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GHS classification in accordance with the Hazardous Products Regulations

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : All Fleet™ SAE 15W-40 Engine Oil

<p>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)</p> <p>SDS@valvoline.com</p>	<p>Emergency telephone number 1-800-VALVOLINE (1-800-825-8654)</p> <p>Regulatory Information Number 1-800-TEAMVAL (1-800-832-6825)</p> <p>Product Information 1-800-TEAMVAL (1-800-832-6825)</p>
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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.	>=70.00 - < 90.00
Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isoctyl) esters, zinc salts	113706-15-3	Skin Irrit. 2; H315 Eye Dam. 1; H318	>=0.00 - < 1.50



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PHOSPHORODITHIOIC ACID, MIXED O,O-BIS(1,3-DIMETHYLBUTYL AND ISO-PR) ESTERS, ZINC SALTS	84605-29-8	Skin Irrit. 2; H315 Eye Dam. 1; H318	>=0.00 - < 1.50
phenol, (tetrapropenyl) derivatives	74499-35-7	Skin Corr. 1C; H314 Eye Dam. 1; H318 Repr. 1B; H360	>=0.00 - < 0.15
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	Not a hazardous substance or mixture.	>=70.00 - < 90.00
Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isoctyl) esters, zinc salts	113706-15-3	Skin Irrit. 2; H315 Eye Dam. 1; H318	>=1.00 - < 3.00
PHOSPHORODITHIOIC ACID, MIXED O,O-BIS(1,3-DIMETHYLBUTYL AND ISO-PR) ESTERS, ZINC SALTS	84605-29-8	Skin Irrit. 2; H315 Eye Dam. 1; H318	>=1.00 - < 3.00
phenol, (tetrapropenyl) derivatives	74499-35-7	Skin Corr. 1C; H314 Eye Dam. 1; H318 Repr. 1B; H360	>=0.10 - < 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.

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- 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 : 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)
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.
- 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)
Sulphur oxides
hydrogen sulfide
mercaptans



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zinc oxide
Oxides of phosphorus

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	64742-54-7	TWA	5 mg/m3 Mist	CA AB OEL



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PARAFFINIC				
		STEL	10 mg/m3 Mist	CA AB OEL
		TWAEV	5 mg/m3 Mist	CA QC OEL
		STEV	10 mg/m3 Mist	CA QC OEL
		TWA	1 mg/m3 Mist	CA BC OEL

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
- pH : No data available
- Melting point/freezing point : No data available
- Boiling point/boiling range : No data available

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Flash point	:	> 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	:	0.0133333 hPa (21.11 °C) Calculated Vapor Pressure
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	0.880 g/cm ³ (15.6 °C)
Solubility(ies)		
Water solubility	:	negligible
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. 112 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.
Possibility of hazardous	:	Product will not undergo hazardous polymerization.

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reactions

Conditions to avoid : excessive heat

Incompatible materials : Acids
Strong oxidizing agentsHazardous decomposition products : carbon dioxide and carbon monoxide
Hydrocarbons
hydrogen sulfide
Nitrogen oxides (NOx)
Sulphur oxides
zinc oxide
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.

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

Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isoctyl) esters, zinc salts:Acute oral toxicity : LD50 (Rat): 2,900 mg/kg
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.**PHOSPHORODITHIOIC ACID, MIXED O,O-BIS(1,3-DIMETHYLBUTYL AND ISO-PR) ESTERS, ZINC SALTS:**

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- Acute oral toxicity : LD50 (Rat): 3,100 mg/kg
- Acute inhalation toxicity : LC50 (Rat): > 2.3 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Assessment: No adverse effect has been observed in acute inhalation toxicity tests.
- Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: No adverse effect has been observed in acute dermal toxicity tests.

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(sec-Bu and isooctyl) esters, zinc salts:

- Acute oral toxicity : LD50 (Rat): 2,900 mg/kg
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.

PHOSPHORODITHIOIC ACID, MIXED O,O-BIS(1,3-DIMETHYLBUTYL AND ISO-PR) ESTERS, ZINC SALTS:

- Acute oral toxicity : LD50 (Rat): 3,100 mg/kg
- Acute inhalation toxicity : LC50 (Rat): > 2.3 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Assessment: No adverse effect has been observed in acute inhalation toxicity tests.
- Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: No adverse effect has been observed in acute dermal toxicity tests.

Skin corrosion/irritation

Not classified based on available information.

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

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

Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isooctyl) esters, zinc salts:

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Result : Irritating to skin.
Remarks : Information given is based on data obtained from similar substances.

PHOSPHORODITHIOIC ACID, MIXED O,O-BIS(1,3-DIMETHYLBUTYL AND ISO-PR) ESTERS, ZINC SALTS:

Species : Rabbit
Result : Irritating to skin.

phenol, (tetrapropenyl) derivatives:

Result : Corrosive to skin

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

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

Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isooctyl) esters, zinc salts:

Result : Irritating to skin.
Remarks : Information given is based on data obtained from similar substances.

PHOSPHORODITHIOIC ACID, MIXED O,O-BIS(1,3-DIMETHYLBUTYL AND ISO-PR) ESTERS, ZINC SALTS:

Species : Rabbit
Result : Irritating to skin.

phenol, (tetrapropenyl) derivatives:

Result : Corrosive 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
Assessment : No eye irritation

Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isooctyl) esters, zinc salts:

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

PHOSPHORODITHIOIC ACID, MIXED O,O-BIS(1,3-DIMETHYLBUTYL AND ISO-PR) ESTERS, ZINC SALTS:

Species : Rabbit
Result : Corrosive

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phenol, (tetrapropenyl) derivatives:

Result : Corrosive

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Result : No eye irritation

Assessment : No eye irritation

Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isooctyl) esters, zinc salts:

Result : Corrosive

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

PHOSPHORODITHIOIC ACID, MIXED O,O-BIS(1,3-DIMETHYLBUTYL AND ISO-PR) ESTERS, ZINC SALTS:

Species : Rabbit

Result : Corrosive

phenol, (tetrapropenyl) derivatives:

Result : Corrosive

Respiratory or skin sensitisation**Skin sensitisation**

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:**Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isooctyl) esters, zinc salts:**

Test Type : Buehler Test

Species : Guinea pig

Assessment : Did not cause sensitisation on laboratory animals.

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

PHOSPHORODITHIOIC ACID, MIXED O,O-BIS(1,3-DIMETHYLBUTYL AND ISO-PR) ESTERS, ZINC SALTS:

Test Type : Buehler Test

Species : Guinea pig

Assessment : Does not cause skin sensitisation.

Method : OECD Test Guideline 406

Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isooctyl) esters, zinc salts:

Test Type : Buehler Test

Species : Guinea pig

Assessment : Did not cause sensitisation on laboratory animals.

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

PHOSPHORODITHIOIC ACID, MIXED O,O-BIS(1,3-DIMETHYLBUTYL AND ISO-PR) ESTERS, ZINC SALTS:

Test Type : Buehler Test

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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(sec-Bu and isoctyl) esters, zinc salts:**

Genotoxicity in vitro : Remarks: In vitro tests showed mutagenic effects which were not observed with in vivo test.

Genotoxicity in vivo : Test Type: chromosome aberration assay
Species: Mouse
Cell type: peripheral blood cells
Result: negative

PHOSPHORODITHIOIC ACID, MIXED O,O-BIS(1,3-DIMETHYLBUTYL AND ISO-PR) ESTERS, ZINC SALTS:

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

Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isoctyl) esters, zinc salts:

Genotoxicity in vitro : Remarks: In vitro tests showed mutagenic effects which were not observed with in vivo test.

Genotoxicity in vivo : Test Type: chromosome aberration assay
Species: Mouse
Cell type: peripheral blood cells
Result: negative

PHOSPHORODITHIOIC ACID, MIXED O,O-BIS(1,3-DIMETHYLBUTYL AND ISO-PR) ESTERS, ZINC SALTS:

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)

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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Reproductive toxicity

Not classified based on available information.

Components:**Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isoctyl) esters, zinc salts:**

Effects on fertility : Species: Rat
Application Route: Oral
Dose: 100 mg/kg bw/day
Symptoms: No effects on reproduction parameters

Effects on foetal development : Species: Rat
Application Route: Oral
Developmental Toxicity: NOAEL F1: 100 mg/kg body weight

phenol, (tetrapropenyl) derivatives:

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

Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isoctyl) esters, zinc salts:

Effects on fertility : Species: Rat
Application Route: Oral
Dose: 100 mg/kg bw/day
Symptoms: No effects on reproduction parameters

Effects on foetal development : Species: Rat
Application Route: Oral
Developmental Toxicity: NOAEL F1: 100 mg/kg body weight

phenol, (tetrapropenyl) derivatives:

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

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:

No aspiration toxicity classification

Further information**Product:**

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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.

Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isoctyl) esters, zinc salts:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 4.5 mg/l
Exposure time: 96 h

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

PHOSPHORODITHIOIC ACID, MIXED O,O-BIS(1,3-DIMETHYLBUTYL AND ISO-PR) ESTERS, ZINC SALTS:

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

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Test substance: WAF
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 23 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 202

Toxicity to algae : EL50 (Desmodesmus subspicatus (green algae)): 24 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.4 mg/l
Exposure time: 28 d
End point: Reproduction Test
Test substance: WAF
Method: OECD Test Guideline 211

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 2; Toxic to aquatic life with long lasting effects.

phenol, (tetrapropenyl) derivatives:
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 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.

Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isooctyl) esters, zinc salts:
Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 4.5 mg/l
Exposure time: 96 h
Remarks: Information given is based on data obtained from similar substances.

PHOSPHORODITHIOIC ACID, MIXED O,O-BIS(1,3-DIMETHYLBUTYL AND ISO-PR) ESTERS, ZINC SALTS:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 4.5 mg/l
Exposure time: 96 h
Test Type: semi-static test
Test substance: WAF
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 23 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 202

Toxicity to algae : EL50 (Desmodesmus subspicatus (green algae)): 24 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.4 mg/l
Exposure time: 28 d
End point: Reproduction Test
Test substance: WAF
Method: OECD Test Guideline 211

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 2; Toxic to aquatic life with long lasting effects.

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phenol, (tetrapropenyl) derivatives:

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.

Persistence and degradability**Components:**

Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isooctyl) esters, zinc salts:

Biodegradability : Result: Not readily biodegradable.

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

PHOSPHORODITHIOIC ACID, MIXED O,O-BIS(1,3-DIMETHYLBUTYL AND ISO-PR) ESTERS, ZINC SALTS:

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 1.5 %

Exposure time: 28 d

Method: OECD Test Guideline 301B

Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isooctyl) esters, zinc salts:

Biodegradability : Result: Not readily biodegradable.

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

PHOSPHORODITHIOIC ACID, MIXED O,O-BIS(1,3-DIMETHYLBUTYL AND ISO-PR) ESTERS, ZINC SALTS:

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-octanol/water : log Pow: Expected > 7

Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isooctyl) esters, zinc salts:

Bioaccumulation : Bioconcentration factor (BCF): 3

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

PHOSPHORODITHIOIC ACID, MIXED O,O-BIS(1,3-DIMETHYLBUTYL AND ISO-PR) ESTERS, ZINC SALTS:

Partition coefficient: n- : log Pow: 0.56

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octanol/water

phenol, (tetrapropenyl) derivatives:

Partition coefficient: n- : log Pow: 7.1

octanol/water

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC:

Partition coefficient: n- : log Pow: Expected > 7

octanol/water

Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isooctyl) esters, zinc salts:

Bioaccumulation : Bioconcentration factor (BCF): 3

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

PHOSPHORODITHIOIC ACID, MIXED O,O-BIS(1,3-DIMETHYLBUTYL AND ISO-PR) ESTERS, ZINC SALTS:

Partition coefficient: n- : log Pow: 0.56

octanol/water

phenol, (tetrapropenyl) derivatives:

Partition coefficient: n- : log Pow: 7.1

octanol/water

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**

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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**TDG**

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**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 : Contact your sales representative for additional information.
- TCSI : 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



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Further information

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

- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H360 May damage 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).

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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