

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

DOW CORNING

MOLYKOTE(R) 106 ANTI FRICTION COATING

Version 5.1 Revision Date: 04.04.2017 SDS Number: 1066011-00009 Date of last issue: 23.03.2017
Date of first issue: 05.01.2015

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

1.1 Product identifier

Trade name : MOLYKOTE(R) 106 ANTI FRICTION COATING
Product code : 000000000004102220

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

Use of the Sub-stance/Mixture : Lubricants and lubricant additives

1.3 Details of the supplier of the safety data sheet

Company : Dow Corning Europe S.A.
rue Jules Bordet - Parc Industriel - Zone C
B-7180 Seneffe

PO box : 65091

Telephone : English Tel: +49 611237507
Deutsch Tel: +49 611237500
Français Tel: +32 64511149
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Español Tel: +32 64511163

E-mail address of person responsible for the SDS : sdseu@dowcorning.com

1.4 Emergency telephone number

Dow Corning (Barry U.K. 24h) Tél: +44 1446732350
Dow Corning (Wiesbaden 24h) Tél: +49 61122158
Dow Corning (Seneffe 24h) Tel: +32 64 888240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 3	H226: Flammable liquid and vapour.
Skin irritation, Category 2	H315: Causes skin irritation.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Specific target organ toxicity - single exposure, Category 3	H336: May cause drowsiness or dizziness.
Specific target organ toxicity - single ex-	H335: May cause respiratory irritation.

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posure, Category 3

Specific target organ toxicity - repeated exposure, Category 2

H373: May cause damage to organs through prolonged or repeated exposure.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Danger

Hazard statements : H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements :

Prevention:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 Do not breathe spray.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

Hazardous components which must be listed on the label:

Butan-1-ol

Xylene

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight > 700 - 1200)

Formaldehyde

2.3 Other hazards

Static-accumulating flammable liquid.

Vapours may form explosive mixture with air.

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SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Inorganic and organic compounds dispersion

Hazardous components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Butan-1-ol	71-36-3 200-751-6 603-004-00-6 01-2119484630-38	Flam. Liq. 3; H226 Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H336 STOT SE 3; H335	$\geq 20 - < 30$
Xylene	1330-20-7 215-535-7 601-022-00-9 01-2119488216-32	Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335 STOT RE 2; H373 Asp. Tox. 1; H304	$\geq 10 - < 20$
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight > 700 - 1200)	25068-38-6 500-033-5 603-074-00-8	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1; H317	$\geq 1 - < 10$
Ethylbenzene	100-41-4 202-849-4 601-023-00-4	Flam. Liq. 2; H225 Acute Tox. 4; H332 STOT RE 2; H373 Asp. Tox. 1; H304 Aquatic Chronic 3; H412	$\geq 2.5 - < 10$
Methanol	67-56-1 200-659-6 603-001-00-X 01-2119433307-44	Flam. Liq. 2; H225 Acute Tox. 3; H301 Acute Tox. 3; H331 Acute Tox. 3; H311 STOT SE 1; H370	$\geq 0.1 - < 1$
Formaldehyde	50-00-0 200-001-8 605-001-00-5 01-2119488953-20	Flam. Gas 1; H220 Acute Tox. 3; H301 Acute Tox. 2; H330 Acute Tox. 3; H311 Skin Corr. 1B; H314 Eye Dam. 1; H318 Skin Sens. 1A; H317 Muta. 2; H341 Carc. 1B; H350 STOT SE 3; H335	< 0.1

For explanation of abbreviations see section 16.

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SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.
- If inhaled : If inhaled, remove to fresh air.
Get medical attention.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.
- In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
If easy to do, remove contact lens, if worn.
Get medical attention immediately.
- If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention.
Rinse mouth thoroughly with water.

4.2 Most important symptoms and effects, both acute and delayed

- Risks : Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye damage.
May cause respiratory irritation.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Treat symptomatically and supportively.
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SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Water spray
Alcohol-resistant 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 fire-fighting : Do not use a solid water stream as it may scatter and spread fire.
Flash back possible over considerable distance.
Vapours may form explosive mixtures with air.
Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides
Metal oxides
Sulphur oxides
Chlorine compounds
Nitrogen oxides (NOx)
Formaldehyde

5.3 Advice for firefighters

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

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Remove all sources of ignition.
Use personal protective equipment.
Follow safe handling advice and personal protective equipment recommendations.

6.2 Environmental precautions

Environmental precautions : Discharge into the environment must be avoided.
Prevent further leakage or spillage if safe to do so.
Prevent spreading over a wide area (e.g. by containment or oil barriers).
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Non-sparking tools should be used.
Soak up with inert absorbent material.

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Suppress (knock down) gases/vapours/mists with a water spray jet.
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

6.4 Reference to other sections

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

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- | | | |
|-------------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Technical measures | : | Ensure all equipment is electrically grounded before beginning transfer operations.
This material can accumulate static charge due to its inherent physical properties and can therefore cause an electrical ignition source to vapors. In order to prevent a fire hazard, as bonding and grounding may be insufficient to remove static electricity, it is necessary to provide an inert gas purge before beginning transfer operations.
Restrict flow velocity in order to reduce the accumulation of static electricity. |
| Local/Total ventilation | : | Use with local exhaust ventilation.
Use only in an area equipped with explosion proof exhaust ventilation. |
| Advice on safe handling | : | Do not get on skin or clothing.
Do not breathe vapours or spray mist.
Do not swallow.
Do not get in eyes.
Handle in accordance with good industrial hygiene and safety practice.
Non-sparking tools should be used.
Keep container tightly closed.
Keep away from heat and sources of ignition.
Take precautionary measures against static discharges.
Take care to prevent spills, waste and minimize release to the environment. |
| Hygiene measures | : | Ensure that eye flushing systems and safety showers are located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use. |

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7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep in properly labelled containers. Store locked up. Keep tightly closed. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Keep away from heat and sources of ignition.

Advice on common storage : Do not store with the following product types:
Strong oxidizing agents
Organic peroxides
Flammable solids
Pyrophoric liquids
Pyrophoric solids
Self-heating substances and mixtures
Substances and mixtures, which in contact with water, emit flammable gases
Explosives
Gases

7.3 Specific end use(s)

Specific use(s) : These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.
For further information regarding the use of silicones / organic oils in consumer aerosol applications, please refer to the guidance document regarding the use of these type of materials in consumer aerosol applications that has been developed by the silicone industry (www.SEHSC.com) or contact the Dow Corning customer service group.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Butan-1-ol	71-36-3	STEL	50 ppm 154 mg/m ³	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
Molybdenum sulfide	1317-33-5	TWA	10 mg/m ³ (Molybdenum)	GB EH40
		STEL	20 mg/m ³ (Molybdenum)	GB EH40
Xylene	1330-20-7	TWA	50 ppm 220 mg/m ³	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
		STEL	100 ppm 441 mg/m ³	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which			

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	there are concerns that dermal absorption will lead to systemic toxicity.			
		TWA	50 ppm 221 mg/m ³	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		STEL	100 ppm 442 mg/m ³	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
Graphite	7782-42-5	TWA (inhalable dust)	10 mg/m ³	GB EH40
Further information	<p>For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust, The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m⁻³ 8-hour TWA of inhalable dust or 4 mg.m⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3., Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used</p>			
		TWA (Respirable dust)	4 mg/m ³	GB EH40
Further information	<p>For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust, The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m⁻³ 8-hour TWA of inhalable dust or 4 mg.m⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3., Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed,</p>			

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			a figure three times the long-term exposure should be used	
Ethylbenzene	100-41-4	TWA	100 ppm 442 mg/m ³	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		STEL	200 ppm 884 mg/m ³	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		TWA	100 ppm 441 mg/m ³	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
		STEL	125 ppm 552 mg/m ³	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
Methanol	67-56-1	TWA	200 ppm 260 mg/m ³	2006/15/EC
Further information	Indicative, Identifies the possibility of significant uptake through the skin			
		TWA	200 ppm 266 mg/m ³	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
		STEL	250 ppm 333 mg/m ³	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
Formaldehyde	50-00-0	TWA	2 ppm 2.5 mg/m ³	GB EH40
		STEL	2 ppm 2.5 mg/m ³	GB EH40

Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
Xylene	1330-20-7	methyl hippuric acid: 650 mmol/mol creatinine (Urine)	After shift	GB EH40 BAT

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

Substance name	End Use	Exposure routes	Potential health effects	Value
Butan-1-ol	Workers	Inhalation	Long-term local effects	310 mg/m ³
	Consumers	Ingestion	Long-term systemic effects	3.125 mg/kg bw/day
	Consumers	Inhalation	Long-term local effects	55 mg/m ³
2-Ethoxy-1-methylethyl acetate	Workers	Inhalation	Long-term systemic effects	302 mg/m ³
	Workers	Inhalation	Acute systemic effects	608 mg/m ³

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	Workers	Skin contact	Long-term systemic effects	103 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	181 mg/m3
	Consumers	Inhalation	Acute systemic effects	365 mg/m3
	Consumers	Skin contact	Long-term systemic effects	62 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	13.1 mg/kg bw/day
Xylene	Workers	Inhalation	Acute systemic effects	289 mg/m3
	Workers	Inhalation	Acute local effects	289 mg/m3
	Workers	Skin contact	Long-term systemic effects	180 mg/kg bw/day
	Workers	Inhalation	Long-term systemic effects	77 mg/m3
	Consumers	Inhalation	Acute systemic effects	174 mg/m3
	Consumers	Inhalation	Acute local effects	174 mg/m3
	Consumers	Skin contact	Long-term systemic effects	108 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	14.8 mg/m3
	Consumers	Ingestion	Long-term systemic effects	1.6 mg/kg bw/day
Graphite	Consumers	Inhalation	Long-term local effects	0.3 mg/m3
	Consumers	Ingestion	Long-term systemic effects	813 mg/kg bw/day
	Workers	Inhalation	Long-term local effects	1.2 mg/m3
Ethylbenzene	Workers	Inhalation	Acute local effects	293 mg/m3
	Workers	Skin contact	Long-term systemic effects	180 mg/kg bw/day
	Workers	Inhalation	Long-term systemic effects	77 mg/m3
	Consumers	Inhalation	Long-term systemic effects	15 mg/m3
	Consumers	Ingestion	Long-term systemic effects	1.6 mg/kg bw/day
Methanol	Workers	Inhalation	Long-term systemic effects	260 mg/m3
	Workers	Inhalation	Acute systemic effects	260 mg/m3
	Workers	Inhalation	Long-term local effects	260 mg/m3
	Workers	Inhalation	Acute local effects	260 mg/m3
	Workers	Skin contact	Long-term systemic effects	40 mg/kg bw/day
	Workers	Skin contact	Acute systemic effects	40 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	50 mg/m3

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			effects	
	Consumers	Inhalation	Acute systemic effects	50 mg/m3
	Consumers	Inhalation	Long-term local effects	50 mg/m3
	Consumers	Inhalation	Acute local effects	50 mg/m3
	Consumers	Skin contact	Long-term systemic effects	8 mg/kg bw/day
	Consumers	Skin contact	Acute systemic effects	8 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	8 mg/kg bw/day
	Consumers	Ingestion	Acute systemic effects	8 mg/kg bw/day
Formaldehyde	Workers	Inhalation	Long-term systemic effects	9 mg/m3
	Workers	Inhalation	Long-term local effects	0.375 mg/m3
	Workers	Skin contact	Long-term systemic effects	240 mg/kg bw/day
	Workers	Inhalation	Acute local effects	0.75 mg/m3
	Consumers	Inhalation	Long-term systemic effects	3.2 mg/m3
	Consumers	Skin contact	Long-term systemic effects	102 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	4.1 mg/kg bw/day
	Workers	Skin contact	Long-term local effects	0.037 mg/cm2
	Consumers	Inhalation	Long-term local effects	0.1 mg/m3
	Consumers	Skin contact	Long-term local effects	0.012 mg/cm2

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

Substance name	Environmental Compartment	Value
Butan-1-ol	Fresh water	0.082 mg/l
	Marine water	0.008 mg/l
	Intermittent use/release	2.25 mg/l
	Sewage treatment plant	2476 mg/l
	Fresh water sediment	0.178 mg/kg
	Marine sediment	0.018 mg/kg
	Soil	0.015 mg/kg
2-Ethoxy-1-methylethyl acetate	Fresh water	1.3 mg/l
	Marine water	0.13 mg/l
	Intermittent use/release	1.3 mg/l
	Sewage treatment plant	62.5 mg/l
	Fresh water sediment	6.4 mg/kg
	Marine sediment	0.64 mg/kg
	Soil	1.34 mg/kg
	Oral (Secondary Poisoning)	117 mg/kg food
Xylene	Fresh water	0.327 mg/l
	Marine water	0.327 mg/l

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	Intermittent use/release	0.327 mg/l
	Sewage treatment plant	6.58 mg/l
	Fresh water sediment	12.46 mg/kg
	Marine sediment	12.46 mg/kg
	Soil	2.31 mg/kg
Ethylbenzene	Fresh water	0.1 mg/l
	Marine water	0.01 mg/l
	Intermittent use/release	0.1 mg/l
	Sewage treatment plant	9.6 mg/l
	Fresh water sediment	13.7 mg/kg
	Soil	2.68 mg/kg
	Oral (Secondary Poisoning)	0.02 mg/kg food
Methanol	Fresh water	20.8 mg/l
	Marine water	2.08 mg/l
	Intermittent use/release	1540 mg/l
	Sewage treatment plant	100 mg/l
	Fresh water sediment	77 mg/kg
	Marine sediment	7.7 mg/kg
	Soil	100 mg/kg
Formaldehyde	Fresh water	0.44 mg/l
	Marine water	0.44 mg/l
	Intermittent use/release	4.44 mg/l
	Sewage treatment plant	0.19 mg/l
	Fresh water sediment	2.3 mg/kg
	Marine sediment	2.3 mg/kg
	Soil	0.2 mg/kg

8.2 Exposure controls

Engineering measures

Processing may form hazardous compounds (see section 10).
Minimize workplace exposure concentrations.
Use only in an area equipped with explosion proof exhaust ventilation.
Use with local exhaust ventilation.

Personal protective equipment

Eye protection : Wear the following personal protective equipment:
Chemical resistant goggles must be worn.
If splashes are likely to occur, wear:
Face-shield

Hand protection

Material : Chemical-resistant gloves

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Take note that the product is flammable, which may impact the selection of hand protection. Wash hands before breaks and at the end of workday.

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| Skin and body protection | : | Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
Wear the following personal protective equipment:
Flame retardant antistatic protective clothing.
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc). |
| 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 | : | Combined particulates and organic vapour type (A-P) |

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- | | | |
|--------------------------------------------------|---|----------------------------------------------|
| Appearance | : | liquid |
| 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 | : | 64 °C |
| Flash point | : | 29.5 °C
Method: Pensky-Martens closed cup |
| Evaporation rate | : | No data available |
| Flammability (solid, gas) | : | Not applicable |
| Upper explosion limit / Upper flammability limit | : | No data available |
| Lower explosion limit / Lower flammability limit | : | No data available |
| Vapour pressure | : | No data available |
| Relative vapour density | : | No data available |
| Relative density | : | 1.165 |
| Solubility(ies) | : | |

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Water solubility : No data available

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

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity
Viscosity, kinematic : > 20.5 mm²/s (25 °C)

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

9.2 Other information

Molecular weight : No data available

Particle size : Not applicable

Self-ignition : The substance or mixture is not classified as pyrophoric. The substance or mixture is not classified as self heating.

SECTION 10: Stability and reactivity

10.1 Reactivity

Not classified as a reactivity hazard.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Flammable liquid and vapour.
Vapours may form explosive mixture with air.
Can react with strong oxidizing agents.
When heated to temperatures above 150 °C (300 °F) in the presence of air, product can form formaldehyde vapours.
Safe handling conditions may be maintained by keeping vapour concentrations within the occupational exposure limit for formaldehyde.
Hazardous decomposition products will be formed at elevated temperatures.

10.4 Conditions to avoid

Conditions to avoid : Handling operations that can promote accumulation of static charges.
Heat, flames and sparks.

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10.5 Incompatible materials

Materials to avoid : Oxidizing agents

10.6 Hazardous decomposition products

Thermal decomposition : Formaldehyde

SECTION 11: Toxicological information

11.1 Information on toxicological effects

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

Acute toxicity

Not classified based on available information.

Product:

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

Acute inhalation toxicity : Acute toxicity estimate: > 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:

Butan-1-ol:

Acute oral toxicity : LD50 (Rat): 790 mg/kg

Acute inhalation toxicity : LC0 (Rat): > 17.76 mg/l
Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): 3,430 mg/kg

Xylene:

Acute oral toxicity : LD50 (Rat): 4,300 mg/kg
Method: Directive 67/548/EEC, Annex V, B.1.

Acute inhalation toxicity : LC50 (Rat): 27.5 mg/l
Exposure time: 4 h
Test atmosphere: vapour

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Acute toxicity estimate: 11 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Expert judgement
Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

Acute dermal toxicity : Acute toxicity estimate: 1,100 mg/kg
Method: Expert judgement
Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight > 700 - 1200):

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 420
Assessment: The substance or mixture has no acute oral toxicity
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on data from similar materials

Ethylbenzene:

Acute oral toxicity : LD50 (Rat): 3,500 mg/kg

Acute inhalation toxicity : LC50 (Rat): 17.2 mg/l
Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

Methanol:

Acute oral toxicity : Acute toxicity estimate (Humans): 300 mg/kg
Method: Expert judgement

Acute inhalation toxicity : Acute toxicity estimate: 3 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Expert judgement
Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

Acute dermal toxicity : Acute toxicity estimate (Humans): 300 mg/kg
Method: Expert judgement

Formaldehyde:

Acute oral toxicity : Acute toxicity estimate: 100 mg/kg

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Method: Expert judgement

Acute inhalation toxicity : Acute toxicity estimate: 100 ppm
Exposure time: 4 h
Test atmosphere: gas
Method: Expert judgement

Acute dermal toxicity : LD50 (Rabbit): 270 mg/kg

Skin corrosion/irritation

Causes skin irritation.

Components:

Butan-1-ol:

Species: Rabbit
Result: Skin irritation

Xylene:

Species: Rabbit
Result: Skin irritation

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight > 700 - 1200):

Result: Skin irritation

Methanol:

Species: Rabbit
Result: No skin irritation

Formaldehyde:

Species: Rabbit
Method: OECD Test Guideline 404
Result: Corrosive after 3 minutes to 1 hour of exposure

Serious eye damage/eye irritation

Causes serious eye damage.

Components:

Butan-1-ol:

Species: Rabbit
Method: OECD Test Guideline 405
Result: Irreversible effects on the eye

Xylene:

Species: Rabbit
Result: Irritation to eyes, reversing within 7 days

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Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight > 700 - 1200):

Result: Irritation to eyes, reversing within 21 days

Ethylbenzene:

Species: Rabbit

Result: No eye irritation

Methanol:

Species: Rabbit

Result: No eye irritation

Formaldehyde:

Species: Rabbit

Result: Irreversible effects on the eye

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Components:

Butan-1-ol:

Test Type: Maximisation Test

Exposure routes: Skin contact

Species: Guinea pig

Result: negative

Remarks: Based on data from similar materials

Xylene:

Test Type: Local lymph node assay (LLNA)

Exposure routes: Skin contact

Species: Mouse

Method: OECD Test Guideline 429

Result: negative

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight > 700 - 1200):

Test Type: Local lymph node assay (LLNA)

Exposure routes: Skin contact

Species: Mouse

Method: OECD Test Guideline 429

Result: positive

Remarks: Based on data from similar materials

Assessment: Probability or evidence of skin sensitisation in humans

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Ethylbenzene:

Test Type: Human repeat insult patch test (HRIPT)
Exposure routes: Skin contact
Result: negative

Methanol:

Test Type: Maximisation Test
Exposure routes: Skin contact
Species: Guinea pig
Result: negative

Formaldehyde:

Test Type: Local lymph node assay (LLNA)
Exposure routes: Skin contact
Species: Mouse
Method: OECD Test Guideline 429
Result: positive

Assessment: Probability or evidence of high skin sensitisation rate in humans

Germ cell mutagenicity

Not classified based on available information.

Components:

Butan-1-ol:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Method: OECD Test Guideline 474
Result: negative

Xylene:

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

: Test Type: In vitro sister chromatid exchange assay in mammalian cells
Result: negative

Genotoxicity in vivo : Test Type: Rodent dominant lethal test (germ cell) (in vivo)
Species: Mouse
Application Route: Skin contact
Result: negative

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Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight > 700 - 1200):

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Rodent dominant lethal test (germ cell) (in vivo)
Species: Mouse
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Ethylbenzene:

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

: Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Genotoxicity in vivo : Test Type: Unscheduled DNA synthesis (UDS) test with mammalian liver cells in vivo
Species: Mouse
Application Route: Inhalation
Method: OECD Test Guideline 486
Result: negative

Methanol:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

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

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection
Result: negative

Formaldehyde:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: positive

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

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: Inhalation

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Result: positive

Germ cell mutagenicity- Assessment : Positive result(s) from in vivo mammalian somatic cell mutagenicity tests.

Carcinogenicity

Not classified based on available information.

Components:

Xylene:

Species: Rat
Application Route: Ingestion
Exposure time: 103 weeks
Result: negative

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight > 700 - 1200):

Species: Rat
Application Route: Ingestion
Exposure time: 24 month(s)
Method: OECD Test Guideline 453
Result: negative
Remarks: Based on data from similar materials

Ethylbenzene:

Species: Rat
Application Route: Inhalation
Exposure time: 104 weeks
Result: positive
Remarks: The mechanism or mode of action may not be relevant in humans.

Methanol:

Species: Mouse
Application Route: inhalation (vapour)
Exposure time: 18 Months
Result: negative

Formaldehyde:

Species: Rat
Application Route: inhalation (gas)
Exposure time: 28 Months
Result: positive

Carcinogenicity - Assessment : Sufficient evidence of carcinogenicity in animal experiments

Reproductive toxicity

Not classified based on available information.

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Components:

Butan-1-ol:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: inhalation (vapour)
Method: OECD Test Guideline 416
Result: negative
Remarks: Based on data from similar materials

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Ingestion
Result: negative

Xylene:

Effects on fertility : Test Type: One-generation reproduction toxicity study
Species: Rat
Application Route: inhalation (vapour)
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: inhalation (vapour)
Result: negative

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight > 700 - 1200):

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 416
Result: negative
Remarks: Based on data from similar materials

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: negative
Remarks: Based on data from similar materials

Ethylbenzene:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: inhalation (vapour)
Method: OECD Test Guideline 415
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Inhalation

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Method: OECD Test Guideline 414
Result: negative

Methanol:

Effects on fertility : Test Type: Fertility/early embryonic development
Species: Mouse
Application Route: Ingestion
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
Species: Mouse
Application Route: Ingestion
Result: positive
Remarks: The effects were seen only at maternally toxic doses.

Formaldehyde:

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: inhalation (gas)
Result: negative

STOT - single exposure

May cause respiratory irritation.
May cause drowsiness or dizziness.

Components:

Butan-1-ol:

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

Xylene:

Assessment: May cause respiratory irritation.

Methanol:

Target Organs: Eyes, Central nervous system
Assessment: Causes damage to organs.

Formaldehyde:

Assessment: May cause respiratory irritation.

STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Components:

Xylene:

Exposure routes: inhalation (vapour)
Target Organs: Central nervous system, Liver, Kidney
Assessment: Shown to produce significant health effects in animals at concentrations of >0.2 to

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1 mg/l/6h/d.

Ethylbenzene:

Exposure routes: inhalation (vapour)

Target Organs: Auditory system

Assessment: Shown to produce significant health effects in animals at concentrations of >0.2 to 1 mg/l/6h/d.

Formaldehyde:

Exposure routes: inhalation (gas)

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

Repeated dose toxicity

Components:

Butan-1-ol:

Species: Rat

NOAEL: 125 mg/kg

Application Route: Ingestion

Exposure time: 13 Weeks

Xylene:

Species: Rat

NOAEL: 4.35 mg/l

Application Route: inhalation (vapour)

Exposure time: 90 Days

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight > 700 - 1200):

Species: Rat

NOAEL: 50 mg/kg

LOAEL: 250 mg/kg

Application Route: Ingestion

Exposure time: 14 Weeks

Method: OECD Test Guideline 408

Remarks: Based on data from similar materials

Ethylbenzene:

Species: Rat, female

LOAEL: 75 ppm

Application Route: inhalation (vapour)

Exposure time: 104 Weeks

Methanol:

Species: Rat

NOAEL: 1.06 mg/l

Application Route: inhalation (vapour)

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Exposure time: 90 Days

Formaldehyde:

Species: Rat
NOAEL: 6 ppm
LOAEL: 10 ppm
Application Route: inhalation (gas)
Exposure time: 28 Days

Aspiration toxicity

Not classified based on available information.

Components:

Xylene:

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.

Ethylbenzene:

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.

SECTION 12: Ecological information

12.1 Toxicity

Components:

Butan-1-ol:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 1,376 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1,328 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): 225 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50 (Pseudomonas putida): 4,390 mg/l
Exposure time: 17 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 4.1 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211

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Xylene:

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 2.6 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials
- Toxicity to daphnia and other aquatic invertebrates : IC50 (Daphnia magna (Water flea)): 1 mg/l
Exposure time: 24 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials
- Toxicity to algae : EC10 (Pseudokirchneriella subcapitata (green algae)): 1.9 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials
- ErC50 (Pseudokirchneriella subcapitata (green algae)): 4.36 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials
- Toxicity to microorganisms : EC50 : > 157 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
Remarks: Based on data from similar materials
- Toxicity to fish (Chronic toxicity) : NOEC: > 1.3 mg/l
Exposure time: 56 d
Species: Oncorhynchus mykiss (rainbow trout)
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10: 1.91 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials

Ethylbenzene:

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 4.2 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1.8 - 2.4 mg/l
Exposure time: 48 h
- Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 5.4 mg/l
Exposure time: 72 h
- Toxicity to microorganisms : EC50 (Nitrosomonas sp.): 96 mg/l
Exposure time: 24 h
Method: OECD Test Guideline 209

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Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.96 mg/l
Exposure time: 7 d
Species: Ceriodaphnia dubia (water flea)

Methanol:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 15,400 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 22,000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 201

Toxicity to microorganisms : IC50 : > 1,000 mg/l
Exposure time: 3 h

Toxicity to fish (Chronic toxicity) : NOEC: 15,800 mg/l
Exposure time: 200 h
Species: Oryzias latipes (Orange-red killifish)

Formaldehyde:

Toxicity to fish : LC50 : 6.7 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia pulex (Water flea)): 5.8 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): 4.89 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50 : 34.1 mg/l
Exposure time: 120 h

Toxicity to fish (Chronic toxicity) : NOEC: >= 48 mg/l
Exposure time: 28 d
Species: Oryzias latipes (Orange-red killifish)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: >= 6.4 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211

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12.2 Persistence and degradability

Components:

Butan-1-ol:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 92 %
Exposure time: 20 d

Xylene:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 87.8 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
Remarks: Based on data from similar materials

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight > 700 - 1200):

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 5 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Ethylbenzene:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 70 - 80 %
Exposure time: 28 d

Methanol:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 95 %
Exposure time: 20 d

Formaldehyde:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 91 %
Exposure time: 14 d
Method: OECD Test Guideline 301C
Remarks: Based on data from similar materials

12.3 Bioaccumulative potential

Components:

Butan-1-ol:

Partition coefficient: n-octanol/water : log Pow: 1

Xylene:

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Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)
Bioconcentration factor (BCF): 5.4 - 25.9

Partition coefficient: n-octanol/water : log Pow: 3.12 - 3.2

Ethylbenzene:

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): < 100
Remarks: Based on data from similar materials

Partition coefficient: n-octanol/water : log Pow: 3.6

Methanol:

Bioaccumulation : Species: Leuciscus idus (Golden orfe)
Bioconcentration factor (BCF): < 10

Partition coefficient: n-octanol/water : log Pow: -0.77

Formaldehyde:

Partition coefficient: n-octanol/water : log Pow: 0.35

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Not relevant

12.6 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
Empty containers retain residue and can be dangerous.
Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death.
If not otherwise specified: Dispose of as unused product.

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SECTION 14: Transport information

14.1 UN number

ADN : UN 1993
ADR : UN 1993
RID : UN 1993
IMDG : UN 1993
IATA : UN 1993

14.2 UN proper shipping name

ADN : FLAMMABLE LIQUID, N.O.S.
(Ethylbenzene, Butan-1-ol)
ADR : FLAMMABLE LIQUID, N.O.S.
(Ethylbenzene, Butan-1-ol)
RID : FLAMMABLE LIQUID, N.O.S.
(Ethylbenzene, Butan-1-ol)
IMDG : FLAMMABLE LIQUID, N.O.S.
(Ethylbenzene, Butan-1-ol)
IATA : Flammable liquid, n.o.s.
(Ethylbenzene, Butan-1-ol)

14.3 Transport hazard class(es)

ADN : 3
ADR : 3
RID : 3
IMDG : 3
IATA : 3

14.4 Packing group

ADN
Packing group : III
Classification Code : F1
Hazard Identification Number : 30
Labels : 3
ADR
Packing group : III
Classification Code : F1
Hazard Identification Number : 30
Labels : 3
Tunnel restriction code : (D/E)
RID
Packing group : III
Classification Code : F1
Hazard Identification Number : 30

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Labels : 3

IMDG

Packing group : III
Labels : 3
EmS Code : F-E, S-E

IATA (Cargo)

Packing instruction (cargo aircraft) : 366
Packing instruction (LQ) : Y344
Packing group : III
Labels : Flammable Liquids

IATA (Passenger)

Packing instruction (passenger aircraft) : 355
Packing instruction (LQ) : Y344
Packing group : III
Labels : Flammable Liquids

14.5 Environmental hazards

ADN

Environmentally hazardous : no

ADR

Environmentally hazardous : no

RID

Environmentally hazardous : no

IMDG

Marine pollutant : no

14.6 Special precautions for user

Not applicable

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

Remarks : Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Not applicable

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

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

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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.

P5c	FLAMMABLE LIQUIDS	Quantity 1 5,000 t	Quantity 2 50,000 t
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Other regulations:

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

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

- NZIoC : All ingredients listed or exempt.
- REACH : For purchases from Dow Corning EU legal entities, all ingredients are currently pre/registered or exempt under REACH. Please refer to section 1 for recommended uses. For purchases from non-EU Dow Corning legal entities with the intention to export into EEA please contact your DC representative/local office.
- AICS : All ingredients listed or exempt.
- IECSC : All ingredients listed or exempt.
- KECI : All ingredients listed, exempt or notified.
- TSCA : All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.
- ENCS/ISHL : Some components are not listed or not identified on ENCS/ISHL.
- PICCS : Consult your local Dow Corning office.
- DSL : All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL).
- TCSI : All ingredients listed or exempt.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

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SECTION 16: Other information

Full text of H-Statements

H220	: Extremely flammable gas.
H225	: Highly flammable liquid and vapour.
H226	: Flammable liquid and vapour.
H301	: Toxic if swallowed.
H302	: Harmful if swallowed.
H304	: May be fatal if swallowed and enters airways.
H311	: Toxic in contact with skin.
H312	: Harmful in contact with skin.
H314	: Causes severe skin burns and eye damage.
H315	: Causes skin irritation.
H317	: May cause an allergic skin reaction.
H318	: Causes serious eye damage.
H319	: Causes serious eye irritation.
H330	: Fatal if inhaled.
H331	: Toxic if inhaled.
H332	: Harmful if inhaled.
H335	: May cause respiratory irritation.
H336	: May cause drowsiness or dizziness.
H341	: Suspected of causing genetic defects.
H350	: May cause cancer.
H370	: Causes damage to organs.
H373	: May cause damage to organs through prolonged or repeated exposure.
H412	: Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	: Acute toxicity
Aquatic Chronic	: Chronic aquatic toxicity
Asp. Tox.	: Aspiration hazard
Carc.	: Carcinogenicity
Eye Dam.	: Serious eye damage
Eye Irrit.	: Eye irritation
Flam. Gas	: Flammable gases
Flam. Liq.	: Flammable liquids
Muta.	: Germ cell mutagenicity
Skin Corr.	: Skin corrosion
Skin Irrit.	: Skin irritation
Skin Sens.	: Skin sensitisation
STOT RE	: Specific target organ toxicity - repeated exposure
STOT SE	: Specific target organ toxicity - single exposure
2000/39/EC	: Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
2006/15/EC	: Europe. Indicative occupational exposure limit values
GB EH40	: UK. EH40 WEL - Workplace Exposure Limits
GB EH40 BAT	: UK. Biological monitoring guidance values
2000/39/EC / TWA	: Limit Value - eight hours
2000/39/EC / STEL	: Short term exposure limit
2006/15/EC / TWA	: Limit Value - eight hours
GB EH40 / TWA	: Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL	: Short-term exposure limit (15-minute reference period)

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

Further information

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Classification of the mixture:

Flam. Liq. 3	H226
Skin Irrit. 2	H315
Eye Dam. 1	H318
Skin Sens. 1	H317
STOT SE 3	H336
STOT SE 3	H335
STOT RE 2	H373

Classification procedure:

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

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

GB / EN