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™ ZINC SPRAY

Product code : 887062

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

Recommended use : Coatings

1.3 Details of the supplier of the safety data sheet	1.4 Emergency telephone number
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	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	H229: Pressurised container: May burst if heated.
	H222: Extremely flammable aerosol.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Long-term (chronic) aquatic hazard, Category 1	H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

UFI : REGR-WKMV-ET4H-ET69

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Danger

Hazard statements :	H410	Very toxic to aquatic life with long lasting effects.
	H319	Causes serious eye irritation.
	H229	Pressurised container: May burst if heated.
	H222	Extremely flammable aerosol.
Precautionary statements :	P102	Keep out of reach of children.
	P101	If medical advice is needed, have product container or label at hand.
	Prevention:	
	P251	Do not pierce or burn, even after use.
	P211	Do not spray on an open flame or other ignition source.
	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	P260	Do not breathe spray.
	Storage:	
	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.

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. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration (%)
zinc	7440-66-6 231-175-3 01-2119467174-37-xxxx	Aquatic Acute1; H400 Aquatic Chronic1; H410	>= 40,00 - < 50,00
Hydrocarbons, C9, aromatics	64742-95-6 918-668-5	Flam. Liq.3; H226 STOT SE3; H336 STOT SE3; H335 Asp. Tox.1; H304 Aquatic Chronic2; H411	>= 5,00 - < 10,00
acetone	67-64-1 200-662-2 01-2119471330-49-xxxx	Flam. Liq.2; H225 Eye Irrit.2; H319 STOT SE3; H336	>= 5,00 - < 10,00
Xylene	1330-20-7 215-535-7 01-2119488216-32-xxxx	Flam. Liq.3; H226 Acute Tox.4; H332 Acute Tox.4; H312 Skin Irrit.2; H315 Eye Irrit.2; H319 STOT SE3; H335 STOT RE2; H373 Asp. Tox.1; H304	>= 2,50 - < 5,00
Zinc oxide	1314-13-2 215-222-5 01-2119463881-32-xxxx	Aquatic Acute1; H400 Aquatic Chronic1; H410	>= 1,00 - < 2,50
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	>= 40,00 - < 50,00

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Do not leave the victim unattended.
Show this safety data sheet to the doctor in attendance.
Call a POISON CENTRE or doctor/physician if exposed or you feel unwell.
Move out of dangerous area.

If inhaled	:	Consult a physician after significant exposure. If unconscious, place in recovery position and seek medical advice. Move to fresh air.
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	:	Protect unharmed eye. Remove contact lenses. Immediately flush eye(s) with plenty of water.
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	:	No symptoms known or expected.
Risks	:	Causes serious eye irritation.

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 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	:	No hazardous combustion products are known

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.

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. 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	:	Dispose of rinse water in accordance with local and national regulations. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Avoid contact with skin and eyes. Avoid exposure - obtain special instructions before use. Take precautionary measures against static discharges. Container hazardous when empty. Do not smoke. Do not breathe vapours/dust. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure.
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.
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.
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/m3	2000/39/EC
		TWA	400 ppm 766 mg/m3	GB EH40
		STEL	500 ppm 958 mg/m3	GB EH40
acetone	67-64-1	TWA	500 ppm 1.210 mg/m3	2000/39/EC
		TWA	500 ppm 1.210 mg/m3	GB EH40
		STEL	1.500 ppm 3.620 mg/m3	GB EH40
Xylene	1330-20-7	TWA	50 ppm 221 mg/m3	2000/39/EC
		STEL	100 ppm 442 mg/m3	2000/39/EC
		TWA	50 ppm 220 mg/m3	GB EH40
		STEL	100 ppm 441 mg/m3	GB EH40

Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
XYLENE	1330-20-7	methyl hippuric acid: 650 Millimoles per mole Creatinine (Urine)	After shift	GB EH40 BAT

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	:	Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.
Hand protection		
Remarks	:	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 Flame-resistant clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Respiratory protection	:	Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.
Filter type	:	Particulates type (P) In the case of dust or aerosol formation use respirator with an approved filter. 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	:	aerosol
Colour	:	grey
Odour	:	solvent-like
Odour Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	Not applicable
Flash point	:	Not applicable
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit / Upper flammability limit	:	26,2 %(V)
Lower explosion limit / Lower flammability limit	:	3,3 %(V)
Vapour pressure	:	4 hPa (20 °C)
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	1,1 g/cm3 (20 °C)
Solubility(ies)		
Water solubility	:	immiscible
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available

Ignition temperature	:	240 °C
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Oxidizing properties	:	No data available

9.2 Other information

Self-ignition	:	not auto-flammable

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 : None known.

Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid : Acids
alkalis
aluminium hydride
Amines
Ammonia
Carbon monoxide
chlorinated rubber
halogens
lithium
lithium aluminum hydride
magnesium

peroxides
Reducing agents
Strong oxidizing agents
water

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 : > 20 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate : > 2.000 mg/kg
Method: Calculation method

Components:

Hydrocarbons, C9, aromatics:

Acute oral toxicity	:	LD50 (Rat, female): 3.492 mg/kg LD50 (Rat, male): 6.984 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): > 6.193 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	:	LD50 (Rabbit): > 3.160 mg/kg

Components:

ACETONE:

Acute oral toxicity	:	LD50 (Rat, female): 5.800 mg/kg
Acute inhalation toxicity	:	LC50 (Rat, female): 76 mg/l Exposure time: 4 h Test atmosphere: vapour
Acute dermal toxicity	:	LD50 (Rabbit): > 7.426 mg/kg

Components:

XYLENE:

Acute oral toxicity	:	LD50 (Rat): 3.523 - 8.600 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 29 mg/l, 6700 ppm Exposure time: 4 h Test atmosphere: vapour
Acute dermal toxicity	:	LD50 (Rabbit): 1.700 mg/kg

Components:

ZINC OXIDE:

Acute oral toxicity	:	LD50 (Rat): > 5 g/kg
Acute inhalation toxicity	:	LC50 (Rat): > 5,7 mg/l Exposure time: 4 h Test atmosphere: dust/mist Assessment: No adverse effect has been observed in acute inhalation toxicity tests.
Acute dermal toxicity	:	LD50 (Rat): > 2.000 mg/kg Method: OECD Test Guideline 402 Assessment: No adverse effect has been observed in acute dermal toxicity tests.

Components:

DIMETHYL ETHER:

Acute inhalation toxicity	:	LC50 (Mouse): 494,36 mg/l Exposure time: 15 min Test atmosphere: gas LC50 (Mouse): 385,94 mg/l Exposure time: 30 min Test atmosphere: gas LC50 (Rat): 164000 ppm Exposure time: 4 h

Test atmosphere: gas

Skin corrosion/irritation

Not classified based on available information.

Product:

Remarks: May cause skin irritation in susceptible persons.

Components:

Hydrocarbons, C9, aromatics:

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

ACETONE:

Result: Slight, transient irritation

Result: Repeated exposure may cause skin dryness or cracking.

XYLENE:

Result: Irritating to skin.

ZINC OXIDE:

Result: Slight, transient irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Remarks: Causes serious eye irritation., Vapours may cause irritation to the eyes, respiratory system and the skin.

Components:

Hydrocarbons, C9, aromatics:

Species: Rabbit
Method: OECD Test Guideline 405
Result: Slight, transient irritation

ACETONE:

Result: Irritating to eyes.

XYLENE:

Result: Irritating to eyes.

ZINC OXIDE:

Method: OECD Test Guideline 405
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, C9, aromatics:

Test Type: Maximisation Test
Species: Guinea pig
Assessment: Did not cause sensitisation on laboratory animals.
Method: OECD Test Guideline 406

ZINC OXIDE:

Test Type: Maximisation Test
Species: Guinea pig
Method: OECD Test Guideline 406

DIMETHYL ETHER:

Remarks: Not applicable

Germ cell mutagenicity

Not classified based on available information.

Components:

Hydrocarbons, C9, aromatics:

Genotoxicity in vitro	:	Test Type: Chromosome aberration test in vitro Result: negative
Germ cell mutagenicity-Assessment	:	Classified based on benzene content < 0.1% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note P)

ZINC OXIDE:

Genotoxicity in vitro	:	Remarks: In vitro tests did not show mutagenic effects
Genotoxicity in vivo	:	Test Type: Micronucleus test Test species: Mouse 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

	:	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

Carcinogenicity

Not classified based on available information.

Components:

Hydrocarbons, C9, aromatics:

Carcinogenicity - Assessment	:	Classified based on benzene content < 0.1% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note P)

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:

ZINC OXIDE:

Effects on foetal development	:	Species: Rat Application Route: inhalation (dust/mist/fume) Symptoms: No specific developmental abnormalities Method: OECD Test Guideline 414

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

Not classified based on available information.

Components:

Hydrocarbons, C9, aromatics:

Assessment: May cause respiratory irritation., May cause drowsiness or dizziness.

ACETONE:

Exposure routes: Inhalation
Target Organs: Nervous system
Assessment: May cause drowsiness or dizziness.

XYLENE:

Assessment: May cause respiratory irritation.

STOT - repeated exposure

Not classified based on available information.

Components:

XYLENE:

Target Organs: Central nervous system, Liver, Kidney
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, aromatics:

May be fatal if swallowed and enters airways.

ACETONE:

May be harmful if swallowed and enters airways.

XYLENE:

May be fatal if swallowed and enters airways.

Further information

Product:

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

SECTION 12: Ecological information

12.1 Toxicity

Components:

zinc

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

Ecotoxicology Assessment

Short-term (acute) aquatic hazard	:	Very toxic to aquatic life.
Long-term (chronic) aquatic hazard	:	Very toxic to aquatic life with long lasting effects.

Hydrocarbons, C9, aromatics

Toxicity to fish	:	LL50 (Oncorhynchus mykiss (rainbow trout)): 9,2 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 (Daphnia magna (Water flea)): 3,2 mg/l Exposure time: 48 h Test Type: static test Test substance: WAF Method: OECD Test Guideline 202
Toxicity to algae	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 2,9 mg/l End point: Growth inhibition Exposure time: 72 h Test Type: static test Test substance: WAF

		Method: OECD Test Guideline 201 NOEL (Pseudokirchneriella subcapitata (green algae)): 1 mg/l End point: Growth inhibition Exposure time: 72 h Test Type: static test Test substance: WAF Method: OECD Test Guideline 201

acetone

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 4.740 - 6.330 mg/l Exposure time: 96 h Test Type: static test LC50 (Pimephales promelas (fathead minnow)): 8.733 - 9.482 mg/l Exposure time: 96 h Test Type: flow-through test
Toxicity to algae	:	NOEC (Microcystis aeruginosa (blue-green algae)): 530 mg/l Exposure time: 8 d Test Type: static test
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 2.112 mg/l Exposure time: 28 d Species: Daphnia magna (Water flea) Test Type: flow-through test

Xylene

Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Daphnia magna (Water flea)): > 100 - < 1.000 mg/l Exposure time: 24 h Test Type: static test

Zinc oxide

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): 1,793 mg/l Exposure time: 96 h Test Type: static test
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 2,6 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202
Toxicity to algae	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 0,136 mg/l Exposure time: 72 h Test Type: static test

		Method: OECD Test Guideline 201
M-Factor (Short-term (acute) aquatic hazard)	:	1
Toxicity to fish (Chronic toxicity)	:	NOEC: 0,026 mg/l Exposure time: 30 d End point: Growth rate Species: Jordanella floridae (flagfish) Test Type: flow-through test Remarks: Information given is based on data obtained from similar substances.
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 0,297 mg/l Exposure time: 10 d End point: Reproduction Test Species: Aquatic invertebrates Remarks: Information given is based on data obtained from similar substances.
M-Factor (Long-term (chronic) aquatic hazard)	:	1

Ecotoxicology Assessment

Short-term (acute) aquatic hazard	:	Acute aquatic toxicity Category 1
Long-term (chronic) aquatic hazard	:	Chronic aquatic toxicity Category 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
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

12.2 Persistence and degradability

Components:

zinc

Biodegradability	:	Result: The methods for determining biodegradability are not applicable to inorganic substances.

acetone

Biodegradability	:	Result: Readily biodegradable. Biodegradation: 90,9 % Exposure time: 28 d Method: OECD Test Guideline 301B

Xylene

Biodegradability	:	Result: Readily biodegradable.
Physico-chemical removability	:	Remarks: The product evaporates readily.

Zinc oxide

Biodegradability	:	Result: The methods for determining biodegradability are not applicable to inorganic substances.

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.

12.3 Bioaccumulative potential

Components:

acetone

Partition coefficient: n-octanol/water	:	log Pow: -0,24

Xylene

Partition coefficient: n-octanol/water	:	log Pow: 3,16

Zinc oxide

Bioaccumulation	:	Remarks: Bioaccumulation is unlikely.

dimethyl ether

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

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..

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., Very 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.
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

14.1 UN number

ADN	:	UN 1950
ADR	:	UN 1950
RID	:	UN 1950
IMDG	:	UN 1950
IATA	:	UN 1950

14.2 UN proper shipping name

ADN	:	AEROSOLS
ADR	:	AEROSOLS
RID	:	AEROSOLS
IMDG	:	AEROSOLS (,)
IATA	:	AEROSOLS

14.3 Transport hazard class(es)

ADN	:	2
ADR	:	2
RID	:	2
IMDG	:	2.1
IATA	:	2.1

14.4 Packing group

ADN

Packing group	:	Not assigned by regulation
Classification Code	:	5F
Labels	:	2.1

ADR

Packing group	:	Not assigned by regulation
Classification Code	:	5F
Labels	:	2.1
Tunnel restriction code	:	(D)

RID

Packing group	:	Not assigned by regulation
Classification Code	:	5F
Hazard Identification Number	:	23

Labels	:	2.1

IMDG

Packing group	:	Not assigned by regulation
Labels	:	2.1
EmS Code	:	F-D, S-U

IATA (Cargo)

Packing instruction (cargo aircraft)	:	203
Packing instruction (LQ)	:	Y203
Packing group	:	Not assigned by regulation
Labels	:	Flammable Gas

IATA (Passenger)

Packing instruction (passenger aircraft)	:	203
Packing instruction (LQ)	:	Y203
Packing group	:	Not assigned by regulation
Labels	:	Flammable Gas

14.5 Environmental hazards

ADN

Environmentally hazardous	:	yes

ADR

Environmentally hazardous	:	yes

RID

Environmentally hazardous	:	yes

IMDG

Marine pollutant	:	yes

IATA (Passenger)

Environmentally hazardous	:	yes

IATA (Cargo)

Environmentally hazardous	:	yes

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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

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 - 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
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)	:	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
E1	ENVIRONMENTAL HAZARDS	100 t	200 t

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	:	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

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
Internal information : 000000274826

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.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.

H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.
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
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