulations****REGULATION**

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

TDG_INWT_C

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MX_DG

Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

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Marine pollutant	no

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Respiratory or skin sensitisation

California Prop. 65

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for carcinogenicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for reproductive/developmental toxicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

The components of this product are reported in the following inventories:

DSL	: All components of this product are on the Canadian DSL
AICS	: On the inventory, or in compliance with the inventory
ENCS	: On the inventory, or in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
TSCA	: On TSCA Inventory

TSCA list

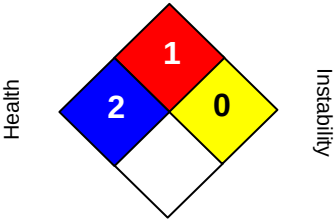
No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

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Further information

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NFPA:	HMIS III:						
Flammability  Health Instability Special hazard.	<table border="1"> <tr> <td>HEALTH</td><td>2</td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	2	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	2						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

H227	Combustible liquid.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

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FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System

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SDS Number: R0409618

Valvoline™ EUROPEAN FULL SYN 5W-30 Synthetic Motor Oil

Version: 1.8

VV915

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**Product identifier**

Trade name : Valvoline™ EUROPEAN FULL SYN 5W-30
Synthetic Motor Oil

Details of the supplier of the safety data sheet

Valvoline LLC
100 Valvoline Way
Lexington, KY 40509
United States of America (USA)
1-800-TEAMVAL (1-800-832-6825)

SDS@valvoline.com

Emergency telephone number

1-800-VALVOLINE (1-800-825-8654)

Regulatory Information Number

1-800-TEAMVAL (1-800-832-6825)

Product Information

1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	Not a hazardous substance or mixture.	>=30.00 - < 40.00
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	Asp. Tox. 1; H304	>=5.00 - < 10.00

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Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based	72623-87-1	Asp. Tox. 1; H304	>=5.00 - < 10.00
ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE)	93819-94-4	Skin Irrit. 2; H315 Eye Dam. 1; H318	>=1.00 - < 1.50

SECTION 4. FIRST AID MEASURES

General advice	: No hazards which require special first aid measures.
If inhaled	: If breathed in, move person into fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	: First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
In case of eye contact	: Remove contact lenses. Protect unharmed eye.
If swallowed	: Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	: No symptoms known or expected.
Notes to physician	: No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray Foam Carbon dioxide (CO2) Dry chemical
Specific hazards during firefighting	: Do not allow run-off from fire fighting to enter drains or water courses.

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Hazardous combustion products : carbon dioxide and carbon monoxide
Hydrocarbons
Nitrogen oxides (NOx)
zinc oxide
Sulphur oxides
hydrogen sulfide
mercaptans

Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.

Further information : Standard procedure for chemical fires.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions : Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

Other information : Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.

Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of	Control parameters /	Basis

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		exposure)	Permissible concentration	
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based	72623-87-1	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL

Engineering measures

: General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection

: No personal respiratory protective equipment normally required.

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- Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.
- Skin and body protection : Wear as appropriate:
Safety shoes
Wear resistant gloves (consult your safety equipment supplier).
- Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : liquid
- Colour : amber
- Odour : No data available
- Odour Threshold : No data available
- pH : No data available
- Melting point/freezing point : No data available
- Boiling point/boiling range : 626 °F / 330 °C
(1,013.333333 hPa)
Calculated Phase Transition Liquid/Gas
- Flash point : 441 °F / 227 °C
Method: Open Cup
- Evaporation rate : No data available
- Flammability (solid, gas) : No data available
- Self-ignition : No data available
- Upper explosion limit / Upper flammability limit : 6 %(V)
GLP: Calculated Explosive Limit
- Lower explosion limit / Lower flammability limit : 1 %(V)
GLP: Calculated Explosive Limit
- Vapour pressure : 1.3333333 hPa (68 °F / 20 °C)
Calculated Vapor Pressure
- Relative vapour density : No data available

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Relative density : No data available

Density : 0.851 g/cm³ (60.01 °F / 15.56 °C)

Solubility(ies)

Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : ca. 63 mm²/s (104 °F / 40 °C)

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : excessive heat

Incompatible materials : Oxidizing agents

Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation
Skin contact
Eye Contact
Ingestion

Acute toxicity

Not classified based on available information.

Product:

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Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Components:
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.58 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: Not classified as acutely toxic by inhalation under GHS.
Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Remarks: No mortality observed at this dose.

ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Acute oral toxicity : LD50 (Rat): 2,600 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 3,160 mg/kg
Method: OECD Test Guideline 402
Assessment: Not classified as acutely toxic by dermal absorption under GHS.

Skin corrosion/irritation

Not classified based on available information.

Components:
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation

Result : Slight, transient irritation

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Assessment : Slight, transient irritation

Result : Slight, transient irritation

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Species : Rabbit

Result : No skin irritation

ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

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Species : Guinea pig
Method : OECD Test Guideline 404
Result : Irritating to skin.
Remarks : Information given is based on data obtained from similar substances.

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Result : No eye irritation
Remarks : Expected based on components.

Remarks : Unlikely to cause eye irritation or injury.

Components:
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : No eye irritation
Assessment : No eye irritation

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Result : No eye irritation
Assessment : No eye irritation

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Species : Rabbit
Result : No eye irritation

ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Species : Rabbit
Result : Corrosive
Remarks : Information given is based on data obtained from similar substances.

Respiratory or skin sensitisation
Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:
Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Test Type : Buehler Test
Species : Guinea pig
Assessment : Does not cause skin sensitisation.

Germ cell mutagenicity

Not classified based on available information.

Components:
ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation

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Method: OECD Test Guideline 471

Result: negative

Remarks: Information given is based on data obtained from similar substances.

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse
Method: OECD Test Guideline 474
Result: negative
Remarks: Information given is based on data obtained from similar substances.

Carcinogenicity

Not classified based on available information.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

No aspiration toxicity classification

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

May be fatal if swallowed and enters airways.

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

May be fatal if swallowed and enters airways.

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Further information**Product:**

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Toxicity to fish : LL50 (Fish): > 100 mg/l
Exposure time: 96 hToxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
Exposure time: 48 hToxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Toxicity to fish : LL50 (Fish): > 100 mg/l
Exposure time: 96 hToxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
Exposure time: 48 hToxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
Exposure time: 72 h

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Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Ecotoxicology Assessment Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 203
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 202

Toxicity to algae : NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOELR (Oncorhynchus mykiss (rainbow trout)): >= 1,000 mg/l
Exposure time: 14 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEL (Daphnia (water flea)): 10 mg/l
Exposure time: 21 d
Test substance: WAF
Method: OECD Test Guideline 211

ZINC BIS[O-(6-METHYLHELPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 4.5 mg/l
Exposure time: 96 h
Test Type: semi-static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 5.4 mg/l
Exposure time: 48 h

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Test Type: static test

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): 2.1 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test

Persistence and degradability
Components:

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 2 - 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 1.5 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

No data available

Bioaccumulative potential
Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Partition coefficient: n- : log Pow: Expected > 7
octanol/water

ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Partition coefficient: n- : log Pow: 0.59 - 1.2 (23 °C)
octanol/water

No data available

Mobility in soil
Components:

No data available

Other adverse effects

No data available

Product:

Additional ecological : No data available
information

Components:
SECTION 13. DISPOSAL CONSIDERATIONS
Disposal methods

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

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Contaminated packaging : Empty remaining contents.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

Not regulated as a dangerous good

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

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KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

TCSI : Not in compliance with the inventory

TSCA : On TSCA Inventory

TSCA list

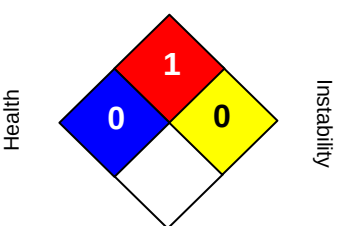
No substances are subject to TSCA 12(b) export notification requirements.

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION
Further information

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NFPA:	HMIS III:						
Flammability Health Instability  Special hazard.	<table border="1"> <tr> <td>HEALTH</td><td>0</td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	0	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	0						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H318 Causes serious eye damage.

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Sources of key data used to compile the Safety Data Sheet
Valvoline internal data including own and sponsored test reports
The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists
BEI : Biological Exposure Index
CAS : Chemical Abstracts Service (Division of the American Chemical Society).
CMR : Carcinogenic, Mutagenic or Toxic for Reproduction
FG : Food grade
GHS : Globally Harmonized System of Classification and Labeling of Chemicals.
H-statement : Hazard Statement
IATA : International Air Transport Association.
IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization
ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"
IMDG : International Maritime Code for Dangerous Goods
ISO : International Organization for Standardization
logPow : octanol-water partition coefficient
LCxx : Lethal Concentration, for xx percent of test population
LDxx : Lethal Dose, for xx percent of test population.
ICxx : Inhibitory Concentration for xx of a substance
Ecxx : Effective Concentration of xx
N.O.S.: Not Otherwise Specified
OECD : Organization for Economic Co-operation and Development
OEL : Occupational Exposure Limit
P-Statement : Precautionary Statement
PBT : Persistent , Bioaccumulative and Toxic
PPE : Personal Protective Equipment
STEL : Short-term exposure limit
STOT : Specific Target Organ Toxicity
TLV : Threshold Limit Value
TWA : Time-weighted average
vPvB : Very Persistent and Very Bioaccumulative
WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
DOT : Department of Transportation
FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
HMIRC : Hazardous Materials Information Review Commission

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HMIS : Hazardous Materials Identification System
 NFPA : National Fire Protection Association
 NIOSH : National Institute for Occupational Safety and Health
 OSHA : Occupational Safety and Health Administration
 PMRA : Health Canada Pest Management Regulatory Agency
 RTK : Right to Know
 WHMIS : Workplace Hazardous Materials Information System

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29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ FULL SYNTHETIC EUROPEAN VEHICLE
SAE 5W-40
Synthetic Motor Oil
™ Trademark, Valvoline or its subsidiaries, registered in various countries

Relevant identified uses of the substance or mixture and uses advised against

Recommended use : lubricant

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL (1-800-832-6825) SDS@valvoline.com	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL (1-800-832-6825) Product Information 1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

Hazardous components

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Chemical name	CAS-No.	Classification	Concentration (%)
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	Not a hazardous substance or mixture.	>=20.00 - < 30.00
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	Asp. Tox. 1; H304	>=5.00 - < 10.00
Lubricating Oils (Petroleum), C20- 50, Hydrotreated Neutral Oil- Based	72623-87-1	Asp. Tox. 1; H304	>=5.00 - < 10.00
ZINC BIS[O-(6- METHYLHELPTYL)]BIS[O-SEC- BUTYL)]BIS(DITHIOPHOSPATE)	93819-94-4	Skin Irrit. 2; H315 Eye Dam. 1; H318	>=1.00 - < 1.50

SECTION 4. FIRST AID MEASURES

General advice	: No hazards which require special first aid measures.
If inhaled	: If breathed in, move person into fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	: First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
In case of eye contact	: Remove contact lenses. Protect unharmed eye.
If swallowed	: Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	: No symptoms known or expected.
Notes to physician	: No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local

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circumstances and the surrounding environment.

Water spray

Foam

Carbon dioxide (CO₂)

Dry chemical

Specific hazards during
firefighting: Do not allow run-off from fire fighting to enter drains or water
courses.Hazardous combustion
products: carbon dioxide and carbon monoxide
Hydrocarbons
Nitrogen oxides (NO_x)
zinc oxide
Sulphur oxides
hydrogen sulfide
mercaptansSpecific extinguishing
methods

:

Product is compatible with standard fire-fighting agents.

Further information

: Standard procedure for chemical fires.

Special protective equipment
for firefighters

: In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURESPersonal precautions,
protective equipment and
emergency procedures: Persons not wearing protective equipment should be excluded
from area of spill until clean-up has been completed.

Environmental precautions

: Prevent further leakage or spillage if safe to do so.

Methods and materials for
containment and cleaning up: Soak up with inert absorbent material (e.g. sand, silica gel,
acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

Other information

: Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling

: Smoking, eating and drinking should be prohibited in the
application area.
For personal protection see section 8.

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Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based	72623-87-1	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL

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Engineering measures : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear as appropriate:
Safety shoes
Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : amber

Odour : mild

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : > 424 °F / 218 °C
(1013 hPa)

Flash point : > 390 °F / > 199 °C

Method: Pensky-Martens closed cup

Evaporation rate : No data available

Flammability (solid, gas) : No data available

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Self-ignition : No data available

Upper explosion limit / Upper
flammability limit : 6 %(V)
Calculated Explosive Limit

Lower explosion limit / Lower
flammability limit : 1 %(V)
Calculated Explosive Limit

Vapour pressure : 1.3333333 hPa (68 °F / 20 °C)
Calculated Vapor Pressure

Relative vapour density : No data available

Relative density : No data available

Density : 0.8520 g/cm3 (60.01 °F / 15.56 °C)

Solubility(ies)
Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-
octanol/water : No data available

Decomposition temperature : No data available

Viscosity
Viscosity, dynamic : No data available

Viscosity, kinematic : ca. 115 mm2/s (104 °F / 40 °C)

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous
reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : excessive heat

Incompatible materials : Strong oxidizing agents

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Hazardous decomposition
products

No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION
Information on likely routes of exposure

Inhalation

Skin contact

Eye Contact

Ingestion

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Components:
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.58 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: Not classified as acutely toxic by inhalation
under GHS.
Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Remarks: No mortality observed at this dose.

ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Acute oral toxicity : LD50 (Rat): 2,600 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 3,160 mg/kg
Method: OECD Test Guideline 402
Assessment: Not classified as acutely toxic by dermal
absorption under GHS.

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Skin corrosion/irritation

Not classified based on available information.

Components:**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

Assessment : Slight, transient irritation

Result : Slight, transient irritation

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Assessment : Slight, transient irritation

Result : Slight, transient irritation

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Species : Rabbit

Result : No skin irritation

ZINC BIS[O-(6-METHYLHELPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Species : Guinea pig

Method : OECD Test Guideline 404

Result : Irritating to skin.

Remarks : Information given is based on data obtained from similar substances.

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Result : No eye irritation

Remarks : Expected based on components.

Remarks : Unlikely to cause eye irritation or injury.

Components:**DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:**

Result : No eye irritation

Assessment : No eye irritation

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Result : No eye irritation

Assessment : No eye irritation

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Species : Rabbit

Result : No eye irritation

ZINC BIS[O-(6-METHYLHELPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Species : Rabbit

Result : Corrosive

Remarks : Information given is based on data obtained from similar substances.

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Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Test Type : Buehler Test
Species : Guinea pig
Assessment : Does not cause skin sensitisation.

Germ cell mutagenicity

Not classified based on available information.

Components:

ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Remarks: Information given is based on data obtained from similar substances.

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse
Method: OECD Test Guideline 474
Result: negative
Remarks: Information given is based on data obtained from similar substances.

Carcinogenicity

Not classified based on available information.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is

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identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

No aspiration toxicity classification

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

May be fatal if swallowed and enters airways.

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Toxicity to fish : LL50 (Fish): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
Exposure time: 48 h

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l

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Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Ecotoxicology Assessment
Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:
Toxicity to fish : LL50 (Fish): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
Exposure time: 48 h

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Ecotoxicology Assessment
Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:
Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 203
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l

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aquatic invertebrates

Exposure time: 48 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 202

Toxicity to algae

: NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity)

: NOELR (Oncorhynchus mykiss (rainbow trout)): >= 1,000 mg/l
Exposure time: 14 d

Toxicity to daphnia and other
aquatic invertebrates
(Chronic toxicity)

: NOEL (Daphnia (water flea)): 10 mg/l
Exposure time: 21 d
Test substance: WAF
Method: OECD Test Guideline 211

ZINC BIS[O-(6-METHYLHELPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 4.5 mg/l
Exposure time: 96 h
Test Type: semi-static test

Toxicity to daphnia and other
aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 5.4 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to algae

: EC50 (Selenastrum capricornutum (green algae)): 2.1 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test

Persistence and degradability
Components:

Lubricating Oils (Petroleum), C20-50, Hydrotreated Neutral Oil-Based:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 2 - 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

ZINC BIS[O-(6-METHYLHELPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 1.5 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

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No data available

Bioaccumulative potential

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Partition coefficient: n- : log Pow: Expected > 7
octanol/water

ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Partition coefficient: n- : log Pow: 0.59 - 1.2 (23 °C)
octanol/water

No data available

Mobility in soil

Components:

No data available

Other adverse effects

No data available

Product:

Additional ecological : No data available
information

Components:

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice : Dispose of in accordance with all applicable local, state and
federal regulations.

Contaminated packaging : Empty remaining contents.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

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Not regulated as a dangerous good

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

California Prop. 65

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for carcinogenicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for reproductive/developmental toxicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

The components of this product are reported in the following inventories:

DSL	: All components of this product are on the Canadian DSL
AICS	: On the inventory, or in compliance with the inventory
ENCS	: On the inventory, or in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
TCSI	: Not in compliance with the inventory
TSCA	: On TSCA Inventory

TSCA list

No substances are subject to TSCA 12(b) export notification requirements.



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Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

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NFPA:	HMIS III:						
Flammability Health Instability Special hazard.	<table> <tr> <td>HEALTH</td><td>0</td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	0	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	0						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H318 Causes serious eye damage.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

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List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System

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29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : SynPower™ Limited Slip SAE 75W-140 Synthetic Gear Oil

Details of the supplier of the safety data sheet

Valvoline LLC
100 Valvoline Way
Lexington, KY 40509
United States of America (USA)
1-800-TEAMVAL (1-800-832-6825)

SDS@valvoline.com

Emergency telephone number

1-800-VALVOLINE (1-800-825-8654)

Regulatory Information Number

1-800-TEAMVAL (1-800-832-6825)

Product Information

1-800-TEAMVAL (1-800-832-6825)

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Eye irritation : Category 2A

Skin sensitization : Category 1

GHS label elements

Hazard pictograms :



Signal Word : Warning

Hazard Statements : May cause an allergic skin reaction.
Causes serious eye irritation.

Precautionary Statements : **Prevention:**
Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
Wash skin thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/ eye protection/ face protection.
Response:

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IF ON SKIN: Wash with plenty of soap and water.
 IF IN EYES: Rinse cautiously with water for several minutes.
 Remove contact lenses, if present and easy to do. Continue rinsing.
 If skin irritation or rash occurs: Get medical advice/ attention.
 If eye irritation persists: Get medical advice/ attention.
 Wash contaminated clothing before reuse.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	Asp. Tox. 1; H304	>=15.00 - < 20.00
OLEFINSULFIDE	68937-96-2	Skin Sens. 1B; H317	>=1.50 - < 5.00
Mineral Oil		Asp. Tox. 1; H304	>=1.50 - < 5.00
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	Not a hazardous substance or mixture.	>=1.50 - < 5.00
React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)		Flam. Liq. 4; H227 Acute Tox. 4; H302 Eye Dam. 1; H318 Skin Sens. 1B; H317	>=1.50 - < 3.00

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
 Show this safety data sheet to the doctor in attendance.
 Do not leave the victim unattended.

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- If inhaled : If breathed in, move person into fresh air.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : Remove contaminated clothing. If irritation develops, get medical attention.
If on skin, rinse well with water.
First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
Wash contaminated clothing before re-use.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
- If swallowed : Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : May cause an allergic skin reaction.
Causes serious eye irritation.
No symptoms known or expected.
- Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
Carbon dioxide (CO2)
Dry chemical
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : acrolein
Aldehydes
carbon dioxide and carbon monoxide
formaldehyde
Ketones
Hydrocarbons
Sulphur oxides

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Nitrogen oxides (NO_x)
hydrogen sulfide

Specific extinguishing
methods

:

Product is compatible with standard fire-fighting agents.

Further information

:

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment
for firefighters

:

In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions,
protective equipment and
emergency procedures

:

Use personal protective equipment.
Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions

:

Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for
containment and cleaning up

:

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

Other information

:

Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling

:

Do not breathe vapours/dust.
Do not smoke.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Container hazardous when empty.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.
Dispose of rinse water in accordance with local and national regulations.

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Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
WHITE MINERAL OIL	8042-47-5	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

Engineering measures : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : Respiratory protection is not required under normal conditions of use.

Hand protection

Remarks : The suitability for a specific workplace should be discussed

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with the producers of the protective gloves.

- Eye protection : Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.
- Skin and body protection : Wear as appropriate:
Impervious clothing
Safety shoes
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Discard gloves that show tears, pinholes, or signs of wear.
Wear resistant gloves (consult your safety equipment supplier).
- Hygiene measures : Wash hands before breaks and at the end of workday.
When using do not eat or drink.
When using do not smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : liquid
- Colour : amber
- Odour : mild
- Odour Threshold : No data available
- pH : No data available
- Melting point/freezing point : No data available
- Boiling point/boiling range : 626 °F / 330 °C
(1,013.333333 hPa)
Calculated Phase Transition Liquid/Gas
- Flash point : > 390 °F / > 199 °C

Method: Cleveland open cup
- Evaporation rate : < 1
Ethyl Ether
- Flammability (solid, gas) : No data available
- Self-ignition : No data available
- Upper explosion limit / Upper flammability limit : 6 %(V)
Calculated Explosive Limit

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Lower explosion limit / Lower flammability limit : 1 %(V)
Calculated Explosive Limit

Vapour pressure : 1.3333333 hPa (68 °F / 20 °C)
Calculated Vapor Pressure

Relative vapour density : > 1
AIR=1

Relative density : No data available

Density : 0.8603 g/cm3 (60.1 °F / 15.6 °C)

Solubility(ies)
Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Decomposition temperature :
No data available

Viscosity
Viscosity, dynamic : No data available

Viscosity, kinematic : 171 mm2/s (104 °F / 40 °C)

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : excessive heat

Incompatible materials : Nitric acid
Strong oxidizing agents
sulphuric acid

Hazardous decomposition products : No hazardous decomposition products are known.

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SECTION 11. TOXICOLOGICAL INFORMATION
Information on likely routes of exposure

Inhalation

Skin contact

Eye Contact

Ingestion

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Components:
HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.58 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: Not classified as acutely toxic by inhalation under GHS.
Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Remarks: No mortality observed at this dose.

OLEFINSULFIDE:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 401
Assessment: Not classified as acutely toxic by ingestion under GHS.
Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: Not classified as acutely toxic by dermal absorption under GHS.
Remarks: No mortality observed at this dose.

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Acute oral toxicity : LD50 (Rat): > 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 5 g/kg

React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched):

Acute oral toxicity : LD50 (Rat): ca. 2,000 mg/kg
Method: OECD Test Guideline 401

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Assessment: The component/mixture is classified as acute oral toxicity, category 4.

Skin corrosion/irritation

Not classified based on available information.

Product:

Remarks : May cause skin irritation in susceptible persons.

Components:
HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Species : Rabbit
Result : No skin irritation

OLEFINSULFIDE:

Result : Mild skin irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Assessment : Slight, transient irritation
Result : Slight, transient irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Remarks : Vapours may cause irritation to the eyes, respiratory system and the skin.
Causes serious eye irritation.

Components:
HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Species : Rabbit
Result : No eye irritation

OLEFINSULFIDE:

Result : Slight, transient irritation

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : No eye irritation
Assessment : No eye irritation

React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched):

Result : Corrosive

Respiratory or skin sensitisation
Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Product:

Remarks : May cause allergic skin reaction.

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Components:
HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Test Type : Buehler Test
Species : Guinea pig
Assessment : Does not cause skin sensitisation.

OLEFINSULFIDE:

Test Type : Maximisation Test
Species : Guinea pig
Assessment : The product is a skin sensitiser, sub-category 1B.
Method : OECD Test Guideline 406

React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched):

Assessment : The product is a skin sensitiser, sub-category 1B.

Germ cell mutagenicity

Not classified based on available information.

Components:
OLEFINSULFIDE:

Genotoxicity in vitro : Test Type: in vitro assay
Result: Positive results were obtained in some in vitro tests.

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse
Cell type: Bone marrow
Method: OECD Test Guideline 474
Result: negative

Carcinogenicity

Not classified based on available information.

Components:
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation
Assessment (EC) 1272/2008, Annex VI, Part 3, Note L)

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

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Aspiration toxicity

Not classified based on available information.

Components:
HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

May be fatal if swallowed and enters airways.

Mineral Oil:

May be fatal if swallowed and enters airways.

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

No aspiration toxicity classification

Further information
Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION
Ecotoxicity
Product:

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Chronic aquatic toxicity Category 4; May cause long lasting harmful effects to aquatic life.

Components:
HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 203
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 202

Toxicity to algae : NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 201

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Toxicity to fish (Chronic toxicity) : NOELR (Oncorhynchus mykiss (rainbow trout)): Calculated $\geq$ 1,000 mg/l
Exposure time: 14 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEL (Daphnia (water flea)): 10 mg/l
Exposure time: 21 d
Test substance: WAF
Method: OECD Test Guideline 211

OLEFINSULFIDE:
Ecotoxicology Assessment
Short-term (acute) aquatic hazard : Harmful to aquatic life.

Long-term (chronic) aquatic hazard : Harmful to aquatic life with long lasting effects.

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Toxicity to fish : LL50 (Fish): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l
Exposure time: 48 h

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Ecotoxicology Assessment
Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Not classified based on available information.

React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched):

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): ca. 24 mg/l
Exposure time: 96 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 203

Toxicity to daphnia and other : EL50 (Daphnia magna (Water flea)): ca. 91.4 mg/l

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aquatic invertebrates

Exposure time: 48 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 202

Toxicity to algae

: ErC50 (Pseudokirchneriella subcapitata (green algae)): 15 mg/l
End point: Growth inhibition
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 3.3 mg/l
End point: Growth inhibition
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 201

Toxicity to daphnia and other
aquatic invertebrates
(Chronic toxicity)

: NOEC (Daphnia magna (Water flea)): 0.12 mg/l
Exposure time: 21 d
End point: Reproduction Test
Test Type: semi-static test
Test substance: WAF
Method: OECD Test Guideline 211

Ecotoxicology Assessment
Short-term (acute) aquatic
hazard

: Toxic to aquatic life.

Long-term (chronic) aquatic
hazard

: Toxic to aquatic life with long lasting effects.

Persistence and degradability
Components:
HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 2 - 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

OLEFINSULFIDE:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 13 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched):

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 7.4 %

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Exposure time: 28 d
Method: Modified Sturm Test

No data available

Bioaccumulative potential

Components:

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Partition coefficient: n-octanol/water : log Pow: Expected > 7

React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched):

Partition coefficient: n-octanol/water : Remarks: No data available

No data available

Mobility in soil

Components:

No data available

Other adverse effects

No data available

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., May cause long lasting harmful effects to aquatic life.

Components:

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International transport regulations

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REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

TDG_INWT_C

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods	MARINE POLLUTANT:(DI-TERT-BUTYL POLYSULFID E)

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MX_DG

Not dangerous goods

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***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant	no

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
METHANOL	67-56-1	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Serious eye damage or eye irritation
Respiratory or skin sensitisation

California Prop. 65

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for carcinogenicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for reproductive/developmental toxicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

The components of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

TCSI : On the inventory, or in compliance with the inventory

TSCA : On TSCA Inventory

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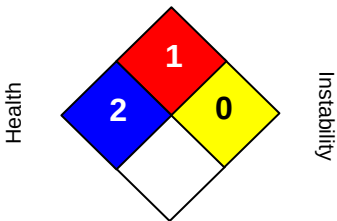
TSCA list

The following substance(s) is/are subject to TSCA 12(b) export notification requirements:
Mineral Oil Not Assigned

SECTION 16. OTHER INFORMATION

Further information

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NFPA:	HMIS III:						
Flammability  Health Instability Special hazard.	<table border="1"> <tr> <td>HEALTH</td><td>2</td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	2	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	2						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements

H227	Combustible liquid.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the

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information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists
 BEI : Biological Exposure Index
 CAS : Chemical Abstracts Service (Division of the American Chemical Society).
 CMR : Carcinogenic, Mutagenic or Toxic for Reproduction
 FG : Food grade
 GHS : Globally Harmonized System of Classification and Labeling of Chemicals.
 H-statement : Hazard Statement
 IATA : International Air Transport Association.
 IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization
 ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"
 IMDG : International Maritime Code for Dangerous Goods
 ISO : International Organization for Standardization
 logPow : octanol-water partition coefficient
 LCxx : Lethal Concentration, for xx percent of test population
 LDxx : Lethal Dose, for xx percent of test population.
 ICxx : Inhibitory Concentration for xx of a substance
 Ecxx : Effective Concentration of xx
 N.O.S.: Not Otherwise Specified
 OECD : Organization for Economic Co-operation and Development
 OEL : Occupational Exposure Limit
 P-Statement : Precautionary Statement
 PBT : Persistent , Bioaccumulative and Toxic
 PPE : Personal Protective Equipment
 STEL : Short-term exposure limit
 STOT : Specific Target Organ Toxicity
 TLV : Threshold Limit Value
 TWA : Time-weighted average
 vPvB : Very Persistent and Very Bioaccumulative
 WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
 DOT : Department of Transportation
 FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
 HMIRC : Hazardous Materials Information Review Commission
 HMIS : Hazardous Materials Identification System
 NFPA : National Fire Protection Association
 NIOSH : National Institute for Occupational Safety and Health
 OSHA : Occupational Safety and Health Administration
 PMRA : Health Canada Pest Management Regulatory Agency
 RTK : Right to Know
 WHMIS : Workplace Hazardous Materials Information System

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