


SAFETY DATA SHEET

Revision Date: 05.06.2019

Print Date: 13.06.2019

SDS Number: R0517049

Valvoline™ LHM PLUS SPECIAL BLEND

Version: 2.0

VE15900

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 : Valvoline™ LHM PLUS
SPECIAL BLEND

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

Recommended use : Engine, gear & lubricating oil.

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)

Aspiration hazard, Category 1

H304: May be fatal if swallowed and enters
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)


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Hazard pictograms

:



Signal word

: Danger

Hazard statements

: H304

May be fatal if swallowed and enters airways.

H412

Harmful to aquatic life with long lasting effects.

Supplemental Hazard Statements

: EUH066

Repeated exposure may cause skin dryness or cracking.

Precautionary statements

: **Prevention:**

P273

Avoid release to the environment.

Response:

P301 + P310

IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P331

Do NOT induce vomiting.

Storage:

P405

Store locked up.

Disposal:

P501

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

Hazardous components which must be listed on the label:

Distillates (petroleum), hydrotreated light paraffinic

HYDROCARBONS, C13-C16, n-ALKANES, ISOALKANES, CYCLICS, <0.03%

AROMATICIS

Gas oils (petroleum), hydrodesulfurized

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.

Additional advice

No information available.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

Chemical name	CAS-No. EC-No.	Classification (REGULATION (EC))	Concentration (%)



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	Registration number	No 1272/2008)	
Distillates (petroleum), hydrotreated light paraffinic	64742-55-8 265-158-7 01-2119487077-29-xxxx	Asp. Tox.1; H304	>= 40,00 - < 50,00
HYDROCARBONS, C13-C16, n-ALKANES, ISOALKANES, CYCLICS, <0.03% AROMATICS	934-954-2 01-2119826592-36-xxxx	Asp. Tox.1; H304	>= 40,00 - < 50,00
Gas oils (petroleum), hydrodesulfurized	64742-79-6 265-182-8 01-2119471311-49-xxxx	Acute Tox.4; H332 Skin Irrit.2; H315 Asp. Tox.1; H304 Aquatic Chronic2; H411	>= 5,00 - < 10,00
Tris(methylphenyl) phosphate	1330-78-5 215-548-8 01-2119531335-46-xxxx	Repr.2; H361f Aquatic Acute1; H400 Aquatic Chronic1; H410	>= 0,50 - < 1,00
2,6-di-tert-butylphenol	128-39-2 204-884-0 01-2119490822-33-xxxx	Skin Irrit.2; H315 Aquatic Acute1; H400 Aquatic Chronic1; H410	>= 0,50 - < 1,00
Phenol, dodecyl-, branched	121158-58-5 310-154-3 01-2119513207-49-xxxx	Skin Corr.1C; H314 Repr.1B; H360 Aquatic Acute1; H400 Aquatic Chronic1; H410	>= 0,10 - < 0,30
Naphthalene	91-20-3 202-049-5 01-2119561346-37-xxxx	Acute Tox.4; H302 Carc.2; H351 Aquatic Acute1; H400 Aquatic Chronic1; H410	>= 0,10 - < 0,25

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.
Call a POISON CENTRE or doctor/physician if exposed or you feel unwell.


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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 : Move to fresh air.
IF INHALED: Call a POISON CENTER/ doctor if you feel unwell.
Keep patient warm and at rest.
If unconscious, place in recovery position and seek medical advice.
- 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 : Obtain medical attention.
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.

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.
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.

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
Carbon dioxide (CO₂)
Dry chemical


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Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : If product is heated above its flash point it will produce vapors sufficient to support combustion. Vapors are heavier than air and may travel along the ground and be ignited by heat, pilot lights, other flames and ignition sources at locations near the point of release.
Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : carbon dioxide and carbon monoxide
Hydrocarbons

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.

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

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

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel,


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acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

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 : Avoid formation of aerosol.
Provide sufficient air exchange and/or exhaust in work rooms.
Do not breathe vapours/dust.
Do not smoke.
Container hazardous when empty.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.
Dispose of rinse water in accordance with local and national regulations.
- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- 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 : 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.
- 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


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8.1 Control parameters
Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Naphthalene	91-20-3	TWA	10 ppm 50 mg/m ³	91/322/EEC

Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
NAPHTHALENE	91-20-3	1-hydroxypyrene: 4 µmol/mol creatinine (Urine)	After shift	GB EH40 BAT

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

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

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

Appearance : liquid

Colour : green


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Odour	:	characteristic
Odour Threshold	:	No data available
pH	:	Not applicable
Pour point	:	-51 °C
Boiling point/boiling range	:	No data available
Flash point	:	105 °C Method: Pensky-Martens closed cup
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	0,1 hPa (20 °C)
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	ca. 0,847 g/cm ³ (15 °C)
Solubility(ies)		
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	:	No data available
Viscosity, kinematic	:	18 mm ² /s (40 °C)
Oxidizing properties	:	No data available


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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

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Product will not undergo hazardous polymerization.

10.4 Conditions to avoid

Conditions to avoid : excessive heat

10.5 Incompatible materials

Materials to avoid : Oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products : No hazardous decomposition products are known.

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.

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


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Components:
HYDROCARBONS, C13-C16, n-ALKANES, ISOALKANES, CYCLICS, <0.03% AROMATICS:

Acute oral toxicity	: LD50 (Rat): > 5.000 mg/kg Method: OECD Test Guideline 401 Assessment: Not classified as acutely toxic by ingestion under GHS.
Acute inhalation toxicity	: LC50 (Rat): > 5,2 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403
Acute dermal toxicity	: LD50 (Rabbit): > 3.160 mg/kg Method: OECD Test Guideline 402 Assessment: Not classified as acutely toxic by dermal absorption under GHS.

Components:
GAS OILS (PETROLEUM), HYDRODESULFURIZED:

Acute oral toxicity	: LD50 (Rat): > 5.000 mg/kg
Acute inhalation toxicity	: LC50 (Rat): 4,6 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	: LD50 (Rabbit): > 2.000 mg/kg Assessment: Not classified as acutely toxic by dermal absorption under GHS.

Components:
TRICRESYL PHOSPHATE:

Acute oral toxicity	: LD50 (Rat, male and female): > 20.000 mg/kg
Acute inhalation toxicity	: LC50 (Rat, male and female): > 11,1 mg/l Exposure time: 1 h Test atmosphere: dust/mist Assessment: Not classified as acutely toxic by inhalation under GHS.
Acute dermal toxicity	: LD50 (Rabbit, male and female): 3.700 mg/kg

Components:
2,6-DI-TERT-BUTYLPHENOL:

Acute oral toxicity	: LD50 (Rat): > 5.000 mg/kg
Acute dermal toxicity	: Assessment: Not classified as acutely toxic by dermal absorption under GHS.


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Components:
PHENOL, DODECYL-, BRANCHED:

Acute oral toxicity : LD50 (Rat): 2.100 mg/kg

Acute dermal toxicity : LD50 (Rabbit): 15.000 mg/kg

Components:
NAPHTHALENE:
Acute oral toxicity : LD50 (Mouse, male): 533 mg/kg
Method: OECD Test Guideline 401Acute inhalation toxicity : LC50 (Rat): > 0,4 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Assessment: Not classified as acutely toxic by inhalation under GHS.Acute dermal toxicity : LD50 (Rabbit): > 2,0 g/kg

LD50 (Rat, male and female): > 2.500 mg/kg
Assessment: Not classified as acutely toxic by dermal absorption under GHS.Acute toxicity (other routes of administration) : LD50 (Mouse, female): 710 mg/kg
Application Route: oral (gavage)LD50 (Mouse): 150 mg/kg
Application Route: IntraperitonealLD50 (Mouse, male): 533 mg/kg
Application Route: oral (gavage)
Skin corrosion/irritation

Repeated exposure may cause skin dryness or cracking.

Product:

Result: Repeated exposure may cause skin dryness or cracking.

Components:
HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Result: Slight, transient irritation

HYDROCARBONS, C13-C16, n-ALKANES, ISOALKANES, CYCLICS, <0.03% AROMATICS:

Species: Rabbit

Method: OECD Test Guideline 404

Result: No skin irritation

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GAS OILS (PETROLEUM), HYDRODESULFURIZED:

Species: Rabbit

Result: Irritating to skin.

TRICRESYL PHOSPHATE:

Species: Rabbit

Exposure time: 4 h

Result: Slight, transient irritation

2,6-DI-TERT-BUTYLPHENOL:

Species: Rabbit

Method: OECD Test Guideline 404

Result: Irritating to skin.

PHENOL, DODECYL-, BRANCHED:

Species: Rabbit

Result: Corrosive after 1 to 4 hours of exposure

NAPHTHALENE:

Result: Slight, transient 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:**HYDROTREATED LIGHT PARAFFINIC DISTILLATE:**

Result: Slight, transient irritation

HYDROCARBONS, C13-C16, n-ALKANES, ISOALKANES, CYCLICS, <0.03% AROMATICS:

Species: Rabbit

Method: OECD Test Guideline 405

Result: Slight, transient irritation

GAS OILS (PETROLEUM), HYDRODESULFURIZED:

Species: Rabbit

Result: Slight, transient irritation

TRICRESYL PHOSPHATE:

Species: Rabbit

Result: No eye irritation

2,6-DI-TERT-BUTYLPHENOL:

Species: Rabbit

Method: OECD Test Guideline 405

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Result: Slight, transient irritation

PHENOL, DODECYL-, BRANCHED:

Species: Rabbit

Result: Corrosive

NAPHTHALENE:

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, C13-C16, n-ALKANES, ISOALKANES, CYCLICS, <0.03% AROMATICS:**

Test Type: Maximisation Test

Species: Guinea pig

Assessment: Did not cause sensitisation on laboratory animals.

Method: OECD Test Guideline 406

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

GAS OILS (PETROLEUM), HYDRODESULFURIZED:

Test Type: Buehler Test

Species: Guinea pig

Assessment: Does not cause skin sensitisation.

TRICRESYL PHOSPHATE:

Test Type: Local lymph node assay

Exposure routes: Dermal

Species: Mouse

Assessment: Does not cause skin sensitisation.

Method: OECD Test Guideline 429

GLP: yes

2,6-DI-TERT-BUTYLPHENOL:

Test Type: Maximisation Test

Species: Guinea pig

Assessment: Does not cause skin sensitisation.

Method: OECD Test Guideline 406

PHENOL, DODECYL-, BRANCHED:

Test Type: Buehler Test

Species: Guinea pig

Method: OECD Test Guideline 406

Germ cell mutagenicity

Not classified based on available information.

Components:


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HYDROCARBONS, C13-C16, n-ALKANES, ISOALKANES, CYCLICS, <0.03% AROMATICS:

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**

Genotoxicity in vivo : Test Type: **chromosome aberration assay**
 Test species: **Rat**
 Cell type: **Bone marrow**
 Method: **OECD Test Guideline 475**
 Result: **negative**
 Remarks: **Information given is based on data obtained from similar substances.**

TRICRESYL PHOSPHATE:

Genotoxicity in vitro : Test Type: **Chromosome aberration test in vitro**
 Test species: **Chinese hamster lung cells**
 Metabolic activation: **with and without metabolic activation**
 Method: **OECD Test Guideline 473**
 Result: **negative**
 GLP: **yes**

: Test Type: **Ames test**
 Test species: **Salmonella typhimurium**
 Metabolic activation: **with and without metabolic activation**
 Method: **OECD Test Guideline 471**
 Result: **negative**
 GLP: **no**

2,6-DI-TERT-BUTYLPHENOL:

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

PHENOL, DODECYL-, BRANCHED:

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

Carcinogenicity

Not classified based on available information.

Components:
HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Carcinogenicity - Assessment : **Classified based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L)**


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NAPHTHALENE:

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in inhalation studies with animals.

Reproductive toxicity

Not classified based on available information.

Components:
TRICRESYL PHOSPHATE:

Effects on fertility : Test Type: Fertility/early embryonic development
Species: Rat, male and female
Application Route: Oral

Test Type: Two-generation study
Species: Mouse, male and female
Application Route: Oral

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat, male and female
Application Route: Oral
Method: OPPTS 870.3700
Result: Teratogenic potential
GLP: yes

Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, based on animal experiments.

PHENOL, DODECYL-, BRANCHED:

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.

Product:

Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

May be fatal if swallowed and enters airways.

Components:
HYDROTREATED LIGHT PARAFFINIC DISTILLATE:


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May be fatal if swallowed and enters airways.

HYDROCARBONS, C13-C16, n-ALKANES, ISOALKANES, CYCLICS, <0.03% AROMATICS:

May be fatal if swallowed and enters airways.

GAS OILS (PETROLEUM), HYDRODESULFURIZED:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Further information
Product:

Remarks: Solvents may degrease the skin.

SECTION 12: Ecological information
12.1 Toxicity
Product:

Ecotoxicology Assessment

Long-term (chronic) aquatic hazard : Harmful to aquatic life with long lasting effects.

Components:

HYDROCARBONS, C13-C16, n-ALKANES, ISOALKANES, CYCLICS, <0.03% AROMATICS

Toxicity to fish : **LL50 (Fish): > 1.028 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 : **LL50 (Calanoid copepod (Acartia tonsa)): > 3.193 mg/l**

Exposure time: 48 h

Test Type: **static test**

Test substance: **WAF**

Method: **OECD Test Guideline 202**

Toxicity to algae : **EL50 (Skeletonema costatum (diatom)): > 10.000 mg/l**

End point: **Growth inhibition**

Exposure time: 72 h

Test Type: **static test**

Test substance: **WAF**

Method: **ISO 10253**

Gas oils (petroleum), hydrodesulfurized

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Toxicity to fish	: LL50 (Oncorhynchus mykiss (rainbow trout)) : 21 mg/l Exposure time: 96 h Test Type: semi-static test Test substance: WAF Method: OECD Test Guideline 203 Remarks: Information given is based on data obtained from similar substances.
Toxicity to daphnia and other aquatic invertebrates	: EL50 (Daphnia magna (Water flea)) : 68 mg/l Exposure time: 48 h Test Type: static test Test substance: WAF Method: Directive 67/548/EEC, Annex V, C.2. Remarks: Information given is based on data obtained from similar substances.
Toxicity to algae	: NOEC (Pseudokirchneriella subcapitata (green algae)) : 3 mg/l End point: Growth inhibition Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 Remarks: Information given is based on data obtained from similar substances. EL50 (Pseudokirchneriella subcapitata (green algae)) : 1,7 mg/l End point: Growth inhibition Exposure time: 72 h Remarks: QSAR
Toxicity to fish (Chronic toxicity)	: NOEL : 0,069 mg/l Exposure time: 14 d Species: Oncorhynchus mykiss (rainbow trout) Method: QSAR
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC : 0,163 mg/l Exposure time: 48 d Species: Daphnia (water flea) Remarks: QSAR

Ecotoxicology Assessment

Long-term (chronic) aquatic hazard : **Toxic to aquatic life with long lasting effects.**

Tris(methylphenyl) phosphate

Toxicity to fish : **LC50 (Rainbow darter (Etheostoma caeruleum))**: 0,6 mg/l
Exposure time: 96 h
Test Type: static test

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Toxicity to daphnia and other aquatic invertebrates	: (Daphnia magna (Water flea)): 0,146 mg/l Test Type: Immobilization Method: OECD Test Guideline 202 GLP: yes
Toxicity to algae	: ErC50 (Pseudokirchneriella subcapitata (microalgae)): > 2,5 mg/l Exposure time: 72 h Test Type: Growth inhibition Method: OECD Test Guideline 201 GLP: yes
M-Factor (Short-term (acute) aquatic hazard)	: 1
Toxicity to bacteria	: EC50 (activated sludge): > 1.000 mg/l Exposure time: 3 h Test Type: Respiration inhibition Method: OECD Test Guideline 209 GLP: yes
Toxicity to fish (Chronic toxicity)	: 0,9 mg/l Exposure time: 28 d Species: Oncorhynchus mykiss (rainbow trout)

Ecotoxicology Assessment

Long-term (chronic) aquatic hazard	: Very toxic to aquatic life with long lasting effects.
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2,6-di-tert-butylphenol

Toxicity to fish	: LC50 (Danio rerio (zebra fish)): 13 mg/l Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 203 LC50 (Oncorhynchus mykiss (rainbow trout)): > 0,1 mg/l Exposure time: 96 h Test Type: semi-static test Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 0,45 mg/l Exposure time: 48 h Test Type: flow-through test
Toxicity to algae	: EC50 (Pseudokirchneriella subcapitata (green algae)): 3,6 mg/l Exposure time: 72 h Test Type: static test



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M-Factor (Short-term (acute) aquatic hazard) : 1

Toxicity to fish (Chronic toxicity) : NOEC: 0,30 mg/l
Exposure time: 14 d
Species: *Pimephales promelas* (fathead minnow)
Test Type: flow-through test

M-Factor (Long-term (chronic) aquatic hazard) : 1

Phenol, dodecyl-, branched

Toxicity to fish : LC50 (*Pimephales promelas* (fathead minnow)): 3,2 mg/l
Exposure time: 96 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 0,037 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (*Desmodesmus subspicatus* (green algae)): 0,36 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

NOEC (*Desmodesmus subspicatus* (green algae)): 0,07 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

M-Factor (Short-term (acute) aquatic hazard) : 10

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,004 mg/l
Exposure time: 21 d
Species: *Daphnia magna* (Water flea)
Test Type: semi-static test
Method: OECD Test Guideline 211

M-Factor (Long-term (chronic) aquatic hazard) : 10

Naphthalene

Toxicity to fish : LC50 (*Oncorhynchus mykiss* (rainbow trout)): 0,91 - 2,82 mg/l

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	Exposure time: 96 h
	Test Type: static test
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 1,09 - 3,4 mg/l
	Exposure time: 48 h
	Test Type: static test
M-Factor (Short-term (acute) aquatic hazard)	: 1
M-Factor (Long-term (chronic) aquatic hazard)	: 1

12.2 Persistence and degradability**Components:**

Gas oils (petroleum), hydrodesulfurized

Biodegradability : Result: **Readily biodegradable.**

Tris(methylphenyl) phosphate

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

2,6-di-tert-butylphenol

Biodegradability : Result: **Not readily biodegradable.**Biodegradation: **12 - 24 %**Exposure time: **28 d**Method: **OECD Test Guideline 302C**

Phenol, dodecyl-, branched

Biodegradability : Result: **Not readily biodegradable.**Biodegradation: **6 %**Exposure time: **28 d**Method: **OECD Test Guideline 301B**

Naphthalene

Biodegradability : Result: **Not readily biodegradable.****12.3 Bioaccumulative potential****Components:**

Gas oils (petroleum), hydrodesulfurized

Partition coefficient: n-octanol/water : Remarks: **No data available**



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Tris(methylphenyl) phosphate

Bioaccumulation : Species: **Pimephales promelas (fathead minnow)**
 Exposure time: **32 d**
 Concentration: **0,0316 mg/l**
 Bioconcentration factor (BCF): **165**
 Method: **Flow through**

Partition coefficient: n-octanol/water : log Pow: **5,93**

2,6-di-tert-butylphenol

Bioaccumulation : Species: **Green algae (Chlorella fusca vacuolata)**
 Exposure time: **24 h**
 Concentration: **0,05 mg/l**
 Bioconcentration factor (BCF): **800**
 Method: **Static**

Species: **Carp (Leuciscus idus melanotus)**
 Exposure time: **3 d**
 Concentration: **0,037 mg/l**
 Bioconcentration factor (BCF): **660**
 Method: **Renewal**

Partition coefficient: n-octanol/water : log Pow: **4,92**

Phenol, dodecyl-, branched

Partition coefficient: n-octanol/water : log Pow: **7,1**

Naphthalene

Partition coefficient: n-octanol/water : log Pow: **3,30**

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:

Additional ecological : An environmental hazard cannot be excluded in the event of

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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.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

SECTION 14: Transport information

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

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.

SECTION 15: Regulatory information

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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 : Naphthalene

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) : Phenol, dodecyl-, branched

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : 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.
Not applicable

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

DSL : This product contains one or several components that are not on the Canadian DSL and have annual quantity limits.

AICS Not in compliance with the inventory

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

TCSI Not in compliance with the inventory

TSCA Not On TSCA Inventory


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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

H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H332	Harmful if inhaled.
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.
H361f	Suspected of damaging fertility.
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


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BEI : Biological Exposure Index
 CAS : Chemical Abstracts Service (Division of the American Chemical Society).
 CMR : Carcinogenic, Mutagenic or Toxic for Reproduction
 FG : Food grade
 GHS : Globally Harmonized System of Classification and Labeling of Chemicals.
 H-statement : Hazard Statement
 IATA : International Air Transport Association.
 IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
 ICAO : International Civil Aviation Organization
 ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"
 IMDG : International Maritime Code for Dangerous Goods
 ISO : International Organization for Standardization
 logPow : octanol-water partition coefficient
 LCxx : Lethal Concentration, for xx percent of test population
 LDxx : Lethal Dose, for xx percent of test population.
 ICxx : Inhibitory Concentration for xx of a substance
 Ecxx : Effective Concentration of xx
 N.O.S.: Not Otherwise Specified
 OECD : Organization for Economic Co-operation and Development
 OEL : Occupational Exposure Limit
 P-Statement : Precautionary Statement
 PBT : Persistent , Bioaccumulative and Toxic
 PPE : Personal Protective Equipment
 STEL : Short-term exposure limit
 STOT : Specific Target Organ Toxicity
 TLV : Threshold Limit Value
 TWA : Time-weighted average
 vPvB : Very Persistent and Very Bioaccumulative
 WEL : Workplace Exposure Level

ABM : Water Hazard Class for the Netherlands
 ADR : Agreement concerning the International Carriage of Dangerous Goods by Road.
 ADN: 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



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