



SAFETY DATA SHEET ARBOKOL 1000

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

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

1.1. Product identifier

Product name ARBOKOL 1000

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

Identified uses [PC1] Sealant.

Uses advised against Use only for intended applications.

1.3. Details of the supplier of the safety data sheet

Supplier Adshead Ratcliffe & Co. Ltd.
Derby Road, Belper
Derbyshire.
DE56 1WJ
T: (+44) 01773 826661
F: (+44) 01773 821215
E: sds.carlisle@ccm-europe.com

1.4. Emergency telephone number

Emergency telephone NPIS (National Poisons Information Service): 0344 892 0111 (for medical professionals only).
For medical advice, members of the public should contact NHS 111 in England: 111; NHS 24 in Scotland: 111; NHS Direct in Wales: 111 or 0845 4647. In Northern Ireland: contact your local GP or pharmacist.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Skin Sens. 1 - H317

Environmental hazards Aquatic Chronic 3 - H412

2.2. Label elements

Hazard pictograms



Signal word Danger

Hazard statements
H315 Causes skin irritation.
H318 Causes serious eye damage.
H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.

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Precautionary statements	<p>P261 Avoid breathing vapours.</p> <p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P310 Immediately call a POISON CENTER/ doctor.</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p>
Supplemental label information	EUH212 Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.
Contains	Reaction mass of calcium carbonate and calcium dihydroxide and calcium peroxide, Barium oxide, obtained by calcining witherite, Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyl enoxymethylene)]bis[oxirane], 2-Mercaptoethanol

2.3. Other hazards

This product contains terphenyl, hydrogenated which is considered to be a vPvB substance.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Liquid polysulfide polymer. Mercaptan terminated liquid polymer of diethyleneoxymethane with Sx linkages.				25 - 50%
CAS number: 68611-50-7				
Classification				
Aquatic Chronic 3 - H412				
1,2-Benzenedicarboxylic acid, benzyl isononyl alkyl esters				10 - <20%
CAS number: 68515-40-2		EC number: 271-082-5		REACH registration number: 01-2119519234-46-XXXX
Classification				
Not Classified				
Titanium dioxide				3 - 7%
CAS number: 13463-67-7		EC number: 236-675-5		REACH registration number: 01-2119489379-17-XXXX
Classification				
Carc. 2 - H351				
Reaction mass of benzyl 1-(isobutyryloxy)-2,2,4-trimethylpentan-3-yl phthalate and benzyl 3-(isobutyryloxy)-2,2,4-trimethylpentyl phthalate				< 5%
CAS number: —		EC number: 701-008-3		REACH registration number: 01-2119519236-42-XXXX
Classification				
Not Classified				

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Reaction mass of calcium carbonate and calcium dihydroxide and calcium peroxide	< 5%
CAS number: —	REACH registration number: 01-2119974579-15-XXXX
Classification Ox. Sol. 1 - H271 Eye Dam. 1 - H318 STOT SE 3 - H335	
Barium oxide, obtained by calcining witherite	< 3%
CAS number: 1304-28-5	EC number: 215-127-9
REACH registration number: 01-2120078585-44-XXXX	
Classification Ox. Sol. 1 - H271 Acute Tox. 3 - H301 Skin Corr. 1A - H314 Eye Dam. 1 - H318	
Phenol, 4,4'-(1-methylethylidene)bis-,polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane]	<2%
CAS number: 25036-25-3	
Classification Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317	
Terphenyl, hydrogenated	< 1%
CAS number: 61788-32-7	EC number: 262-967-7
REACH registration number: 01-2119488183-33-XXXX	
Classification Aquatic Chronic 2 - H411	

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Xylene		< 1%
CAS number: 1330-20-7	EC number: 215-535-7	REACH registration number: 01-2119488216-32-XXXX
Classification		
Flam. Liq. 3 - H226		
Acute Tox. 4 - H312		
Acute Tox. 4 - H332		
Skin Irrit. 2 - H315		
Eye Irrit. 2 - H319		
STOT SE 3 - H335		
STOT RE 2 - H373		
Asp. Tox. 1 - H304		
Aquatic Chronic 3 - H412		
2-Mercaptoethanol		< 0.3%
CAS number: 60-24-2	EC number: 200-464-6	
M factor (Acute) = 1		
Classification		
Acute Tox. 3 - H301		
Acute Tox. 2 - H310		
Acute Tox. 3 - H331		
Skin Irrit. 2 - H315		
Eye Dam. 1 - H318		
Skin Sens. 1A - H317		
Repr. 2 - H361f		
STOT RE 2 - H373		
Aquatic Acute 1 - H400		
Aquatic Chronic 2 - H411		
Ethylbenzene		< 0.3%
CAS number: 100-41-4	EC number: 202-849-4	REACH registration number: 01-2119489370-35-XXXX
Classification		
Flam. Liq. 2 - H225		
Acute Tox. 4 - H332		
STOT RE 2 - H373		
Asp. Tox. 1 - H304		
Silicon dioxide, chemically prepared		< 0.1%
CAS number: 112945-52-5	EC number: 231-545-4	REACH registration number: 01-2119379499-16-XXXX
Classification		
Not Classified		

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Quartz	< 0.1%
CAS number: 14808-60-7	EC number: 238-878-4
Classification	
Not Classified	

The full text for all hazard statements is displayed in Section 16.

Composition comments Light colours of this product may contain at least 1% of titanium dioxide but less than 1% of all particles have a diameter $\leq 10 \mu\text{m}$ therefore the classification Carc. 2; H351 does not apply. The labelling statement, EUH212 ('Warning! Hazardous respirable dust may be formed when used. Do not breathe dust') applies however considering the form and use of the product it is unlikely that respirable dust will be generated.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information If in doubt, get medical attention promptly. Never give anything by mouth to an unconscious person.

Inhalation Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.

Ingestion Rinse mouth thoroughly with water. Give plenty of water to drink. Give milk instead of water if readily available. Get medical attention if any discomfort continues.

Skin contact Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues. In the event of any sensitisation symptoms developing, ensure further exposure is avoided.

Eye contact Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing.

Protection of first aiders First aid personnel should wear appropriate protective equipment during any rescue.

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

Inhalation No specific symptoms known.

Ingestion May cause discomfort if swallowed.

Skin contact Causes skin irritation. May cause an allergic skin reaction.

Eye contact Causes serious eye damage.

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

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Water spray, foam, dry powder or carbon dioxide.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Toxic gases or vapours.

Hazardous combustion products Carbon dioxide (CO₂). Carbon monoxide (CO). Hydrogen sulphide (H₂S). Sulphurous gases (SO_x).

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5.3. Advice for firefighters

Protective actions during firefighting Control run-off water by containing and keeping it out of sewers and watercourses.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet. Avoid contact with skin and eyes. Remove contaminated clothing and rinse skin thoroughly with water. Contaminated work clothing should not be allowed out of the workplace.

6.2. Environmental precautions

Environmental precautions Avoid discharge into drains or watercourses or onto the ground. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Collect and place in suitable waste disposal containers and seal securely. Avoid the spillage or runoff entering drains, sewers or watercourses.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid contact with skin and eyes. Persons susceptible to allergic reactions should not handle this product. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product.

Advice on general occupational hygiene Wash promptly with soap and water if skin becomes contaminated. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

1,2-Benzenedicarboxylic acid, benzyl isononyl alkyl esters

Similar phthalates (di-isooctyl phthalate, di-isononyl phthalate, di-isodecyl phthalate: Long-term exposure limit (8-hour TWA): WEL 5 mg/m³

Titanium dioxide

Long-term exposure limit (8-hour TWA): WEL 4 mg/m³ respirable dust

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ inhalable dust

Terphenyl, hydrogenated

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Long-term exposure limit (8-hour TWA): WEL 2 ppm 19 mg/m³

Short-term exposure limit (15-minute): WEL 5 ppm 48 mg/m³

Xylene

Long-term exposure limit (8-hour TWA): WEL 50 ppm 220 mg/m³

Short-term exposure limit (15-minute): WEL 100 ppm 441 mg/m³

Sk, BMGV

Ethylbenzene

Long-term exposure limit (8-hour TWA): WEL 100 ppm 441 mg/m³

Short-term exposure limit (15-minute): WEL 125 ppm 552 mg/m³

Sk

Silicon dioxide, chemically prepared

Silica, amorphous - Inhalable dust: Long-term exposure limit (8-hour TWA) WEL: 6 mg/m³, Respirable dust: Long-term exposure limit (8-hour TWA) WEL: 2.4 mg/m³

WEL = Workplace Exposure Limit.

Sk = Can be absorbed through the skin.

BMGV = Biological monitoring guidance value.

1,2-Benzenedicarboxylic acid, benzyl isononyl alkyl esters (CAS: 68515-40-2)

DNEL Workers - Inhalation; Long term systemic effects: 1.32 mg/m³
Workers - Dermal; Long term systemic effects: 2.8 mg/kg/day

Terphenyl, hydrogenated (CAS: 61788-32-7)

DNEL Workers - Inhalation; Long term systemic effects: 2.01 mg/m³
Workers - Dermal; Long term systemic effects: 0.622 mg/kg/day

PNEC

- Fresh water; 2 µg/l
- marine water; 0.2 µg/l
- Intermittent release, Fresh water; 13.4 µg/l
- STP; 10.3 mg/l
- Sediment (Freshwater); 63.2 mg/kg
- Sediment (Marinewater); 6.32 mg/kg
- Soil; 12.6 mg/kg
- Oral (food); 2.22 mg/kg

Xylene (CAS: 1330-20-7)

Biological limit values Xylene, o-, m-, p- or mixed isomers: 650 mmol methyl hippuric acid/mol creatinine in urine. Post shift.

DNEL Workers - Inhalation; Long term systemic effects: 221 mg/m³
Workers - Inhalation; Short term systemic effects: 442 mg/m³
Workers - Dermal; Long term systemic effects: 212 mg/kg/day

PNEC

- Fresh water; 0.327 mg/l
- marine water; 0.327 mg/l
- Intermittent release; 0.327 mg/l
- STP; 6.58 mg/l
- Sediment (Freshwater); 12.46 mg/kg
- Sediment (Marinewater); 12.46 mg/kg
- Soil; 2.31 mg/kg

2-Mercaptoethanol (CAS: 60-24-2)

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DNEL	Workers - Inhalation; Long term systemic effects: 4 mg/m ³ Workers - Dermal; Long term systemic effects: 0.6 mg/kg/day
PNEC	- Fresh water; 0.00632 mg/l - marine water; 0.000632 mg/l - Intermittent release; 0.004 mg/l - STP; 60 mg/l - Sediment (Freshwater); 0.0236 mg/kg - Sediment (Marinewater); 0.00236 mg/kg - Soil; 0.00101 mg/kg

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation.

Eye/face protection

Wear eye protection. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection

Wear protective gloves made of the following material: Polyvinyl chloride (PVC). Nitrile rubber. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material.

Other skin and body protection

Wear appropriate clothing to prevent repeated or prolonged skin contact.

Hygiene measures

Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated.

Respiratory protection

Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.

Environmental exposure controls

Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Paste.
Colour	Various colours.
Odour	Aromatic.
Odour threshold	No information available.
pH	Technically not feasible.
Melting point	Liquid polysulphide polymer: -60°C
Initial boiling point and range	No information available.
Flash point	Liquid polysulphide polymer: > 230°C
Evaporation rate	No information available.
Evaporation factor	No information available.

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Flammability (solid, gas)	No information available.
Upper/lower flammability or explosive limits	No information available.
Vapour pressure	Liquid polysulphide polymer: 12.6 hPa @ 20°C
Vapour density	No information available.
Relative density	1.53 - 1.56 @ 20°C
Solubility(ies)	Insoluble in water.
Partition coefficient	No information available.
Auto-ignition temperature	No information available.
Decomposition Temperature	Not determined.
Viscosity	8, 000 - 12, 000 P @ 20°C
Explosive properties	Not considered to be explosive.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Other information None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity See the other subsections of this section for further details.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Not known. Will not polymerise.

10.4. Conditions to avoid

Conditions to avoid Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials

Materials to avoid Strong acids. Strong alkalis. Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition or combustion products may include the following substances: Hydrogen sulphide (H₂S). Sulphurous gases (SO_x). Formaldehyde. Mercaptan.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects There are no data available on this product.

Acute toxicity - oral

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

ATE oral (mg/kg) 5,072.46

Acute toxicity - dermal

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Notes (dermal LD₅₀)	Based on available data the classification criteria are not met.
ATE dermal (mg/kg)	80,000.0
<u>Acute toxicity - inhalation</u>	
Notes (inhalation LC₅₀)	Based on available data the classification criteria are not met.
ATE inhalation (gases ppm)	446,428.57
<u>Skin corrosion/irritation</u>	
Skin corrosion/irritation	Skin Irrit. 2 Causes skin irritation.
Animal data	Based on available data the classification criteria are not met.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Eye Dam. 1 Causes serious eye damage.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	Based on available data the classification criteria are not met.
<u>Skin sensitisation</u>	
Skin sensitisation	Skin Sens. 1 May cause an allergic skin reaction.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Based on available data the classification criteria are not met.
<u>Carcinogenicity</u>	
Carcinogenicity	Based on available data the classification criteria are not met.
<u>Reproductive toxicity</u>	
Reproductive toxicity - development	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.
<u>Aspiration hazard</u>	
Aspiration hazard	Not applicable.
<u>Inhalation</u>	
Inhalation	No specific health hazards known.
<u>Ingestion</u>	
Ingestion	May cause discomfort if swallowed.
<u>Skin contact</u>	
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
<u>Eye contact</u>	
Eye contact	Causes serious eye damage.
<u>Route of exposure</u>	
Route of exposure	Oral Dermal Inhalation
<u>Medical considerations</u>	
Medical considerations	Skin disorders and allergies.

Toxicological information on ingredients.

Liquid polysulfide polymer. Mercaptan terminated liquid polymer of diethyleneoxymethane with Sx linkages.

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ >2000 mg/kg, Oral, Rat

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Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ >2000 mg/kg, Dermal, Rabbit

1,2-Benzenedicarboxylic acid, benzyl isononyl alkyl esters

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 15,800.0

Species Rat

ATE oral (mg/kg) 15,800.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 7,940.0

Species Rabbit

ATE dermal (mg/kg) 7,940.0

Titanium dioxide

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 10,000.0

Species Rat

Notes (oral LD₅₀) LD₅₀ >10000 mg/kg, Oral, Rat

ATE oral (mg/kg) 10,000.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 10,000.0

Species Rabbit

Notes (dermal LD₅₀) LD₅₀ >10000 mg/kg, Dermal, Rabbit

ATE dermal (mg/kg) 10,000.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ dust/mist mg/l) 6.82

Species Rat

Notes (inhalation LC₅₀) LC₅₀ >6.82 mg/l, Inhalation, Rat

ATE inhalation (dusts/mists mg/l) 6.82

Carcinogenicity

Carcinogenicity Suspected of causing cancer by inhalation.

Target organ for carcinogenicity Lungs

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Barium oxide, obtained by calcining witherite

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 147.0

Species Rat

ATE oral (mg/kg) 147.0

Germ cell mutagenicity

Genotoxicity - in vitro Negative.

Phenol, 4,4'-(1-methylethylidene)bis-,polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy)methylene]]bis[oxirane]

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ >2000 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ >2000 mg/kg, Dermal, Rat

Terphenyl, hydrogenated

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 12,500.0

Species Rat

Notes (oral LD₅₀) LD₅₀ > 10000 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ >2,000 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LC₅₀ > 4.7 mg/l/4hr/day, Inhalation, Rat

Xylene

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 3,523.0

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 12,126.0

Species Rabbit

ATE dermal (mg/kg) 1,100.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 27.124

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Species Rat

ATE inhalation (vapours mg/l) 11.0

Skin corrosion/irritation

Animal data Primary dermal irritation index: 3.0 Moderately irritating.

Serious eye damage/irritation

Serious eye damage/irritation Moderately irritating.

Respiratory sensitisation

Respiratory sensitisation No specific test data are available.

Specific target organ toxicity - single exposure

STOT - single exposure Respiratory irritation.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

Aspiration hazard May be fatal if swallowed and enters airways.

2-Mercaptoethanol

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 98.0

Species Rat

ATE oral (mg/kg) 98.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 112.0

Species Rabbit

ATE dermal (mg/kg) 112.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ gases ppmV) 625.0

Species Rat

ATE inhalation (gases ppm) 625.0

Skin corrosion/irritation

Animal data Erythema/eschar score: Well defined erythema (2). Oedema score: Slight oedema - edges of area well defined by definite raising (2).

Serious eye damage/irritation

Serious eye damage/irritation Irritating.

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Skin sensitisation

Skin sensitisation Sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro Negative.

Genotoxicity - in vivo Negative.

Ethylbenzene

Acute toxicity - inhalation

**ATE inhalation (vapours
mg/l)** 11.0

Silicon dioxide, chemically prepared

Acute toxicity - oral

**Acute toxicity oral (LD₅₀
mg/kg)** 5,000.0

Species Rat

Notes (oral LD₅₀) LD₅₀ >5000 mg/kg, Oral, Rat

ATE oral (mg/kg) 5,000.0

Acute toxicity - dermal

**Acute toxicity dermal (LD₅₀
mg/kg)** 5,000.0

Species Rabbit

Notes (dermal LD₅₀) LD₅₀ >5000 mg/kg, Dermal, Rabbit

ATE dermal (mg/kg) 5,000.0

SECTION 12: Ecological information

Ecotoxicity The product contains a substance which is harmful to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

12.1. Toxicity

Toxicity No data available.

Acute aquatic toxicity

Summary Based on available data the classification criteria are not met.

Chronic aquatic toxicity

Summary Aquatic Chronic 3 Harmful to aquatic life with long lasting effects.

Ecological information on ingredients.

Liquid polysulfide polymer. Mercaptan terminated liquid polymer of diethyleneoxymethane with Sx linkages.

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 320 mg/l, Pimephales promelas (Fat-head Minnow)
LC₅₀, 96 hours: >1000 mg/l, Cyprinodon variegatus (Sheepshead minnow)

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Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 32 mg/l, Daphnia magna
 LC₅₀, 96 hours: 59 mg/l, Mysidopsis bahia (saltwater mysid)

Acute toxicity - aquatic plants EC₅₀, 72 hours: 17 mg/l, Selenastrum capricornutum

1,2-Benzenedicarboxylic acid, benzyl isononyl alkyl esters

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: >1000 mg/l, Oncorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates LC₅₀, 48 hours: 4.5 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 96 hours: >1000 ppm, Pseudokirchneriella subcapitata

Titanium dioxide

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: >100 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: >100 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: >10000 mg/l, Diatom

Barium oxide, obtained by calcining witherite

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: >97.5 mg/l, Brachydanio rerio (Zebra Fish)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 14.5 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: > 34.31 mg/l, Pseudokirchneriella subcapitata

Acute toxicity - microorganisms EC₅₀, 3 hours: >1000 mg/l, Activated sludge

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates EC₅₀, 21 days: 8.9 mg/l, Daphnia magna

Terphenyl, hydrogenated

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: >1000 mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: > 1.34 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 48 hours: > 320 mg/l, Pseudokirchneriella subcapitata

Acute toxicity - microorganisms NOEC, 3 hours: 103 mg/l, Activated sludge

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Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates NOELR, 21 days: <1 mg/l, Daphnia magna

Xylene

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 2.6 - 11.23 mg/l, Fish

Acute toxicity - aquatic invertebrates IC₅₀, 24 hours: 1 mg/l, Daphnia magna
EC₅₀, 48 hours: 3.82 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: 2.2 mg/l, Selenastrum capricornutum

Chronic aquatic toxicity

Chronic toxicity - fish early life stage NOEC, 56 days: > 1.3 mg/l, Oncorhynchus mykiss (Rainbow trout)

Chronic toxicity - aquatic invertebrates NOEC, 7 days: 0.96 mg/l, Ceriodaphnia sp.

2-Mercaptoethanol

Acute aquatic toxicity

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

M factor (Acute) 1

Acute toxicity - fish LC₅₀, 96 hours: 37 mg/l, Leuciscus idus (Golden orfe)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 0.4 mg/l, Daphnia magna
NOEC, 48 hours: >0.0632 mg/l, Daphnia magna
LOEC, 48 hours: 0.1264 mg/l, Daphnia magna

Acute toxicity - aquatic plants LC₅₀, 96 hours: 19 mg/l, Desmodesmus subspicatus

Acute toxicity - microorganisms EC₁₀, 17 hours: 60 mg/l, Pseudomonas putida

Silicon dioxide, chemically prepared

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: >10000 mg/l, Brachydanio rerio (Zebra Fish)

Acute toxicity - aquatic invertebrates EC₅₀, 24 hours: >1000 mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability No data available.

Ecological information on ingredients.

Liquid polysulfide polymer. Mercaptan terminated liquid polymer of diethyleneoxymethane with Sx linkages.

Persistence and degradability Not readily biodegradable.

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1,2-Benzenedicarboxylic acid, benzyl isononyl alkyl esters

Persistence and degradability Readily biodegradable

Xylene

Biodegradation The substance is readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient No information available.

Ecological information on ingredients.

Liquid polysulfide polymer. Mercaptan terminated liquid polymer of diethyleneoxymethane with Sx linkages.

Bioaccumulative potential Bioaccumulation is unlikely.

1,2-Benzenedicarboxylic acid, benzyl isononyl alkyl esters

Bioaccumulative potential BCF: 840, Pimephales promelas (Fat-head Minnow)

Titanium dioxide

Bioaccumulative potential BCF: 9.6, Cyprinus carpio (Common carp) 42 days

Terphenyl, hydrogenated

Bioaccumulative potential BCF: 700 - 5200,

Partition coefficient log Pow: 6.5

Xylene

Bioaccumulative potential BCF: 25.9, Oncorhynchus mykiss (Rainbow trout)

Partition coefficient log Pow: 3.2

12.4. Mobility in soil

Mobility The product is insoluble in water.

Ecological information on ingredients.

Liquid polysulfide polymer. Mercaptan terminated liquid polymer of diethyleneoxymethane with Sx linkages.

Mobility Not considered mobile.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product contains terphenyl, hydrogenated which is considered to be a vPvB substance.

Ecological information on ingredients.

Terphenyl, hydrogenated

Results of PBT and vPvB assessment This substance is classified as vPvB.

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12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Waste is classified as hazardous waste. When handling waste, the safety precautions applying to handling of the product should be considered.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Waste class HP4 Irritant HP13 Sensitising HP14 Ecotoxic 08 04 09*

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/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

Transport in bulk according to Not applicable.

**Annex II of MARPOL 73/78
and the IBC Code**

SECTION 15: Regulatory information

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

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National regulations

The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019, UK SI 2019/720. The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2020, UK SI 2020/1567.

The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, UK SI 2019/758, UK SI 2019/858 and UK SI 2019/1144. The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020, UK SI 2020/1577.

The Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No. 2677) (as amended).

Health and Safety at Work etc. Act 1974 (as amended).

EH40/2005 Workplace exposure limits.

EU legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

Health and environmental listings

Terphenyl, hydrogenated is on the GB and the EU Candidate Lists of Substances of Very High Concern (SVHCs) (vPvB (Article 57e)).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

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Abbreviations and acronyms used in the safety data sheet	<p>ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.</p> <p>ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.</p> <p>ATE: Acute Toxicity Estimate.</p> <p>BCF: Bioconcentration Factor.</p> <p>BOD: Biochemical Oxygen Demand.</p> <p>CAS: Chemical Abstracts Service.</p> <p>cATpE: Converted Acute Toxicity Point Estimate.</p> <p>DMEL: Derived Minimal Effect Level.</p> <p>DNEL: Derived No Effect Level.</p> <p>EC₅₀: 50% of maximal Effective Concentration.</p> <p>GHS: Globally Harmonized System.</p> <p>IATA: International Air Transport Association.</p> <p>ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.</p> <p>IMDG: International Maritime Dangerous Goods.</p> <p>Kow: Octanol-water partition coefficient.</p> <p>LC₅₀: Lethal Concentration to 50 % of a test population.</p> <p>LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).</p> <p>LOAEC: Lowest Observed Adverse Effect Concentration.</p> <p>LOAEL: Lowest Observed Adverse Effect Level.</p> <p>LOEC: Lowest Observed Effect Concentration.</p> <p>MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.</p> <p>NOAEC: No Observed Adverse Effect Concentration.</p> <p>NOAEL: No Observed Adverse Effect Level.</p> <p>NOEC: No Observed Effect Concentration.</p> <p>PBT: Persistent, Bioaccumulative and Toxic substance.</p> <p>PNEC: Predicted No Effect Concentration.</p> <p>REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.</p> <p>SVHC: Substances of Very High Concern.</p> <p>UVCB - Unknown or variable composition, complex reaction products or Biological materials.</p> <p>vPvB: Very Persistent and Very Bioaccumulative.</p>
Classification abbreviations and acronyms	<p>Acute Tox. = Acute toxicity</p> <p>Aquatic Acute = Hazardous to the aquatic environment (acute)</p> <p>Aquatic Chronic = Hazardous to the aquatic environment (chronic)</p> <p>Carc. = Carcinogenicity</p> <p>Eye Dam. = Serious eye damage</p> <p>Eye Irrit. = Eye irritation</p> <p>Ox. Sol. = Oxidising solid</p> <p>Repr. = Reproductive toxicity</p> <p>Skin Corr. = Skin corrosion</p> <p>Skin Irrit. = Skin irritation</p> <p>Skin Sens. = Skin sensitisation</p> <p>STOT RE = Specific target organ toxicity-repeated exposure</p>
Key literature references and sources for data	<p>SDS from supplier. Source: European Chemicals Agency, http://echa.europa.eu/</p>
Classification procedures according to Regulation (EC) 1272/2008	<p>Eye Dam. 1 - H318, Skin Irrit. 2 - H315, Skin Sens. 1 - H317, Aquatic Chronic 3 - H412: Calculation method.</p>
Revision comments	<p>Revised classification. Revised sections: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16.</p>

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Revision date	15/03/2022
Revision	2
Supersedes date	13/04/2017
SDS number	10157
SDS status	Approved.
Hazard statements in full	<p>H225 Highly flammable liquid and vapour. H226 Flammable liquid and vapour. H271 May cause fire or explosion; strong oxidiser. H301 Toxic if swallowed. H304 May be fatal if swallowed and enters airways. H310 Fatal 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. H331 Toxic if inhaled. H332 Harmful if inhaled. H335 May cause respiratory irritation. H351 Suspected of causing cancer by inhalation. H361f Suspected of damaging fertility. H373 May cause damage to organs (Heart, Liver) through prolonged or repeated exposure. H373 May cause damage to organs through prolonged or repeated exposure. H400 Very toxic to aquatic life. H411 Toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects.</p>

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.