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GHS classification in accordance with the Hazardous Products Regulations

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 Canada Corp 905 Winston Churchill Blvd Mississauga ON L5J 4P2 Canada 1-800-TEAMVAL	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL Product Information 1-800-TEAMVAL
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SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin sensitisation : Sub-category 1B

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H317 May cause an allergic skin reaction.

Precautionary statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of water.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
Disposal:
P501 Dispose of contents/ container to an approved waste

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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	≥ 1.00 - < 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	≥ 0.10 - < 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.
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
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 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

Contains no substances with occupational exposure limit values.

- 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.

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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	: 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
Melting point/freezing point	: No data available
Boiling point/boiling range	: > 424.9 °F / 218.3 °C (1013.333 hPa)
Flash point	: > 432 °F / > 222 °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

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Vapour pressure : < 0.1000000 mmHg

Relative vapour density : > 1AIR=1

Relative density : 0.89 (60.00 °F)

Density : 0.8916 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 : 146 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

Hazardous decomposition products

carbon dioxide and carbon monoxide
Sodium oxides**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:

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.

Product:

Remarks: May cause skin irritation in susceptible persons.

Components:

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:

OLEFINSULFIDE:

Result: Slight, transient irritation

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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 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):

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
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.

Product:

No aspiration toxicity classification

Further information

Product:

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Remarks: No data available

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.

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

Toxicity to daphnia and other aquatic invertebrates : NOEC (Water flea (Daphnia magna)): 0.12 mg/l
Exposure time: 21 d

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(Chronic toxicity)

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

: 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

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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

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
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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

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.

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)

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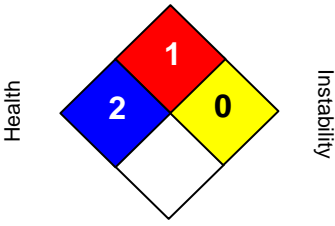
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SECTION 16. OTHER INFORMATION**Further information**

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NFPA:	HMIS III:						
<p>Flammability</p> <p>Health</p> <p>Instability</p> <p>Special hazard.</p> 	<table><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> <p>0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic</p>	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

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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