



DRIVING SURFACE PERFECTION

RAPTOR ACID ETCH PRIMER

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
SDS Ref. (EU): RAAEPAL
Date of issue: 3/26/2015 Revision date: 7/16/2018 Supersedes: 11/3/2017 Version: 4.0

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

1.1. Product identifier

Product form : Mixture
Trade name : RAPTOR ACID ETCH PRIMER
Product code : RPTEP/AL
Vaporizer : Aerosol
Product group : Aerosol

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial
For professional use only
Function or use category : Aerosol

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

U-POL LIMITED
Denington Road, Wellingborough
Northants. NN8 2QH - UK
T +44 (0) 1933 230310
technical.department@u-pol.com - www.u-pol.com

1.4. Emergency telephone number

Emergency number : CHEMTREC - +44 (0) 870 8200418 (24 hrs)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Aerosol, Category 1 H222;H229
Skin corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category 1 H318
Hazardous to the aquatic environment — Chronic Hazard, Category 3 H412
Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

Pressurised container: May burst if heated. Extremely flammable aerosol. Causes skin irritation. Causes serious eye damage. Harmful to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

GHS05

Signal word (CLP) :

Danger

Hazardous ingredients :

1-butanol

Hazard statements (CLP) :

H222 - Extremely flammable aerosol.
H229 - Pressurised container: May burst if heated.
H315 - Causes skin irritation.
H318 - Causes serious eye damage.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (CLP) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P251 - Do not pierce or burn, even after use.
P273 - Avoid release to the environment.
P280 - Wear eye protection, protective clothing, protective gloves.
P302+P352 - IF ON SKIN: Wash with plenty of water.
P305 - IF IN EYES: Rinse first with plenty of water and if necessary take medical advice.
P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C, 122 °F.

2.3. Other hazards

No additional information available

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SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
dimethyl ether substance with a Community workplace exposure limit (Note U)	(CAS-No.) 115-10-6 (EC-No.) 204-065-8 (EC Index-No.) 603-019-00-8 (REACH-no) 01-2119472128-37	25 - 50	Flam. Gas 1, H220 Press. Gas
xylene (Note C)	(CAS-No.) 1330-20-7 (EC-No.) 215-535-7 (EC Index-No.) 601-022-00-9 (REACH-no) 01-2119488216-32	10 - 20	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315
1-butanol	(CAS-No.) 71-36-3 (EC-No.) 200-751-6 (EC Index-No.) 603-004-00-6 (REACH-no) 01-2119484630-28	10 - 20	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Skin Irrit. 2, H315 STOT SE 3, H335 STOT SE 3, H336
1-methoxy-2-propanol; monopropylene glycol methyl ether substance with a Community workplace exposure limit	(CAS-No.) 107-98-2 (EC-No.) 203-539-1 (EC Index-No.) 603-064-00-3 (REACH-no) 01-2119457435-35	3 - 10	Flam. Liq. 3, H226 STOT SE 3, H336
titanium(IV) oxide substance with a Community workplace exposure limit	(CAS-No.) 13463-67-7 (EC-No.) 236-675-5 (REACH-no) 01-2119489379-17	3 - 5	Not classified
ethylbenzene	(CAS-No.) 100-41-4 (EC-No.) 202-849-4 (EC Index-No.) 601-023-00-4 (REACH-no) 01-2119489370-35	3 - 5	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 STOT RE 2, H373 Asp. Tox. 1, H304
trizinc bis(orthophosphate)	(CAS-No.) 7779-90-0 (EC-No.) 231-944-3 (EC Index-No.) 030-011-00-6 (REACH-no) 01-2119485044-40	1 - 2.5	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2-methylpropan-1-ol; iso-butanol	(CAS-No.) 78-83-1 (EC-No.) 201-148-0 (EC Index-No.) 603-108-00-1 (REACH-no) 01-2119484609-23	1 - 2.5	Flam. Liq. 3, H226 Eye Dam. 1, H318 Skin Irrit. 2, H315 STOT SE 3, H335 STOT SE 3, H336

Note C : Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

Note U (Table 3): When put on the market gases have to be classified as 'Gases under pressure', in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case.

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Serious damage to eyes.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Extremely flammable aerosol.
Explosion hazard : Pressurised container: May burst if heated.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Safety glasses. Protective clothing. Gloves.
Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage. Contain released product, pump into suitable containers.
Methods for cleaning up : Mechanically recover the product.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Avoid contact with skin and eyes. Wear personal protective equipment.

Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. Store in a well-ventilated place. Keep cool.

Storage temperature : < 25 °C

Storage area : Store in a well-ventilated place.

Special rules on packaging : Keep only in original container.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

dimethyl ether (115-10-6)		
EU	Local name	Dimethylether
EU	IOELV TWA (mg/m ³)	1920 mg/m ³
EU	IOELV TWA (ppm)	1000 ppm
EU	Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
United Kingdom	Local name	Dimethyl ether
United Kingdom	WEL TWA (mg/m ³)	766 mg/m ³
United Kingdom	WEL TWA (ppm)	400 ppm
United Kingdom	WEL STEL (mg/m ³)	958 mg/m ³
United Kingdom	WEL STEL (ppm)	500 ppm

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dimethyl ether (115-10-6)

United Kingdom	Regulatory reference	EH40. HSE
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titanium(IV) oxide (13463-67-7)

EU	Local name	Titanium dioxide
EU	Notes	(Ongoing)
EU	Regulatory reference	SCOEL Recommendations
United Kingdom	Local name	Titanium dioxide
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³ 4 mg/m ³
United Kingdom	Regulatory reference	EH40. HSE

ethylbenzene (100-41-4)

EU	Local name	Ethylbenzene
EU	IOELV TWA (mg/m ³)	442 mg/m ³
EU	IOELV TWA (ppm)	100 ppm
EU	IOELV STEL (mg/m ³)	884 mg/m ³
EU	IOELV STEL (ppm)	200 ppm
EU	Notes	Skin
EU	Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
United Kingdom	Local name	Ethylbenzene
United Kingdom	WEL TWA (mg/m ³)	441 mg/m ³
United Kingdom	WEL TWA (ppm)	100 ppm
United Kingdom	WEL STEL (mg/m ³)	552 mg/m ³
United Kingdom	WEL STEL (ppm)	125 ppm
United Kingdom	Remark (WEL)	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
United Kingdom	Regulatory reference	EH40. HSE

xylene (1330-20-7)

EU	Local name	Xylene, mixed isomers, pure
EU	IOELV TWA (mg/m ³)	221 mg/m ³
EU	IOELV TWA (ppm)	50 ppm
EU	IOELV STEL (mg/m ³)	442 mg/m ³
EU	IOELV STEL (ppm)	100 ppm
EU	Notes	Skin
EU	Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
United Kingdom	Local name	Xylene
United Kingdom	WEL TWA (mg/m ³)	220 mg/m ³
United Kingdom	WEL TWA (ppm)	50 ppm
United Kingdom	WEL STEL (mg/m ³)	441 mg/m ³
United Kingdom	WEL STEL (ppm)	100 ppm
United Kingdom	Remark (WEL)	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity), BMGV (Biological monitoring guidance values are listed in Table 2)
United Kingdom	Regulatory reference	EH40. HSE

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1-butanol (71-36-3)		
EU	Local name	n-Butyl alcohol
EU	Notes	(Ongoing)
EU	Regulatory reference	SCOEL Recommendations
United Kingdom	Local name	Butan-1-ol
United Kingdom	WEL STEL (mg/m ³)	154 mg/m ³
United Kingdom	WEL STEL (ppm)	50 ppm
United Kingdom	Remark (WEL)	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
United Kingdom	Regulatory reference	EH40. HSE

2-methylpropan-1-ol; iso-butanol (78-83-1)		
United Kingdom	Local name	2-Methylpropan-1-ol
United Kingdom	WEL TWA (mg/m ³)	154 mg/m ³
United Kingdom	WEL TWA (ppm)	50 ppm
United Kingdom	WEL STEL (mg/m ³)	231 mg/m ³
United Kingdom	WEL STEL (ppm)	75 ppm
United Kingdom	Regulatory reference	EH40. HSE

1-methoxy-2-propanol; monopropylene glycol methyl ether (107-98-2)		
EU	Local name	1-Methoxypropanol-2
EU	IOELV TWA (mg/m ³)	375 mg/m ³
EU	IOELV TWA (ppm)	100 ppm
EU	IOELV STEL (mg/m ³)	568 mg/m ³
EU	IOELV STEL (ppm)	150 ppm
EU	Notes	Skin
EU	Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
United Kingdom	Local name	1-Methoxypropan-2-ol
United Kingdom	WEL TWA (mg/m ³)	375 mg/m ³
United Kingdom	WEL TWA (ppm)	100 ppm
United Kingdom	WEL STEL (mg/m ³)	560 mg/m ³
United Kingdom	WEL STEL (ppm)	150 ppm
United Kingdom	Remark (WEL)	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
United Kingdom	Regulatory reference	EH40. HSE

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Materials for protective clothing:

Impermeable clothing

Hand protection:

Protective gloves

Eye protection:

Safety glasses

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Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Aerosol.
Colour	: Light grey.
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Extremely flammable aerosol.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 0.802 g/cm ³
Solubility	: insoluble in water. soluble in most organic solvents.
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Pressurised container: May burst if heated.
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

VOC content	: 692 g/l
Gas group	: Press. Gas (Liq.)

SECTION 10: Stability and reactivity

10.1. Reactivity

Extremely flammable aerosol. Pressurised container: May burst if heated.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

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dimethyl ether (115-10-6)

LC50 inhalation rat (mg/l)	309 mg/l (Other, 4 h, Rat, Male, Experimental value, Inhalation (gases))
LC50 inhalation rat (ppm)	164000 ppm (Other, 4 h, Rat, Male, Experimental value, Inhalation (gases))

trizinc bis(orthophosphate) (7779-90-0)

LD50 oral rat	> 5000 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Experimental value, Oral)
LC50 inhalation rat (mg/l)	> 5410 mg/m ³ air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male/female, Read-across, Inhalation (dust))

titanium(IV) oxide (13463-67-7)

LD50 oral rat	> 5000 mg/kg bodyweight (OECD 425: Acute Oral Toxicity: Up-and-Down Procedure, Rat, Female, Experimental value, Oral, 14 day(s))
LC50 inhalation rat (mg/l)	> 6.82 mg/l (Other, 4 h, Rat, Male, Experimental value, Inhalation (dust), 14 day(s))

ethylbenzene (100-41-4)

LD50 oral rat	3500 mg/kg (Rat, Male/female, Experimental value, Oral)
LD50 dermal rabbit	15432 mg/kg bodyweight (24 h, Rabbit, Male, Experimental value, Dermal)
LC50 inhalation rat (mg/l)	17.8 mg/l (4 h, Rat, Male, Experimental value, Inhalation (vapours))

xylene (1330-20-7)

LD50 oral rat	3523 mg/kg bodyweight (Equivalent or similar to EU Method B.1: Acute Toxicity (Oral), Rat, Male, Experimental value, Oral, 14 day(s))
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1-butanol (71-36-3)

LD50 oral rat	2292 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Female, Experimental value, Oral)
LD50 dermal rabbit	3430 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male, Experimental value, Dermal)

2-methylpropan-1-ol; iso-butanol (78-83-1)

LD50 oral rat	> 2830 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male, Experimental value)
LD50 dermal rabbit	> 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rabbit, Male, Experimental value)
LC50 inhalation rat (mg/l)	24.6 mg/l air (Other, 4 h, Rat, Male/female, Experimental value, Inhalation (vapours))

1-methoxy-2-propanol; monopropylene glycol methyl ether (107-98-2)

LD50 oral rat	4016 mg/kg bodyweight (EU Method B.1 tris: Acute oral toxic – Acute toxic class method, Rat, Male/female, Experimental value, Oral)
LD50 dermal rat	> 2000 mg/kg bodyweight (Other, 24 h, Rat, Male/female, Experimental value, Dermal)

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

titanium(IV) oxide (13463-67-7)

IARC group	2B - Possibly carcinogenic to humans
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ethylbenzene (100-41-4)

IARC group	2B - Possibly carcinogenic to humans
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xylene (1330-20-7)

IARC group	3 - Not classifiable
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Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

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Vaporizer	Aerosol
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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Harmful to aquatic life with long lasting effects.
Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Harmful to aquatic life with long lasting effects.

dimethyl ether (115-10-6)

LC50 fish 1	> 4100 mg/l (Other, 96 h, Poecilia reticulata, Semi-static system, Fresh water, Experimental value)
EC50 Daphnia 1	> 4400 mg/l (Other, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
EC50 96h algae (1)	154.9 mg/l (ECOSAR v1.00, Algae, QSAR)

trizinc bis(orthophosphate) (7779-90-0)

LC50 fish 1	0.169 mg/l (ASTM E729-88, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Read-across, Nominal concentration)
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titanium(IV) oxide (13463-67-7)

LC50 fish 1	> 100 mg/l (Equivalent or similar to OECD 203, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, Nominal concentration)
ErC50 (algae)	61 mg/l (EPA 600/9-78-018, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)

ethylbenzene (100-41-4)

LC50 fish 1	4.2 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Salmo gairdneri, Semi-static system, Fresh water, Experimental value)
EC50 Daphnia 1	1.8 - 2.4 mg/l (US EPA, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
EC50 72h algae (1)	5.4 mg/l (US EPA, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Cell numbers)

xylene (1330-20-7)

LC50 fish 1	2.6 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Static renewal, Fresh water, Read-across, Lethal)
ErC50 (algae)	4.36 mg/l (OECD 201: Alga, Growth Inhibition Test, 73 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)

1-butanol (71-36-3)

LC50 fish 1	1376 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Pimephales promelas, Static system, Fresh water, Experimental value, GLP)
EC50 Daphnia 1	1328 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)
EC50 96h algae (1)	225 mg/l (OECD 201: Alga, Growth Inhibition Test, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)

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2-methylpropan-1-ol; iso-butanol (78-83-1)	
LC50 fish 1	1430 mg/l (Other, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)
EC50 Daphnia 1	1100 mg/l (ASTM, 48 h, Daphnia pulex, Static system, Fresh water, Experimental value, Nominal concentration)
ErC50 (algae)	1799 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)

1-methoxy-2-propanol; monopropylene glycol methyl ether (107-98-2)	
LC50 fish 1	>= 1000 mg/l (Equivalent or similar to OECD 203, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value, Nominal concentration)
ErC50 (algae)	> 1000 mg/l (Other, 168 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)

12.2. Persistence and degradability

dimethyl ether (115-10-6)	
Persistence and degradability	Non degradable in the soil. Not readily biodegradable in water.

trizinc bis(orthophosphate) (7779-90-0)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

titanium(IV) oxide (13463-67-7)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable (inorganic)
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

ethylbenzene (100-41-4)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	1.44 g O ₂ /g substance (20d.)
Chemical oxygen demand (COD)	2.1 g O ₂ /g substance
ThOD	3.17 g O ₂ /g substance

xylene (1330-20-7)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.

1-butanol (71-36-3)	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	1.1 - 1.92 g O ₂ /g substance
Chemical oxygen demand (COD)	2.46 g O ₂ /g substance
ThOD	2.59 g O ₂ /g substance
BOD (% of ThOD)	0.33 - 0.79

2-methylpropan-1-ol; iso-butanol (78-83-1)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.

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1-methoxy-2-propanol; monopropylene glycol methyl ether (107-98-2)

Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
ThOD	1.95 g O ₂ /g substance

12.3. Bioaccumulative potential

dimethyl ether (115-10-6)

Log Pow	0.1 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

trizinc bis(orthophosphate) (7779-90-0)

BCF other aquatic organisms 1	116 - 60960 (21 day(s), Gammarus sp., Semi-static system, Salt water, Read-across, Fresh weight)
Bioaccumulative potential	High potential for bioaccumulation (BCF > 5000).

titanium(IV) oxide (13463-67-7)

Bioaccumulative potential	Not bioaccumulative.
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ethylbenzene (100-41-4)

BCF fish 1	1 - 2.4 (Other, 6 week(s), Oncorhynchus kisutch, Flow-through system, Salt water, Experimental value)
Log Pow	3.6 (Experimental value, EU Method A.8: Partition Coefficient, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

xylylene (1330-20-7)

BCF fish 1	7.2 - 25.9 (56 day(s), Oncorhynchus mykiss, Flow-through system, Fresh water, Read-across)
Log Pow	3.2 (Read-across, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

1-butanol (71-36-3)

BCF other aquatic organisms 1	3.16 (BCFWIN, Calculated value)
Log Pow	1 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

2-methylpropan-1-ol; iso-butanol (78-83-1)

Log Pow	1 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

1-methoxy-2-propanol; monopropylene glycol methyl ether (107-98-2)

BCF fish 1	1 (Pimephales promelas)
Log Pow	< 1 (Experimental value, Equivalent or similar to OECD 117, 20 °C)
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

dimethyl ether (115-10-6)

Surface tension	0.02 N/m (-40 °C)
Ecology - soil	Not applicable (gas).

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trizinc bis(orthophosphate) (7779-90-0)

Ecology - soil	Adsorbs into the soil.
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titanium(IV) oxide (13463-67-7)

Ecology - soil	Low potential for mobility in soil.
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ethylbenzene (100-41-4)

Surface tension	0.071 N/m (23 °C, 0.0582 g/l, EU Method A.5: Surface tension)
-----------------	---------------------------------------------------------------

Log Koc	2.71 (log Koc, PCKOCWIN v1.66, QSAR)
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Ecology - soil	Low potential for adsorption in soil. Toxic to soil organisms.
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xylene (1330-20-7)

Surface tension	28.01 - 29.76 mN/m (25 °C)
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Log Koc	2.73 (log Koc, Equivalent or similar to OECD 121, Read-across)
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Ecology - soil	Low potential for adsorption in soil. May be harmful to plant growth, blooming and fruit formation.
----------------	-----------------------------------------------------------------------------------------------------

1-butanol (71-36-3)

Surface tension	0.07 N/m (20 °C, 1 g/l, OECD 115: Surface Tension of Aqueous Solutions)
-----------------	-------------------------------------------------------------------------

Log Koc	0.388 (log Koc, PCKOCWIN v1.66, Calculated value)
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Ecology - soil	Highly mobile in soil. May be harmful to plant growth, blooming and fruit formation.
----------------	--------------------------------------------------------------------------------------

2-methylpropan-1-ol; iso-butanol (78-83-1)

Surface tension	0.0697 N/m (20 °C, 1 g/l, OECD 115: Surface Tension of Aqueous Solutions)
-----------------	---------------------------------------------------------------------------

Log Koc	0.31 (log Koc, SRC PCKOCWIN v1.66, Calculated value)
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Ecology - soil	Highly mobile in soil.
----------------	------------------------

1-methoxy-2-propanol; monopropylene glycol methyl ether (107-98-2)

Surface tension	0.0707 N/m (20 °C, 1 g/l, OECD 115: Surface Tension of Aqueous Solutions)
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Ecology - soil	Low potential for adsorption in soil.
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12.5. Results of PBT and vPvB assessment

Component

dimethyl ether (115-10-6)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
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trizinc bis(orthophosphate) (7779-90-0)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
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titanium(IV) oxide (13463-67-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
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ethylbenzene (100-41-4)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
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xylene (1330-20-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
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1-butanol (71-36-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
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2-methylpropan-1-ol; iso-butanol (78-83-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
--------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

1-methoxy-2-propanol; monopropylene glycol methyl ether (107-98-2)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
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12.6. Other adverse effects

No additional information available

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
1950	1950	1950	1950	1950
14.2. UN proper shipping name				
AEROSOLS	AEROSOLS	Aerosols, flammable	AEROSOLS	AEROSOLS
Transport document description				
UN 1950 AEROSOLS, 2.1, (D)	UN 1950 AEROSOLS, 2.1	UN 1950 Aerosols, flammable, 2.1	UN 1950 AEROSOLS, 2.1	UN 1950 AEROSOLS, 2.1
14.3. Transport hazard class(es)				
2.1	2.1	2.1	2.1	2.1
				
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR) : 5F
Special provisions (ADR) : 190, 327, 344, 625
Limited quantities (ADR) : 1I
Excepted quantities (ADR) : E0
Packing instructions (ADR) : P207, LP02
Special packing provisions (ADR) : PP87, RR6, L2
Mixed packing provisions (ADR) : MP9
Transport category (ADR) : 2
Special provisions for carriage - Packages (ADR) : V14
Special provisions for carriage - Loading, unloading and handling (ADR) : CV9, CV12
Special provisions for carriage - Operation (ADR) : S2
Tunnel restriction code (ADR) : D

Transport by sea

Special provisions (IMDG) : 63, 190, 277, 327, 344, 959
Limited quantities (IMDG) : SP277
Excepted quantities (IMDG) : E0
Packing instructions (IMDG) : P207, LP02
Special packing provisions (IMDG) : PP87, L2
EmS-No. (Fire) : F-D
EmS-No. (Spillage) : S-U
Stowage category (IMDG) : None
Stowage and handling (IMDG) : SW1, SW22

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Segregation (IMDG) : SG69

Air transport

PCA Excepted quantities (IATA) : E0
PCA Limited quantities (IATA) : Y203
PCA limited quantity max net quantity (IATA) : 30kgG
PCA packing instructions (IATA) : 203
PCA max net quantity (IATA) : 75kg
CAO packing instructions (IATA) : 203
CAO max net quantity (IATA) : 150kg
Special provisions (IATA) : A145, A167, A802
ERG code (IATA) : 10L

Inland waterway transport

Classification code (ADN) : 5F
Special provisions (ADN) : 190, 327, 344, 625
Limited quantities (ADN) : 1 L
Excepted quantities (ADN) : E0
Equipment required (ADN) : PP, EX, A
Ventilation (ADN) : VE01, VE04
Number of blue cones/lights (ADN) : 1

Rail transport

Classification code (RID) : 5F
Special provisions (RID) : 190, 327, 344, 625
Limited quantities (RID) : 1L
Excepted quantities (RID) : E0
Packing instructions (RID) : P207, LP02
Special packing provisions (RID) : PP87, RR6, L2
Mixed packing provisions (RID) : MP9
Transport category (RID) : 2
Special provisions for carriage – Packages (RID) : W14
Special provisions for carriage - Loading, unloading and handling (RID) : CW9, CW12
Colis express (express parcels) (RID) : CE2
Hazard identification number (RID) : 23

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

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

3(b) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10	ethylbenzene - xylene - 1-butanol - 2-methylpropan-1-ol; iso-butanol
3(a) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F	ethylbenzene - xylene - 1-butanol - 2-methylpropan-1-ol; iso-butanol - 1-methoxy-2-propanol; monopropylene glycol methyl ether
3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008	ethylbenzene - xylene - 1-butanol - 2-methylpropan-1-ol; iso-butanol - 1-methoxy-2-propanol; monopropylene glycol methyl ether
40. Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.	dimethyl ether - ethylbenzene - xylene - 1-butanol - 2-methylpropan-1-ol; iso-butanol - 1-methoxy-2-propanol; monopropylene glycol methyl ether

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Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

VOC content : 692 g/l

Directive 2012/18/EU (SEVESO III)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Full text of H- and EUH-statements:	
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Flam. Gas 1	Flammable gases, Category 1
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Press. Gas	Gases under pressure
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
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.
H412	Harmful to aquatic life with long lasting effects.

SDS EU (REACH Annex II)

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