



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Valvoline™ DIESEL SYSTEM PROTECTOR

Version: 5.0

Revision Date: 24.05.2023

Print Date: 19/07/2023

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

1.1 Product identifier

Trade name : Valvoline™ DIESEL SYSTEM PROTECTOR

Product code : 890605

Unique Formula Identifier (UFI) : 9NRC-3SHX-C00Y-WDGN

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

Use of the substance/mixture : Fuels and fuel additives

1.3 Details of the supplier of the safety data sheet

Company : Ellis Enterprises B.V., an affiliate of Valvoline
Wieldrechtseweg 39
3316 BG Dordrecht
Netherlands

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

E-mail address of person responsible for the SDS : 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

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Eye irritation, Category 2 H319: Causes serious eye irritation.

Aspiration hazard, Category 1 H304: May be fatal if swallowed and enters



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Valvoline™ DIESEL SYSTEM PROTECTOR

Version: 5.0

Revision Date: 24.05.2023

Print Date: 19/07/2023

airways.

Long-term (chronic) aquatic hazard,
Category 3

H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Hazard pictograms

:



Signal word

:

Danger

Hazard statements

:

H304 May be fatal if swallowed and enters airways.
H319 Causes serious eye irritation.
H412 Harmful 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:

P280 Wear eye protection/ face protection.
P273 Avoid release to the environment.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P331 Do NOT induce vomiting.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Valvoline™ DIESEL SYSTEM PROTECTOR

Version: 5.0

Revision Date: 24.05.2023

Print Date: 19/07/2023

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Not Assigned 918-481-9 01-2119457273-39-xxxx	Asp. Tox. 1; H304	>= 90 - <= 100
ETHYLHEXYL-2 NITRATE	27247-96-7 248-363-6 01-2119539586-27-xxxx	Acute Tox. 4; H302 Acute Tox. 4; H332 Acute Tox. 4; H312 Aquatic Chronic 2; H411	>= 5 - < 10
ETHYLHEXANOL-2	104-76-7 203-234-3 01-2119487289-20-xxxx	Acute Tox. 4; H332 Skin Irrit. 2; H315 STOT SE 3; H335 (Respiratory system)	>= 2.5 - < 5
OLEYL N-METHYLGLYCINE	110-25-8 203-749-3 01-2119488991-20-xxxx	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Dam. 1; H318 Aquatic Acute 1; H400 M-Factor (Acute aquatic toxicity): 1	>= 2.5 - < 3
OLEYL HYDROXYETHYL IMIDAZOLINE	95-38-5 202-414-9 01-2119777867-13-xxxx	Acute Tox. 4; H302 Skin Corr. 1C; H314 Eye Dam. 1; H318 STOT RE 2; H373 (Gastrointestinal tract, thymus gland) Aquatic Acute 1; H400 Aquatic Chronic 1;	>= 0.5 - < 1



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Valvoline™ DIESEL SYSTEM PROTECTOR

Version: 5.0

Revision Date: 24.05.2023

Print Date: 19/07/2023

		H410 M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 1	
MORPHOLINE	110-91-8 203-815-1 613-028-00-9 01-2119496057-30-xxxx	Flam. Liq. 3; H226 Acute Tox. 4; H302 Acute Tox. 3; H331 Acute Tox. 3; H311 Skin Corr. 1B; H314 Eye Dam. 1; H318	>= 0.5 - < 1

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Symptoms of poisoning may appear several hours later.
Do not leave the victim unattended.
- If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.
Do NOT induce vomiting.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Valvoline™ DIESEL SYSTEM PROTECTOR

Version: 5.0

Revision Date: 24.05.2023

Print Date: 19/07/2023

4.2 Most important symptoms and effects, both acute and delayed

- | | | |
|----------|---|--|
| Symptoms | : | No symptoms known or expected. |
| Risks | : | May be fatal if swallowed and enters airways.
Causes serious eye irritation.
Repeated exposure may cause skin dryness or cracking. |
| | : | May be fatal if swallowed and enters airways.
Causes serious eye irritation.
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. |
| | : | Treat symptomatically. |

SECTION 5: Firefighting measures

5.1 Extinguishing media

- | | | |
|--------------------------------|---|-----------------------------------|
| Suitable extinguishing media | : | Carbon dioxide (CO ₂) |
| Unsuitable extinguishing media | : | High volume water jet |

5.2 Special hazards arising from the substance or mixture

- | | | |
|--------------------------------------|---|---|
| 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 |

5.3 Advice for firefighters

- | | | |
|---|---|---|
| Special protective equipment for firefighters | : | Wear self-contained breathing apparatus for firefighting if necessary. |
| Further information | : | Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
For safety reasons in case of fire, cans should be stored separately in closed containments.
Use a water spray to cool fully closed containers. |



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Valvoline™ DIESEL SYSTEM PROTECTOR

Version: 5.0

Revision Date: 24.05.2023

Print Date: 19/07/2023

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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

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

Methods for cleaning up : Contain spillage, and then collect with non-combustible
absorbent material, (e.g. sand, earth, diatomaceous earth,
vermiculite) and place in container for disposal according to
local / national regulations (see section 13).
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid formation of aerosol.
Do not breathe vapours/dust.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the
application area.
Provide sufficient air exchange and/or exhaust in work rooms.
Dispose of rinse water in accordance with local and national
regulations.

Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material.
Keep away from open flames, hot surfaces and sources of
ignition.

Hygiene measures : When using do not eat or drink. When using do not smoke.



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Valvoline™ DIESEL SYSTEM PROTECTOR

Version: 5.0

Revision Date: 24.05.2023

Print Date: 19/07/2023

Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : No smoking. Keep in a well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

Further information on storage stability : 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
ETHYLHEXANOL-2	104-76-7	TWA	1 ppm 5.4 mg/m3	GB EH40
		TWA	1 ppm 5.4 mg/m3	2017/164/EU
Further information: Indicative				
MORPHOLINE	110-91-8	TWA	10 ppm 36 mg/m3	GB EH40
Further information: Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.				
		STEL	20 ppm 72 mg/m3	GB EH40
Further information: Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.				
		TWA	10 ppm 36 mg/m3	2006/15/EC
Further information: Indicative				
		STEL	20 ppm 72 mg/m3	2006/15/EC
Further information: Indicative				



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Valvoline™ DIESEL SYSTEM PROTECTOR

Version: 5.0

Revision Date: 24.05.2023

Print Date: 19/07/2023

Derived No Effect Level (DNEL):

Substance name	End Use	Exposure routes	Potential health effects	Value
OLEYL HYDROXYETHYL IMIDAZOLINE	Workers	Inhalation	Long-term systemic effects	0.46 mg/m ³
Remarks:RD TOX - Repeated dose toxicity				
	Workers	Inhalation	Acute systemic effects	14 mg/m ³
Remarks:RD TOX - Repeated dose toxicity				
	Workers	Dermal	Long-term systemic effects	0.06 mg/kg
Remarks:RD TOX - Repeated dose toxicity				
	Workers	Dermal	Acute systemic effects	2 mg/kg
Remarks:RD TOX - Repeated dose toxicity				

Predicted No Effect Concentration (PNEC):

Substance name	Environmental Compartment	Value
OLEYL N-METHYLGLYCINE	Sewage treatment plant	13 mg/l
OLEYL HYDROXYETHYL IMIDAZOLINE	Sewage treatment plant	0.27 mg/l
	Fresh water sediment	0.376 mg/kg
	Marine sediment	0.0376 mg/kg
	Soil	0.075 mg/kg

8.2 Exposure controls

Personal protective equipment

Eye/face protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Hand protection

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

Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : No personal respiratory protective equipment normally required.

B



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Valvoline™ DIESEL SYSTEM PROTECTOR

Version: 5.0

Revision Date: 24.05.2023

Print Date: 19/07/2023

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	: liquid
Colour	: yellow
Odour	: characteristic
Odour Threshold	: No data available
pH	: Not applicable
Melting point/freezing point	: No data available
Initial boiling point and boiling range	: 100 °C
Flash point	: 62 °C
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Upper explosion limit / Upper flammability limit	: 7 %(V)
Lower explosion limit / Lower flammability limit	: 0.5 %(V)
Vapour pressure	: No data available
Relative vapour density	: No data available
Relative density	: No data available
Density	: ca. 0.83 g/cm ³ (20 °C)
Solubility(ies)	
Water solubility	: insoluble
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Valvoline™ DIESEL SYSTEM PROTECTOR

Version: 5.0

Revision Date: 24.05.2023

Print Date: 19/07/2023

Decomposition temperature : No data available

Viscosity
Viscosity, dynamic : No data available

Viscosity, kinematic : ca. 7 mm²/s (40 °C)

Oxidizing properties : No data available

9.2 Other information

Self-ignition : No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : No decomposition if stored and applied as directed.

Vapours may form explosive mixture with air.

10.4 Conditions to avoid

Conditions to avoid : excessive heat

10.5 Incompatible materials

Materials to avoid : Acids
alkalis
Lead
Strong oxidizing agents
strong reducing agents

10.6 Hazardous decomposition products

No hazardous decomposition products are known.



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Valvoline™ DIESEL SYSTEM PROTECTOR

Version: 5.0

Revision Date: 24.05.2023

Print Date: 19/07/2023

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method

Components:

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401
Remarks: The toxicological data has been taken from products of similar composition.

Acute inhalation toxicity : LD50 (Rat): > 5,000 mg/m3
Exposure time: 8 h
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): >= 3,160 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

ETHYLHEXYL-2 NITRATE:

Acute oral toxicity : (Human): Assessment: The component/mixture is moderately toxic after single ingestion.

Acute inhalation toxicity : (Humans): Assessment: The component/mixture is moderately toxic after short term inhalation.

Acute dermal toxicity : (Humans): Assessment: The component/mixture is moderately toxic after single contact with skin.



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Valvoline™ DIESEL SYSTEM PROTECTOR

Version: 5.0

Revision Date: 24.05.2023

Print Date: 19/07/2023

ETHYLHEXANOL-2:

- Acute oral toxicity : LD50 (Rat, male): 3,290 mg/kg
- Acute inhalation toxicity : Test atmosphere: vapour
Assessment: The component/mixture is moderately toxic after short term inhalation.
- Acute dermal toxicity : LD50 (Rat): > 3,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

OLEYL N-METHYLGLYCINE:

- Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
- Acute inhalation toxicity : LC50 (Rat): > 1.01 - 1.85 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

OLEYL HYDROXYETHYL IMIDAZOLINE:

- Acute oral toxicity : LD50 (Rat): ca. 1,265 mg/kg

MORPHOLINE:

- Acute oral toxicity : LD50 (Rat): ca. 1,900 mg/kg
Method: OECD Test Guideline 401
- Acute inhalation toxicity : Test atmosphere: vapour
Assessment: The component/mixture is toxic after short term inhalation.
- Acute dermal toxicity : LD50 (Rabbit): ca. 500 mg/kg

Skin corrosion/irritation

Repeated exposure may cause skin dryness or cracking.

Product:

- Remarks : May cause skin irritation and/or dermatitis.

Components:

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

- Result : No skin irritation
- Result : Repeated exposure may cause skin dryness or cracking.



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Valvoline™ DIESEL SYSTEM PROTECTOR

Version: 5.0

Revision Date: 24.05.2023

Print Date: 19/07/2023

ETHYLHEXYL-2 NITRATE:

Result : Repeated exposure may cause skin dryness or cracking.

Species : Rabbit

Result : No skin irritation

ETHYLHEXANOL-2:

Assessment : Irritating to skin.

Result : Irritating to skin.

OLEYL N-METHYLGLYCINE:

Species : Rabbit

Result : Irritating to skin.

OLEYL HYDROXYETHYL IMIDAZOLINE:

Species : Rabbit

Method : OECD Test Guideline 404

Result : Corrosive after 1 to 4 hours of exposure

MORPHOLINE:

Species : Rabbit

Method : OECD Test Guideline 404

Result : Corrosive after 3 minutes or less of exposure

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Result : Eye irritation

Remarks : May cause irreversible eye damage.

Components:

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Result : No eye irritation

ETHYLHEXYL-2 NITRATE:

Species : Rabbit

Result : No eye irritation



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Valvoline™ DIESEL SYSTEM PROTECTOR

Version: 5.0

Revision Date: 24.05.2023

Print Date: 19/07/2023

ETHYLHEXANOL-2:

Assessment : Severely irritating to eyes
Result : Severely irritating to eyes

OLEYL N-METHYLGLYCINE:

Species : Rabbit
Result : Corrosive

OLEYL HYDROXYETHYL IMIDAZOLINE:

Result : Corrosive

MORPHOLINE:

Species : Rabbit
Method : OECD Test Guideline 405
Result : Corrosive

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Assessment : Did not cause sensitisation on laboratory animals.

ETHYLHEXYL-2 NITRATE:

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

OLEYL N-METHYLGLYCINE:

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

OLEYL HYDROXYETHYL IMIDAZOLINE:



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Valvoline™ DIESEL SYSTEM PROTECTOR

Version: 5.0

Revision Date: 24.05.2023

Print Date: 19/07/2023

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

Germ cell mutagenicity

Not classified based on available information.

Components:

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Genotoxicity in vitro : Test Type: in vitro assay
Result: negative

ETHYLHEXYL-2 NITRATE:

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

OLEYL N-METHYLGLYCINE:

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

MORPHOLINE:

Genotoxicity in vitro : Test Type: unscheduled DNA synthesis assay
Test system: rat hepatocytes
Metabolic activation: without metabolic activation
Method: OECD Test Guideline 482
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: without metabolic activation
Method: OECD Test Guideline 476
Result: positive

Carcinogenicity

Not classified based on available information.



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Valvoline™ DIESEL SYSTEM PROTECTOR

Version: 5.0

Revision Date: 24.05.2023

Print Date: 19/07/2023

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

Components:

ETHYLHEXANOL-2:

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:

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Species : Rat
Application Route : Oral
Method : OECD Test Guideline 422

Aspiration toxicity

May be fatal if swallowed and enters airways.

Components:

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks : Solvents may degrease the skin.



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Valvoline™ DIESEL SYSTEM PROTECTOR

Version: 5.0

Revision Date: 24.05.2023

Print Date: 19/07/2023

SECTION 12: Ecological information

12.1 Toxicity

Product:

Ecotoxicology Assessment

Acute aquatic toxicity : Toxic to aquatic life.

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

Components:

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 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 : EL50 (Daphnia magna (Water flea)): > 1,000 mg/l
aquatic invertebrates
Exposure time: 48 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 202

Toxicity to algae/aquatic : EL50 (Pseudokirchneriella subcapitata (green algae)): > 1,000
plants
mg/l
Exposure time: 72 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 201

Ecotoxicology Assessment

Acute aquatic toxicity : Not classified based on available information.

Chronic aquatic toxicity : Not classified based on available information.

ETHYLHEXYL-2 NITRATE:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 2 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Valvoline™ DIESEL SYSTEM PROTECTOR

Version: 5.0

Revision Date: 24.05.2023

Print Date: 19/07/2023

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 12.6 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

NOEC (Daphnia magna (Water flea)): 10 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 3.22 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

Ecotoxicology Assessment

Acute aquatic toxicity : Acute aquatic toxicity Category 2; Toxic to aquatic life.

Chronic aquatic toxicity : Chronic aquatic toxicity Category 2; Toxic to aquatic life with long lasting effects.

ETHYLHEXANOL-2:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 28.2 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 39 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : (Desmodesmus subspicatus (green algae)): 11.5 mg/l
End point: Biomass
Exposure time: 72 h
Test Type: static test

Ecotoxicology Assessment

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

Chronic aquatic toxicity : Not classified based on available information.

OLEYL N-METHYLGLYCINE:

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 9.3 mg/l
Exposure time: 96 h
Test Type: static test



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Valvoline™ DIESEL SYSTEM PROTECTOR

Version: 5.0

Revision Date: 24.05.2023

Print Date: 19/07/2023

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.43 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 6.3 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test

M-Factor (Acute aquatic toxicity) : 1

Ecotoxicology Assessment

Acute aquatic toxicity : Acute aquatic toxicity Category 1; Very toxic to aquatic life.

Chronic aquatic toxicity : Not classified based on available information.

OLEYL HYDROXYETHYL IMIDAZOLINE:

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 (Daphnia magna (Water flea)): 0.163 mg/l
Exposure time: 48 h
Test Type: semi-static test
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : 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

Ecotoxicology Assessment

Acute aquatic toxicity : Acute aquatic toxicity Category 1; Very toxic to aquatic life.

Chronic aquatic toxicity : Chronic aquatic toxicity Category 1; Very toxic to aquatic life with long lasting effects.



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Valvoline™ DIESEL SYSTEM PROTECTOR

Version: 5.0

Revision Date: 24.05.2023

Print Date: 19/07/2023

MORPHOLINE:

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 380 mg/l
Exposure time: 96 h
Test Type: static test
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 45 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
- Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 28 mg/l
Exposure time: 96 h
Test Type: static test
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 5 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: semi-static test
Method: OECD Test Guideline 211

Ecotoxicology Assessment

- Acute aquatic toxicity : Acute aquatic toxicity Category 3; Harmful to aquatic life.
- Chronic aquatic toxicity : Not classified based on available information.

12.2 Persistence and degradability

Components:

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

- Biodegradability : Inoculum: activated sludge
Result: Readily biodegradable.
Biodegradation: 80 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

ETHYLHEXYL-2 NITRATE:

- Biodegradability : Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 310

ETHYLHEXANOL-2:



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Valvoline™ DIESEL SYSTEM PROTECTOR

Version: 5.0

Revision Date: 24.05.2023

Print Date: 19/07/2023

Biodegradability : Result: Readily biodegradable.
Biodegradation: 68 %
Exposure time: 17 d
Method: Modified Sturm Test

OLEYL N-METHYLGLYCINE:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 85 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

OLEYL HYDROXYETHYL IMIDAZOLINE:

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

MORPHOLINE:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 92.6 %
Exposure time: 22 d
Method: OECD Test Guideline 301E

12.3 Bioaccumulative potential

Components:

ETHYLHEXYL-2 NITRATE:

Partition coefficient: n- : log Pow: 5.24
octanol/water

OLEYL N-METHYLGLYCINE:

Partition coefficient: n- : log Pow: 3.5 - 4.2
octanol/water

OLEYL HYDROXYETHYL IMIDAZOLINE:

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

MORPHOLINE:

Partition coefficient: n- : log Pow: -0.86
octanol/water



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Valvoline™ DIESEL SYSTEM PROTECTOR

Version: 5.0

Revision Date: 24.05.2023

Print Date: 19/07/2023

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Product:

Endocrine disrupting potential : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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

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

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Valvoline™ DIESEL SYSTEM PROTECTOR

Version: 5.0

Revision Date: 24.05.2023

Print Date: 19/07/2023

SECTION 14: Transport information

14.1 UN number

ADR	:	Not regulated as a dangerous good
RID	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA_P	:	Not regulated as a dangerous good

14.2 UN proper shipping name

ADR	:	Not regulated as a dangerous good
RID	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA_P	:	Not regulated as a dangerous good

14.3 Transport hazard class(es)

ADR	:	Not regulated as a dangerous good
RID	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA_P	:	Not regulated as a dangerous good

14.4 Packing group

ADR	:	Not regulated as a dangerous good
RID	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA (Cargo)	:	Not regulated as a dangerous good
IATA_P (Passenger)	:	Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

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.



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Valvoline™ DIESEL SYSTEM PROTECTOR

Version: 5.0

Revision Date: 24.05.2023

Print Date: 19/07/2023

SECTION 15: Regulatory information

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

Relevant EU provisions transposed through retained EU law

UK REACH List of restrictions (Annex 17)	: Conditions of restriction for the following entries should be considered: Number on list 3
UK REACH Candidate list of substances of very high concern (SVHC) for Authorisation	: Not applicable
The Persistent Organic Pollutants Regulations (retained Regulation (EU) 2019/1021 as amended for Great Britain)	: Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	: Not applicable
UK REACH List of substances subject to authorisation (Annex XIV)	: Not applicable
Control of Major Accident Hazards Regulations 2015 (COMAH)	Not applicable

Other regulations:

Take note of The Management of Health and Safety at Work Regulations 1999 (requirements relating to new and expectant mothers at work contained in Regulation 16 to 18) and of the Pregnant Workers Directive 92/85/EEC.

Take note of The Management of Health and Safety at Work Regulations 1999 (requirements relating to protection of young people at work contained in Regulation 19) and of Directive 94/33/EC on the protection of young people at work.

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

TCSI	: Not in compliance with the inventory
TSCA	: Product contains substance(s) not listed on TSCA inventory.
AIIC	: Not in compliance with the inventory
DSL	: This product contains the following components that are not on the Canadian DSL nor NDSL. Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Valvoline™ DIESEL SYSTEM PROTECTOR

Version: 5.0

Revision Date: 24.05.2023

Print Date: 19/07/2023

Proprietary of DIESEL SYSTEM PROTECTOR
(000000272888)

ENCS	: Not in compliance with the inventory
KECI	: Not in compliance with the inventory
PICCS	: Not in compliance with the inventory
IECSC	: Not in compliance with the inventory
NZIoC	: Not in compliance with the inventory

15.2 Chemical safety assessment

No data available

Inventories

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

SECTION 16: Other information

Full text of H-Statements

H226	: Flammable liquid and vapour.
H302	: Harmful if swallowed.
H304	: May be fatal if swallowed and enters airways.
H311	: Toxic in contact with skin.
H312	: Harmful in contact with skin.
H314	: Causes severe skin burns and eye damage.
H315	: Causes skin irritation.
H318	: Causes serious eye damage.
H331	: Toxic if inhaled.
H332	: Harmful if inhaled.
H335	: May cause respiratory irritation.
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.

Full text of other abbreviations

Acute Tox.	: Acute toxicity
Aquatic Acute	: Short-term (acute) aquatic hazard
Aquatic Chronic	: Long-term (chronic) aquatic hazard
Asp. Tox.	: Aspiration hazard



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Valvoline™ DIESEL SYSTEM PROTECTOR

Version: 5.0

Revision Date: 24.05.2023

Print Date: 19/07/2023

Eye Dam.	: Serious eye damage
Flam. Liq.	: Flammable liquids
Skin Corr.	: Skin corrosion
Skin Irrit.	: Skin irritation
STOT RE	: Specific target organ toxicity - repeated exposure
STOT SE	: Specific target organ toxicity - single exposure
2006/15/EC	: Europe. Indicative occupational exposure limit values
2017/164/EU	: Europe. Commission Directive 2017/164/EU establishing a fourth list of indicative occupational exposure limit values
GB EH40	: UK. EH40 WEL - Workplace Exposure Limits
2006/15/EC / TWA	: Limit Value - eight hours
2006/15/EC / STEL	: Short term exposure limit
2017/164/EU / TWA	: Limit Value - eight hours
GB EH40 / TWA	: Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL	: Short-term exposure limit (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006
Valvoline™ DIESEL SYSTEM PROTECTOR

Version: 5.0

Revision Date: 24.05.2023

Print Date: 19/07/2023

Further information

Internal information : 000000272888

Classification of the mixture:

Eye Irrit. 2	H319
Asp. Tox. 1	H304
Aquatic Chronic 3	H412

Classification procedure:

Based on product data or assessment
Calculation method
Based on product data or assessment

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

GB / EN