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Valvoline Professional Series WATER PUMP LUBE & PROTECTANT WATER PUMP LUBE & PROTR 882567		Version: 1.0

GHS classification in accordance with the Hazardous Products Regulations

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline Professional Series WATER PUMP LUBE & PROTECTANT
WATER PUMP LUBE & PROTR

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 irritation : Category 2

Eye irritation : Category 2A

Skin sensitisation : Category 1

GHS label elements


Hazard pictograms :



Signal word : Warning

Hazard statements : H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.

Precautionary statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.

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Valvoline Professional Series COOLING SYSTEM CLEANER 882517		Version: 1.1

GHS classification in accordance with the Hazardous Products Regulations

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline Professional Series COOLING SYSTEM CLEANER

Details of the supplier of the safety data sheet Valvoline Canada Corp 905 Winston Churchill Blvd Mississauga ON L5J 4P2 Canada 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)
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SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Specific target organ toxicity : Category 2 (Respiratory Tract)
- repeated exposure
(Inhalation)

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H373 May cause damage to organs (Respiratory Tract) through prolonged or repeated exposure if inhaled.

Precautionary statements : **Prevention:**
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Response:
P314 Get medical advice/ attention if you feel unwell.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

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Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
ETHYLENEDIAMINETETRAACETIC ACID, TETRASODIUM SALT	64-02-8	Acute Tox. 4; H302 Acute Tox. 4; H332 Eye Irrit. 2A; H319 STOT RE 2; H373	≥ 5.00 - < 10.00

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

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delayed

the skin may include:

stomach or intestinal upset (nausea, vomiting, diarrhea)

irritation (nose, throat, airways)

Cough

lung edema (fluid buildup in the lung tissue)

Difficulty in breathing

May cause damage to organs through prolonged or repeated exposure 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

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 : Ammonia
toxic fumes
Nitrogen oxides (NO_x)
carbon dioxide and carbon monoxide

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 : 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.
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

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

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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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : liquid

Odour : No data available

Odour Threshold : No data available

pH : Average 9.0

Melting point/freezing point : No data available

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

Flash point : Not applicable

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 : 23.333333 hPa (20 °C)
Calculated Vapor Pressure

Relative vapour density : No data available

Relative density : No data available

Density : 1.045 g/cm³

Solubility(ies)

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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.

Conditions to avoid : None known.

Incompatible materials : aluminum
Copper
Copper alloys
Nickel
Oxidizing agents
reactive metals such as aluminum and magnesium
steel
Strong bases
strong mineral acids
ZincHazardous decomposition
products carbon dioxide and carbon monoxide
Nitrogen oxides (NOx)
toxic fumes
Ammonia

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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.

Components:

ETHYLENEDIAMINETETRAACETIC ACID, TETRASODIUM SALT:

Acute oral toxicity : LD50 (Rat, female): 1,780 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 1 - 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Remarks: Information given is based on data obtained from similar substances.

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

Skin corrosion/irritation

Not classified based on available information.

Components:

ETHYLENEDIAMINETETRAACETIC ACID, TETRASODIUM SALT:

Species: Rabbit

Result: No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks: Unlikely to cause eye irritation or injury.

Components:

ETHYLENEDIAMINETETRAACETIC ACID, TETRASODIUM SALT:

Result: Severely irritating to eyes

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

Components:

ETHYLENEDIAMINETETRAACETIC ACID, TETRASODIUM SALT:

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.

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Components:

ETHYLENEDIAMINETETRAACETIC ACID, TETRASODIUM SALT:

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

May cause damage to organs (Respiratory Tract) through prolonged or repeated exposure if inhaled.

Components:

ETHYLENEDIAMINETETRAACETIC ACID, TETRASODIUM SALT:

Exposure routes: Inhalation

Target Organs: Respiratory Tract

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

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:

ETHYLENEDIAMINETETRAACETIC ACID, TETRASODIUM SALT:

Toxicity to fish : LC50 (Bluegill (Lepomis macrochirus)): 792 mg/l
Exposure time: 96 hToxicity to daphnia and other : EC50 (Water flea (Daphnia magna)): 140 mg/l
aquatic invertebrates Exposure time: 48 h
Remarks: Information given is based on data obtained from similar substances.

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Toxicity to algae : NOEC (Desmodesmus subspicatus (green algae)): > 100 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Method: Directive 67/548/EEC, Annex V, C.3.

Toxicity to fish (Chronic toxicity) : NOEC (Danio rerio (zebra fish)): >= 25.7 mg/l
Exposure time: 35 d
Test Type: flow-through test
Method: OECD Test Guideline 210
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)): 25 mg/l
Exposure time: 21 d
Test Type: semi-static test
Remarks: Information given is based on data obtained from similar substances.

Persistence and degradability**Components:**

ETHYLENEDIAMINETETRAACETIC ACID, TETRASODIUM SALT:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: < 10 %
Exposure time: 28 d
Method: OECD Test Guideline 301E

Biodegradation: 90 - 100 %
Exposure time: 72 d
Method: OECD Test Guideline 301E

No data available

Bioaccumulative potential**Components:**

ETHYLENEDIAMINETETRAACETIC ACID, TETRASODIUM SALT:

Partition coefficient: n-octanol/water : log Pow: < 3

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.

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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

TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

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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

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



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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:						
<p>Flammability</p> <p>Health</p> <p>Instability</p> <p>Special hazard.</p>	<table> <tr> <td>HEALTH</td><td>0*</td></tr> <tr> <td>FLAMMABILITY</td><td>0</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	0*	FLAMMABILITY	0	PHYSICAL HAZARD	0
HEALTH	0*						
FLAMMABILITY	0						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Not applicable


Full text of H-Statements

H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure 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.

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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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P280 Wear protective gloves/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P337 + P313 If eye irritation persists: 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 disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
SODIUM NITRATE	7631-99-4	Ox. Sol. 3; H272 1; Eye Irrit. 2A; H319	>=1.00 - < 5.00
SODIUM MERCAPTOBENZOTHAZOLE	2492-26-4	Met. Corr. 1; H290 Skin Corr. 1C; H314 Eye Dam. 1; H318 Skin Sens. 1; H317	>=1.00 - < 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.
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 : Overexposure to this product (or a component) may cause methemoglobinemia, which in sufficient concentration causes cyanosis. Severe cyanosis may require intravenous injection of methylene blue. Methylene blue is contraindicated if the patient has confirmed or suspected glucose-6-phosphate dehydrogenase deficiency.
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)
Cough
cyanosis (causes blue coloring of the skin and nails from lack of oxygen)
methemoglobinemia (blood abnormality which causes a blue coloring to the skin)
Convulsions
Difficulty in breathing
Causes skin irritation.
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 : Nitrogen oxides (NO_x)
carbon dioxide and carbon monoxide
Oxides of phosphorus
potassium oxide
Sulphur oxides
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.
- 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 : 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.
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.

Hand protection

- Material : neoprene

- 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

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

Flash point : Not applicable

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 : 32 hPa (25 °C)
Calculated Vapor Pressure

Relative vapour density : No data available

Relative density : 1.036 (60.00 °F)

Density : 1.036 g/cm³ (60.00 °F)

Solubility(ies)
Water solubility : completely soluble

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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 : The substance or mixture is not classified as oxidizing.

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
Exposure to moisture

Incompatible materials : Combustible material
Heavy metals
Organic materials
Powdered metals
Reducing agents
Strong acids
Strong oxidizing agents
water

Hazardous decomposition products : May form:
carbon dioxide and carbon monoxide
Nitrogen oxides (NOx)
Sulphur oxides
nitrogen oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of : Inhalation

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exposure

Skin contact
Eye Contact
Ingestion**Acute toxicity**

Not classified based on available information.

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

Acute oral toxicity : LD50 (Rat): 2,100 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 6.5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 7,940 mg/kg

Skin corrosion/irritation

Causes skin irritation.

Product:

Remarks: May cause skin irritation and/or dermatitis.

Components:**SODIUM NITRATE:**

Species: Rabbit

Method: OECD Test Guideline 404

Result: No skin irritation

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

SODIUM MERCAPTOBENZOTHAZOLE:

Species: Rabbit

Result: Corrosive after 1 to 4 hours of exposure

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:**SODIUM NITRATE:**

Species: Rabbit

Result: Irritating to eyes.

Method: OECD Test Guideline 405

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SODIUM MERCAPTOBENZOTHAZOLE:

Species: Rabbit

Result: Corrosive

Respiratory or skin sensitisation

Skin sensitisation: May cause an allergic skin reaction.

Respiratory sensitisation: Not classified based on available information.

Components:

SODIUM MERCAPTOBENZOTHAZOLE:

Test Type: Maximisation Test

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:

SODIUM MERCAPTOBENZOTHAZOLE:

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

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Test species: Mouse
Result: negative
Remarks: Information given is based on data obtained from similar substances.

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.

Further information

Product:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

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

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

Components:**SODIUM NITRATE:**

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

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

SODIUM MERCAPTOBENZOTHAZOLE:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.73 mg/l
Exposure time: 96 h
Test Type: flow-through test
Method: OECD Test Guideline 203
Remarks: Information given is based on data obtained from similar substances.

LC50 (Bluegill (Lepomis macrochirus)): 3.8 mg/l
Exposure time: 96 h
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Water flea (Daphnia magna)): 19 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

Toxicity to algae : IC50 (Pseudokirchneriella subcapitata (green algae)): 0.3 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 201

ErC50 (Pseudokirchneriella subcapitata (green algae)): 0.5 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Information given is based on data obtained from similar substances.

NOEC (Pseudokirchneriella subcapitata (green algae)): 0.066 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201



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

Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 0.041 mg/l
Exposure time: 89 d
End point: Growth rate
Test Type: flow-through test
Method: OECD Test Guideline 210
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)): 0.08 mg/l
Exposure time: 21 d
End point: Reproduction Test
Method: OECD Test Guideline 211
Remarks: Information given is based on data obtained from similar substances.

Persistence and degradability

Components:

SODIUM MERCAPTOBENZOTHAZOLE:

Biodegradability : Result: Not readily biodegradable.
Remarks: Information given is based on data obtained from similar substances.

No data available

Bioaccumulative potential

Components:

SODIUM MERCAPTOBENZOTHAZOLE:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): < 8
Exposure time: 6 Weeks
Concentration: 0.01 mg/l
Remarks: Information given is based on data obtained from similar substances.

Partition coefficient: n-octanol/water : log Pow: 2.42
pH: 7

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.

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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

TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

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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

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 : 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



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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:						
<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>0</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	0	PHYSICAL HAZARD	0
HEALTH	2						
FLAMMABILITY	0						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Not applicable


Full text of H-Statements

H272	May intensify fire; oxidizer.
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
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.

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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