


SAFETY DATA SHEET

Revision Date: 06.04.2018

Print Date: 10.04.2018

SDS Number: R0524263

Tectyl® GLASHELDER/KLAR CORROSION INHIBITOR

Version: 3.0

VE20055

Conforms to EU Regulation 1907/2006/EC as amended. - SDSGHS_GB

SECTION 1: Identification of the substance/mixture and of the company/undertaking
1.1 Product identifier

Trade name : Tectyl® GLASHELDER/KLAR
CORROSION INHIBITOR

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

Recommended use : Corrosion inhibitor.

1.3 Details of the supplier of the safety data sheet

Ellis Enterprises B.V., an affiliate of Valvoline
Wieldrechtseweg 39
3316 BG Dordrecht
Netherlands
+31 (0)78 654 3500 (in the Netherlands), or
contact your local CSR contact person

SDS@valvoline.com

1.4 Emergency telephone number

00-800-825-8654 / 001-859-202-3865, or contact
your local emergency telephone number at 112

Product Information

+31 (0)78 654 3500 (in the Netherlands), or
contact your local CSR contact person

SECTION 2: Hazards identification
2.1 Classification of the substance or mixture
Classification (REGULATION (EC) No 1272/2008)

Aerosols, Category 1

H222: Extremely flammable aerosol.

H229: Pressurised container: May burst if heated.

Specific target organ toxicity - single
exposure, Category 3, Central nervous
system

H336: May cause drowsiness or dizziness.

Chronic aquatic toxicity, Category 2

H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements
Labelling (REGULATION (EC) No 1272/2008)


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Hazard pictograms



Signal word

: Danger

Hazard statements

: H222 Extremely flammable aerosol.
 H229 Pressurised container: May burst if heated.
 H336 May cause drowsiness or dizziness.
 H411 Toxic to aquatic life with long lasting effects.

Supplemental Hazard Statements

: EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statements

: P101 If medical advice is needed, have product container or label at hand.
 P102 Keep out of reach of children.
Prevention:
 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P211 Do not spray on an open flame or other ignition source.
 P251 Do not pierce or burn, even after use.
 P271 Use only outdoors or in a well-ventilated area.
Storage:
 P405 Store locked up.
 P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.
Disposal:
 P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

Hydrocarbons, C9-C11, n-alkanes, iso-alkanes, cyclenes, <2% aromatics

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

4-Hydroxy-4-methylpentan-2-one

2.3 Other hazards

Additional advice

No information available.

SECTION 3: Composition/information on ingredients

3.2 Mixtures



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Hazardous components

Chemical name	CAS-No. EC-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration (%)
Propane	74-98-6 200-827-9 01-2119486944-21-xxxx	Flam. Gas1; H220 Press. GasLiquefied gas; H280	>= 15,00 - < 25,00
Hydrocarbons, C9-C11, n-alkanes, iso- alkanes, cyclenes, <2% aromatics	01-2119463258-33-xxxx	Flam. Liq.3; H226 STOT SE3; H336 Asp. Tox.1; H304	>= 15,00 - < 20,00
Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics	01-2119473851-33-xxxx	Flam. Liq.2; H225 STOT SE3; H336 Asp. Tox.1; H304 Aquatic Chronic2; H411	>= 10,00 - < 15,00
4-Hydroxy-4- methylpentan-2-one	123-42-2 204-626-7 01-2119473975-21-xxxx	Eye Irrit.2; H319 STOT SE3; H335	>= 1,00 - < 2,50
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6 265-156-6 01-2119480375-34-xxxx	Asp. Tox.1; H304	>= 1,00 - < 2,50
2-(2-Heptadec-8-enyl- 2-imidazolin-1- yl)ethanol	95-38-5 202-414-9 01-2119777867-13-xxxx	Acute Tox.4; H302 Skin Corr.1C; H314 Eye Dam.1; H318 STOT RE2; H373 Aquatic Acute1; H400 Aquatic Chronic1; H410	>= 0,50 - < 1,00
Substances with a workplace exposure limit :			
dimethyl ether	115-10-6 204-065-8 01-2119472128-37-0005	Flam. Gas1; H220 Press. GasLiquefied gas; H280	>= 25,00 - < 40,00
2-Methoxy-1- methylethyl acetate	108-65-6 203-603-9	Flam. Liq.3; H226	>= 1,00 - < 2,50

For explanation of abbreviations see section 16.

SECTION 4: First aid measures


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4.1 Description of 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.
Do not leave the victim unattended.
- If inhaled : Move to fresh air.
If unconscious, place in recovery position and seek medical advice.
Consult a physician after significant exposure.
- 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.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : 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)
Lung irritation
Dizziness
- Risks :
Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material.
May cause drowsiness or dizziness.
Repeated exposure may cause skin dryness or cracking.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : No hazards which require special first aid measures.


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SECTION 5: Firefighting measures
5.1 Extinguishing media

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

5.2 Special hazards arising from the substance or mixture

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
 various hydrocarbons
 Acetone
 acrid smoke and fumes

carbon dioxide and carbon monoxide
 Hydrocarbons
 Acetone
 acrid smoke and fumes

5.3 Advice for firefighters

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

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.


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SECTION 6: Accidental release measures
6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Evacuate personnel to safe areas.
 Remove all sources of ignition.
 Use personal protective equipment.
 Ensure adequate ventilation.
 Avoid breathing dust.
 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.
 Comply with all applicable federal, state, and local regulations.

6.2 Environmental precautions

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.

6.3 Methods and material for containment and cleaning up
6.4 Reference to other sections

For further information see Section 8 and Section 13 of the safety data sheet.

SECTION 7: Handling and storage
7.1 Precautions for safe handling

Advice on safe handling : Open drum carefully as content may be under pressure.
 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.

Advice on protection against fire and explosion : Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Keep away from open flames, hot surfaces and sources of ignition. Use only explosion-proof equipment.


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

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects. 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. Electrical installations / working materials must comply with the technological safety standards.

Other data : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection
8.1 Control parameters
Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
dimethyl ether	115-10-6	TWA	1.000 ppm 1.920 mg/m ³	2000/39/EC
		TWA	400 ppm 766 mg/m ³	GB EH40
		STEL	500 ppm 958 mg/m ³	GB EH40
4-Hydroxy-4-methylpentan-2-one	123-42-2	TWA	50 ppm 241 mg/m ³	GB EH40
		STEL	75 ppm 362 mg/m ³	GB EH40
2-Methoxy-1-methylethyl acetate	108-65-6	STEL	100 ppm 550 mg/m ³	2000/39/EC
		TWA	50 ppm 275 mg/m ³	2000/39/EC
		TWA	50 ppm	GB EH40


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			274 mg/m3	
		STEL	100 ppm	GB EH40
			548 mg/m3	

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

dimethyl ether : End Use: Workers
 Exposure routes: Inhalation
 Potential health effects: Long-term systemic effects
 Value: 1894 mg/m3
 End Use: Consumers
 Exposure routes: Inhalation
 Potential health effects: Long-term systemic effects
 Value: 471 mg/m3

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

dimethyl ether : Fresh water
 Value: 0,155 mg/l
 Marine water
 Value: 0,016 mg/l
 Sewage treatment plant
 Value: 160 mg/l
 Fresh water sediment
 Value: 0,681 mg/kg
 Marine sediment
 Value: 0,069 mg/kg
 Soil
 Value: 0,045 mg/kg

8.2 Exposure controls
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

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

Hand protection

Remarks : Nitrile rubber

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

Skin and body protection : Wear as appropriate:
 Impervious clothing
 Safety shoes


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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.

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

SECTION 9: Physical and chemical properties
9.1 Information on basic physical and chemical properties

Appearance : aerosol

Colour : colourless

Odour : hydrocarbon-like

Odour Threshold : No data available

pH :
No data available

Melting point/freezing point : < -20 °C

Boiling point/boiling range : < 35 °C

Flash point : < -18 °C

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 : 3 hPa (20 °C)

Relative vapour density : No data available

Relative density : No data available

Density : 0,72 g/cm³ (20 °C)

Solubility(ies)


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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 : 45 mPa.s (20 °C)

 Viscosity, kinematic : 50 mm²/s (20 °C)

Oxidizing properties : No data available

9.2 Other information

No data available

SECTION 10: Stability and reactivity
10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Vapours may form explosive mixture with air.


10.4 Conditions to avoid

Conditions to avoid : Heat, flames and sparks.

Exposure to air.
Exposure to moisture

10.5 Incompatible materials

Materials to avoid : aluminum
aluminium hydride
Carbon monoxide
halogens
Lead
lithium aluminum hydride
Oxygen
peroxides

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Strong acids
strong alkalis
Strong oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products : acrid smoke and fumes
carbon dioxide and carbon monoxide
various hydrocarbons
acrid smoke and fumes
carbon dioxide and carbon monoxide
Hydrocarbons

SECTION 11: Toxicological information

11.1 Information on toxicological effects

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

Acute toxicity

Not classified based on available information.

Components:

PROPANE:

Acute inhalation toxicity : **LC50 (Rat): 1.237 mg/l**
Exposure time: **2 h**
Test atmosphere: **gas**
Assessment: **Not classified as acutely toxic by inhalation under GHS.**
Remarks: **Information given is based on data obtained from similar substances.**

Components:

Hydrocarbons, C9-C11, n-alkanes, iso-alkanes, cyclenes, <2% aromatics:

Acute oral toxicity : **LD50 (Rat, male and female): > 15.000 mg/kg**
Method: **OECD Test Guideline 423**
Remarks: **Information given is based on data obtained from similar substances.**

Acute inhalation toxicity : **LC50 (Rat): > 4,95 mg/l**
Exposure time: **4 h**
Test atmosphere: **vapour**
Method: **OECD Test Guideline 403**
Assessment: **No adverse effect has been observed in acute**

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inhalation toxicity tests.**Remarks: Information given is based on data obtained from similar substances.**

Acute dermal toxicity : **LD50 (Rabbit, male and female): >= 3.160 mg/kg**
Method: **OECD Test Guideline 402**
Assessment: **No adverse effect has been observed in acute dermal toxicity tests.**
Remarks: Information given is based on data obtained from similar substances.

Components:**Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics:**

Acute oral toxicity : **LD50 (Rat, male and female): > 5.000 mg/kg**

Acute inhalation toxicity : **LC50 (Rat, male and female): > 23,3 mg/l**
Exposure time: **4 h**
Test atmosphere: **vapour**
Method: **OECD Test Guideline 403**
Assessment: **No adverse effect has been observed in acute inhalation toxicity tests.**

Acute dermal toxicity : **LD50 (Rat, male and female): > 2.800 - 3.100 mg/kg**

Components:**DIACETONE ALCOHOL:**

Acute oral toxicity : **LD50 (Rat): 3.002 mg/kg**
Method: **OECD Test Guideline 401**

Acute dermal toxicity : **LD50 (Rabbit): 13.500 mg/kg**
LD50 (Rat): > 1.875 mg/kg
Assessment: **No adverse effect has been observed in acute dermal toxicity tests.**

Components:**DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC:**

Acute oral toxicity : **LD50 (Rat): > 5 g/kg**

Acute dermal toxicity : **LD50 (Rabbit): > 2.000 mg/kg**
Assessment: **Not classified as acutely toxic by dermal absorption under GHS.**

Components:**OLEYL HYDROXYETHYL IMIDAZOLINE:**

Acute oral toxicity : **LD50 (Rat): ca. 1.265 mg/kg**


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Components:
DIMETHYL ETHER:

Acute inhalation toxicity : LC50 (Rat): 164000 ppm
 Exposure time: 4 h
 Test atmosphere: gas

Components:
PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE:

Acute oral toxicity : LD50 (Rat): 8.532 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 1728 ppm
 Exposure time: 4 h
 Test atmosphere: vapour
 Assessment: No adverse effect has been observed in acute inhalation toxicity tests.

Acute dermal toxicity : LD50 (Rabbit): > 5.000 mg/kg

Skin corrosion/irritation

Repeated exposure may cause skin dryness or cracking.

Product:

Remarks: May cause skin irritation and/or dermatitis.

Result: Repeated exposure may cause skin dryness or cracking.

Components:
Hydrocarbons, C9-C11, n-alkanes, iso-alkanes, cyclenes, <2% aromatics:

Result: Slight, transient irritation

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics:

Species: Rabbit
 Method: OECD Test Guideline 404
 Result: Slight, transient irritation

DIACETONE ALCOHOL:

Species: Rabbit
 Method: OECD Test Guideline 404
 Result: Slight, transient irritation

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC:

Result: No skin irritation

OLEYL HYDROXYETHYL IMIDAZOLINE:

Species: Rabbit
 Method: OECD Test Guideline 404

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Result: **Corrosive after 1 to 4 hours of exposure****PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE:**

Result: No 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.

Components:**Hydrocarbons, C9-C11, n-alkanes, iso-alkanes, cyclenes, <2% aromatics:**Result: **No eye irritation****Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics:**Species: **Rabbit**Result: **Slight, transient irritation****DIACETONE ALCOHOL:**Species: **Human**Result: **Irritating to eyes.**Remarks: **100 ppm for 15 minutes****DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC:**Result: **Slight, transient irritation****OLEYL HYDROXYETHYL IMIDAZOLINE:**Result: **Corrosive****PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE:**

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, C7-C9, n-alkanes, isoalkanes, cyclics:**Test Type: **Maximisation Test**Species: **Guinea pig**Assessment: **Does not cause skin sensitisation.**Method: **OECD Test Guideline 406****DIACETONE ALCOHOL:**Test Type: **Maximisation Test**Species: **Guinea pig**Method: **OECD Test Guideline 406**


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OLEYL HYDROXYETHYL IMIDAZOLINE:

Species: Guinea pig

Assessment: Does not cause skin sensitisation.

Method: OECD Test Guideline 406

DIMETHYL ETHER:

Remarks: Not applicable

PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE:

Test Type: Maximisation Test

Species: Guinea pig

Assessment: Did not cause sensitisation on laboratory animals.

Method: OECD Test Guideline 406

Germ cell mutagenicity

Not classified based on available information.

Components:
PROPANE:

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

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics:

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

: Method: OECD Test Guideline 473
 Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test
 Test species: Mouse
 Application Route: Oral
 Method: OECD Test Guideline 474
 Result: negative

DIMETHYL ETHER:

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

: Test Type: Chromosome aberration test in vitro
 Result: negative


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: Test Type: In vitro mammalian cell gene mutation test
Result: negative

: Test Type: unscheduled DNA synthesis assay
Result: negative

Genotoxicity in vivo : Test species: Drosophila melanogaster (vinegar fly)
Result: negative

PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE:

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
GLP: yes

Carcinogenicity

Not classified based on available information.

Components:
DIMETHYL ETHER:

Species: Rat
Application Route: inhalation (vapour)
NOAEL: No observed adverse effect level: 47,106 mg/l
Result: negative

Reproductive toxicity

Not classified based on available information.

Components:
DIMETHYL ETHER:

Effects on fertility : Application Route: inhalation (gas)
Result: Animal testing did not show any effects on fertility.

Effects on foetal development : Application Route: inhalation (vapour)
Method: OECD Test Guideline 414
Result: No teratogenic effects
GLP: yes

STOT - single exposure

May cause drowsiness or dizziness.

Components:
Hydrocarbons, C9-C11, n-alkanes, iso-alkanes, cyclenes, <2% aromatics:

Assessment: **May cause drowsiness or dizziness.**

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics:


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Assessment: **May cause drowsiness or dizziness.**

DIACETONE ALCOHOL:

Assessment: **May cause respiratory irritation.**

STOT - repeated exposure

Not classified based on available information.

Components:
OLEYL HYDROXYETHYL IMIDAZOLINE:

Exposure routes: **Ingestion**

Target Organs: **Gastrointestinal tract, thymus gland**

Assessment: **May cause damage to organs through prolonged or repeated exposure.**

Repeated dose toxicity
Components:
DIMETHYL ETHER:

Species: Rat

No observed adverse effect level: 47,106 g/m³

Application Route: inhalation (vapour)

Method: OECD Test Guideline 452

Aspiration toxicity

Not classified based on available information.

Components:
Hydrocarbons, C9-C11, n-alkanes, iso-alkanes, cyclenes, <2% aromatics:

May be fatal if swallowed and enters airways.

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics:

May be fatal if swallowed and enters airways.

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC:

May be fatal if swallowed and enters airways.

Further information
Product:

Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting., Concentrations substantially above the TLV value may cause narcotic effects., Solvents may degrease the skin.

SECTION 12: Ecological information

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12.1 Toxicity**Components:**

Hydrocarbons, C9-C11, n-alkanes, iso-alkanes, cyclenes, <2% aromatics

Toxicity to fish	: LL50 (Oncorhynchus mykiss (rainbow trout)) : > 1.000 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 (Water flea (Daphnia magna)) : 1.000 mg/l Exposure time: 48 h Test Type: static test Test substance: WAF Method: OECD Test Guideline 202
Toxicity to algae	: EL50 (Pseudokirchneriella subcapitata (green algae)) : > 1.000 mg/l End point: Growth inhibition Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

Toxicity to fish	: LL50 (Oncorhynchus mykiss (rainbow trout)) : 3 - 10 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 (Water flea (Daphnia magna)) : 4,6 - 10 mg/l Exposure time: 48 h Test Type: static test Test substance: WAF Method: OECD Test Guideline 202
Toxicity to algae	: EL50 (Pseudokirchneriella subcapitata (green algae)) : 10 - 30 mg/l End point: Growth inhibition Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC : 0,17 mg/l Exposure time: 21 d Species: Water flea (Daphnia magna) Test Type: static test Test substance: WAF Method: OECD Test Guideline 211

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Ecotoxicology AssessmentChronic aquatic toxicity : **Toxic to aquatic life with long lasting effects.****4-Hydroxy-4-methylpentan-2-one**

Toxicity to fish : **LC50 (Oryzias latipes (Orange-red killifish)): > 100 mg/l**
 Exposure time: 96 h
 Test Type: **semi-static test**
 Method: **OECD Test Guideline 203**

Toxicity to daphnia and other aquatic invertebrates : **EC50 (Water flea (Daphnia magna)): > 1.000 mg/l**
 Exposure time: 48 h
 Test Type: **semi-static test**
 Method: **OECD Test Guideline 202**

Toxicity to algae : **ErC50 (Pseudokirchneriella subcapitata (green algae)): > 1.000 mg/l**
 Exposure time: 72 h
 Test Type: **static test**
 Method: **OECD Test Guideline 201**

2-(2-Heptadec-8-enyl-2-imidazolin-1-yl)ethanol

Toxicity to fish : **LC50 (Danio rerio (zebra fish)): 0,3 mg/l**
 Exposure time: 96 h
 Test Type: **static test**
 Method: **OECD Test Guideline 203**

Toxicity to daphnia and other aquatic invertebrates : **EC50 (Water flea (Daphnia magna)): 0,163 mg/l**
 Exposure time: 48 h
 Test Type: **semi-static test**
 Method: **OECD Test Guideline 202**

Toxicity to algae : **EC50 (Desmodesmus subspicatus (green algae)): 0,03 mg/l**
 End point: **Growth inhibition**
 Exposure time: 72 h
 Test Type: **static test**
 Method: **OECD Test Guideline 201**

M-Factor (Acute aquatic toxicity) : **10**

M-Factor (Chronic aquatic toxicity) : **1**

dimethyl ether
 Toxicity to fish : **LC50 (Poecilia reticulata (guppy)): > 4,1 g/l**
 Exposure time: 96 h
 Test Type: **semi-static test**
 Remarks: **No toxicity at the limit of solubility**


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- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna Straus): > 4,4 g/l
Exposure time: 48 h
Test Type: static test
Remarks: No toxicity at the limit of solubility
- Toxicity to algae : EC50 : 155 mg/l
Exposure time: 96 h
Remarks: QSAR
- Toxicity to bacteria : EC10 (Pseudomonas putida): > 1.600 mg/l
- 2-Methoxy-1-methylethyl acetate
Toxicity to fish : LC50 (Oryzias latipes (Orange-red killifish)): > 100 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 : EC50 (Water flea (Daphnia magna)): 373 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes
- Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (microalgae)): > 1.000 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes
- NOEC (Pseudokirchneriella subcapitata (microalgae)): 1.000 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes
- Toxicity to fish (Chronic toxicity) : NOEC: 47,5 mg/l
Exposure time: 14 d
Species: Oryzias latipes (Orange-red killifish)
Test Type: flow-through test
Method: OECD Test Guideline 204
GLP: yes
- Toxicity to daphnia and other : NOEC: > 100 mg/l

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aquatic invertebrates
(Chronic toxicity)

Exposure time: 21 d
Species: Water flea (Daphnia magna)
Test Type: semi-static test
Method: OECD Test Guideline 211
GLP: yes

12.2 Persistence and degradability

Components:

Hydrocarbons, C9-C11, n-alkanes, iso-alkanes, cyclenes, <2% aromatics

Biodegradability : Result: **Readily biodegradable.**
Biodegradation: **80 %**
Exposure time: **28 d**
Method: **OECD Test Guideline 301F**

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

Biodegradability : Inoculum: **activated sludge**
Biodegradation: **98 %**
Exposure time: **28 d**
Method: **OECD Test Guideline 301F**
Remarks: **Information given is based on data obtained from similar substances.**

2-(2-Heptadec-8-enyl-2-imidazolin-1-yl)ethanol

Biodegradability : Result: **Not readily biodegradable.**
Biodegradation: **1 %**
Exposure time: **28 d**
Method: **OECD Test Guideline 301B**

dimethyl ether

Biodegradability : Test Type: aerobic
Inoculum: activated sludge
Concentration: 2 mg/l
Result: Not readily biodegradable.
Biodegradation: 5 %
Method: OECD Test Guideline 301D
Remarks: According to the results of tests of biodegradability this product is not readily biodegradable.

2-Methoxy-1-methylethyl acetate

Biodegradability : Result: Readily biodegradable.
Biodegradation: 83 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

12.3 Bioaccumulative potential

Components:

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Propane

 Partition coefficient: n-octanol/water : log Pow: **2,36**

4-Hydroxy-4-methylpentan-2-one

 Partition coefficient: n-octanol/water : log Pow: **-0,098**

2-(2-Heptadec-8-enyl-2-imidazolin-1-yl)ethanol

 Partition coefficient: n-octanol/water : log Pow: **8**

dimethyl ether

Partition coefficient: n-octanol/water : log Pow: 0,10

2-Methoxy-1-methylethyl acetate

Partition coefficient: n-octanol/water : Pow: 1,2

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment
Components:

dimethyl ether

Assessment

: This substance is not considered to be very persistent and very bioaccumulating (vPvB).. This substance is not considered to be persistent, bioaccumulating and toxic (PBT)..

12.6 Other adverse effects
Product:


Additional ecological information

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

SECTION 13: Disposal considerations
13.1 Waste treatment methods

Product

 : 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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Contaminated packaging : Empty remaining contents.
 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

SECTION 14: Transport information

14.1 UN number

ADR: Not dangerous goods
INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO: UN1950
INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER: UN1950
INTERNATIONAL MARITIME DANGEROUS GOODS: UN1950
RID: Not dangerous goods

14.2 UN proper shipping name

ADR: Not dangerous goods
INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO: Aerosols, flammable
INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER: Aerosols, flammable
INTERNATIONAL MARITIME DANGEROUS GOODS: AEROSOLS
RID: Not dangerous goods

14.3 Transport hazard class(es)


ADR: Not dangerous goods
INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO: 2.1
INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER: 2.1
INTERNATIONAL MARITIME DANGEROUS GOODS: 2.1
RID: Not dangerous goods

14.4 Packing group

ADR: Not dangerous goods
INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO:
INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER:
INTERNATIONAL MARITIME DANGEROUS GOODS:
RID: Not dangerous goods

14.5 Environmental hazards

ADR: Environmentally hazardous
INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO: Environmentally hazardous
INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER: Environmentally hazardous

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INTERNATIONAL MARITIME DANGEROUS GOODS: Environmentally hazardous, MARINE POLLUTANT
RID: Environmentally hazardous

14.6 Special precautions for user

Not applicable

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

Ship Type: Not applicable
Hazard code(s): Not applicable
Pollutant Category: Not applicable

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

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

- Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable
- Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable
- REACH - List of substances subject to authorisation (Annex XIV) : Not applicable
- REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics
- REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 57). : Not applicable
- Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

		Quantity 1	Quantity 2
P3a	FLAMMABLE AEROSOLS	150 t	500 t
E2	ENVIRONMENTAL HAZARDS	200 t	500 t

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Other regulations : Young people under 18 years old are not allowed to work with this product according to the EU Directive 94/33/EC on the protection of young people at work.

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)

15.2 Chemical safety assessment

No data available

SECTION 16: Other information

Further information

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Full text of H-Statements

H220 Extremely flammable gas.

H225 Highly flammable liquid and vapour.

H226 Flammable liquid and vapour.

H280 Contains gas under pressure; may explode if heated.

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.


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H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure if swallowed.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

Other information : 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 (+31 (0)78 654 3500).

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.

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

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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

ABM : Water Hazard Class for the Netherlands
 ADR : Agreement concerning the International Carriage of Dangerous Goods by Road.
 ADNR: Regulation for the Carriage of Dangerous Substances on the Rhine
 CLP : Classification, Labelling and Packaging
 CSA : Chemical Safety Assessment
 CSR : Chemical Safety Report
 DNEL : Derived No Effect Level.
 EINECS : European Inventory of Existing Commercial Chemical Substances.
 ELINCS : European List of Notified Chemical Substances
 PEC : Predicted Effect Concentration
 PEL : Permissible Exposure Limits
 PNEC : Predicted No Effect Concentration
 R-phrase : Risk phrase
 REACH : Registration, Evaluation, Authorisation and Restriction of Chemicals
 RID : Regulation Concerning the International Transport of Dangerous Goods by Rail
 S-phrase: Safety phrase
 WGK : German Water Hazard Class