

ALPHA

SAFETY DATA SHEET S 248

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

1.1. Product identifier

Product name S 248

Product number S 248

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

Identified uses Adhesive.

Uses advised against No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier

Alpha Adhesives & Sealants Ltd
Llewellyn Close
Sandy Lane Ind. Estate
Stourport-on-Severn
Worcs. UK
DY13 9RH
Tel: 0044(0)1299 828626
Fax: 0044(0)1299 828666
Email: sales@alpha-adhesives.co.uk

1.4. Emergency telephone number

Emergency telephone 44 (0) 1299 828626 (Available 08.30 to 17.00)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Flam. Liq. 2 - H225

Health hazards Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Repr. 2 - H361d STOT SE 3 - H336

Environmental hazards Aquatic Chronic 2 - H411

Human health Contains a substance/a group of substances which may damage the unborn child.

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

Physicochemical The product is highly flammable. Vapours may form explosive mixtures with air.

2.2. Label elements

Pictogram



Signal word

Danger

S 248

Hazard statements	<p>H225 Highly flammable liquid and vapour. H302 Harmful if swallowed. H315 Causes skin irritation. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. H361d Suspected of damaging the unborn child. H411 Toxic to aquatic life with long lasting effects.</p>
Precautionary statements	<p>P202 Do not handle until all safety precautions have been read and understood. P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P241 Use explosion-proof electrical equipment. P243 Take precautionary measures against static discharge. P261 Avoid breathing vapour/ spray. P403+P233 Store in a well-ventilated place. Keep container tightly closed.</p>
Contains	Hydrocarbons,C6-C7,n-alkanes,isoalkanes,cyclics,<5%n-hexane, ACETONE, TOLUENE
Supplementary precautionary statements	<p>P201 Obtain special instructions before use. P240 Ground/ bond container and receiving equipment. P242 Use only non-sparking tools. P264 Wash contaminated skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. P302+P352 IF ON SKIN: Wash with plenty of water. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 IF exposed or concerned: Get medical advice/ attention. P312 Call a POISON CENTER/ doctor if you feel unwell. P321 Specific treatment (see medical advice on this label). P330 Rinse mouth. P332+P313 If skin irritation occurs: Get medical advice/ attention. P337+P313 If eye irritation persists: Get medical advice/ attention. P362+P364 Take off contaminated clothing and wash it before reuse. P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish. P391 Collect spillage. P403+P235 Store in a well-ventilated place. Keep cool. P405 Store locked up. P501 Dispose of contents/ container in accordance with national regulations.</p>

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

S 248

Hydrocarbons,C6-C7,n-alkanes,isoalkanes,cyclics,<5%n-hexane			35-50%
CAS number: —	EC number: 921-024-6	REACH registration number: 01-2119475514-35	
Classification			
Flam. Liq. 2 - H225			
Skin Irrit. 2 - H315			
STOT SE 3 - H336			
Asp. Tox. 1 - H304			
Aquatic Chronic 2 - H411			
ACETONE			20-35%
CAS number: 67-64-1	EC number: 200-662-2	REACH registration number: 01-2119471330-49	
Classification			
Flam. Liq. 2 - H225			
Eye Irrit. 2 - H319			
STOT SE 3 - H336			
TOLUENE			5-10%
CAS number: 108-88-3	EC number: 203-625-9	REACH registration number: 01-2119471310-51	
Classification			
Flam. Liq. 2 - H225			
Skin Irrit. 2 - H315			
Repr. 2 - H361d			
STOT SE 3 - H336			
STOT RE 2 - H373			
Asp. Tox. 1 - H304			
ETHANOL			1-5%
CAS number: 64-17-5	EC number: 200-578-6	REACH registration number: 01-2119457610-43	
Classification			
Flam. Liq. 2 - H225			
Eye Irrit. 2 - H319			

S 248

HEXANE-norm	<1%
CAS number: 110-54-3	EC number: 203-777-6
Classification	
Flam. Liq. 2 - H225	
Skin Irrit. 2 - H315	
Repr. 2 - H361f	
STOT SE 3 - H336	
STOT RE 2 - H373	
Asp. Tox. 1 - H304	
Aquatic Chronic 2 - H411	
Butylated reaction product of p-cresol & dicyclopentadiene	<1%
CAS number: 68610-51-5	EC number: 271-867-2
M factor (Acute) = 1	
Classification	
Aquatic Acute 1 - H400	
Aquatic Chronic 4 - H413	

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

Composition comments The product contains organic solvents.

Chemical Nature

chemical nature

SECTION 4: First aid measures**4.1. Description of first aid measures**

General information	Move affected person to fresh air at once. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention.
Inhalation	Remove affected person from source of contamination. Move affected person to fresh air at once. If spray/mist has been inhaled, proceed as follows. 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. Get medical attention if a large quantity has been ingested. Show this Safety Data Sheet to the medical personnel.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water.
Eye contact	Remove contact lenses, if present and easy to do. Continue rinsing. Continue to rinse for at least 15 minutes and get medical attention.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

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

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Vapours may cause headache, fatigue, dizziness and nausea.
Ingestion	May cause stomach pain or vomiting.

S 248

Skin contact	Prolonged contact may cause redness, irritation and dry skin.
Eye contact	Irritating to eyes. Symptoms following overexposure may include the following: Redness. Pain.

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

Notes for the doctor	No specific recommendations. If in doubt, get medical attention promptly.
Specific treatments	Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide or dry powder.
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	Heating may generate flammable vapours. The product is highly flammable. Vapours may form explosive mixtures with air. Vapours may accumulate on the floor and in low-lying areas.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Irritating gases or vapours. Carbon monoxide (CO). Carbon dioxide (CO ₂). Hydrogen chloride (HCl).

5.3. Advice for firefighters

Protective actions during firefighting	Avoid breathing fire gases or vapours. Ventilate closed spaces before entering them. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Cool containers exposed to flames with water until well after the fire is out.
Special protective equipment for firefighters	Wear chemical protective suit. Use air-supplied respirator, gloves and protective goggles.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure suitable respiratory protection is worn during removal of spillages in confined areas. Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate.
For non-emergency personnel	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.
For emergency responders	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

6.2. Environmental precautions

Environmental precautions	Do not discharge into drains or watercourses or onto the ground.
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6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Absorb spillage with sand or other inert absorbent.
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6.4. Reference to other sections

Reference to other sections	Wear protective clothing as described in Section 8 of this safety data sheet.
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SECTION 7: Handling and storage

S 248

7.1. Precautions for safe handling

Usage precautions	Keep away from heat, sparks and open flame. Good personal hygiene procedures should be implemented. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. Avoid inhalation of vapours/spray and contact with skin and eyes.
Advice on general occupational hygiene	Wash promptly with soap and water if skin becomes contaminated. Use appropriate hand lotion to prevent defatting and cracking of skin.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions	Keep away from oxidising materials, heat and flames. Store in tightly-closed, original container in a dry, cool and well-ventilated place. Store at temperatures between 5°C and 25°C.
Storage class	Flammable liquid storage.

7.3. Specific end use(s)

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

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

ACETONE

Long-term exposure limit (8-hour TWA): WEL 500 ppm 1210 mg/m³
 Short-term exposure limit (15-minute): WEL 1500 ppm 3620 mg/m³

TOLUENE

Long-term exposure limit (8-hour TWA): 50 191
 Short-term exposure limit (15-minute): 100 384

ETHANOL

Long-term exposure limit (8-hour TWA): WEL 1000 ppm 1920 mg/m³
 Short-term exposure limit (15-minute): WEL

HEXANE-norm

Long-term exposure limit (8-hour TWA): WEL 20 ppm 72 mg/m³
 Short-term exposure limit (15-minute): WEL

METHANOL

Long-term exposure limit (8-hour TWA): WEL 200 ppm(Sk) 266 mg/m³(Sk)
 Short-term exposure limit (15-minute): WEL 250 ppm(Sk) 333 mg/m³(Sk)
 WEL = Workplace Exposure Limit

Hydrocarbons,C6-C7,n-alkanes,isoalkanes,cyclics,<5%n-hexane

DNEL	Consumer - Oral; Long term systemic effects: 699 mg/kg/day Industry - Oral; Long term systemic effects: 2035 mg/kg/day Consumer - Dermal; Long term systemic effects: 699 mg/kg/day - Dermal; Long term systemic effects: 773 mg/kg/day Consumer - Inhalation; Long term systemic effects: 608 mg/m ³
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ACETONE (CAS: 67-64-1)

Ingredient comments	WEL = Workplace Exposure Limits
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S 248

DNEL Industry - Dermal; Short term systemic effects: 186 mg/m³
 Industry - Inhalation; Short term local effects: 2420 mg/m³
 Industry - Inhalation; Long term systemic effects: 1210 mg/m³
 Consumer - Dermal; Long term systemic effects: 62 mg/kg/day
 Consumer - Inhalation; Long term systemic effects: 200 mg/m³
 Consumer - Oral; Long term systemic effects: 62 mg/m³
 Industry - Dermal; Long term systemic effects: 186 mg/kg/day

PNEC - Fresh water; 10.6 mg/l
 - Marine water; 1.06 mg/l
 - Sediment (Freshwater); 30.4 mg/kg
 - Sediment (Marinewater); 3.04 mg/kg
 - Soil; 29.5 mg/kg
 - STP; 100 mg/l

TOLUENE (CAS: 108-88-3)

DNEL Consumer - Oral; Long term systemic effects: 8.13 mg/m³
 Industry - Dermal; Long term systemic effects: 384 mg/kg/day
 Consumer - Inhalation; Short term local effects: 226 mg/m³
 Consumer - Inhalation; Short term systemic effects: 226 mg/m³
 Industry - Inhalation; Short term systemic effects: 384 mg/m³
 Industry - Inhalation; Short term local effects: 384 mg/m³
 Industry - Inhalation; Long term local effects: 192 mg/m³
 Consumer - Inhalation; Long term systemic effects: 56.5 mg/m³
 Industry - Inhalation; Long term systemic effects: 192 mg/m³

PNEC - Fresh water; 0.68 mg/l
 - Sediment (Freshwater); 16.39 mg/kg
 - STP; 13.61 mg/l
 - Soil; 2.89 mg/kg

ETHANOL (CAS: 64-17-5)

DNEL Consumer - Oral; Long term systemic effects: 87 mg/kg/day
 Consumer - Dermal; Long term systemic effects: 206 mg/kg/day
 Industry - Dermal; Long term systemic effects: 343 mg/kg/day
 Consumer - Inhalation; Short term local effects: 950 mg/m³
 Industry - Inhalation; Short term local effects: 1900 mg/m³
 Consumer - Inhalation; Long term systemic effects: 114 mg/m³
 Industry - Inhalation; Long term systemic effects: 950 mg/m³

PNEC - Fresh water; 0.96 mg/l
 - Sediment (Freshwater); 3.6 mg/kg
 - Marine water; 0.79 mg/l
 - Soil; 0.63 mg/kg

Butylated reaction product of p-cresol & dicyclopentadiene (CAS: 68610-51-5)

DNEL Industry - Oral; Long term systemic effects: 0.8 mg/kg/day
 Industry - Dermal; Long term systemic effects: 4 mg/kg/day
 Industry - Inhalation; Long term systemic effects: 0.35 mg/m³

PNEC - STP; 150.9 mg/l

METHANOL (CAS: 67-56-1)

S 248**DNEL**

Consumer - Oral; Short term systemic effects: 8 mg/kg/day
 Consumer - Oral; Long term systemic effects: 8 mg/kg/day
 Consumer - Dermal; Short term systemic effects: 8 mg/kg/day
 Industry - Dermal; Long term systemic effects: 40 mg/kg/day
 Industry - Dermal; Short term systemic effects: 40 mg/kg/day
 Industry - Inhalation; Short term local effects: 260 mg/m³
 Industry - Inhalation; Short term systemic effects: 260 mg/m³
 Consumer - Inhalation; Short term local effects: 50 mg/m³
 Consumer - Inhalation; Long term systemic effects: 50 mg/m³

PNEC

- Fresh water; 154 mg/l
 - Marine water; 15.4 mg/l
 - STP; 100 mg/l
 - Soil; 23.5 mg/kg
 - Intermittent release; 1,540 mg/l

8.2. Exposure controls**Protective equipment****Appropriate engineering controls**

Provide adequate ventilation. Avoid inhalation of vapours. As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapour or mist. This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

Eye/face protection

Wear chemical splash goggles. Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection

Wear protective gloves made of the following material: Nitrile rubber. To protect hands from chemicals, gloves should comply with European Standard EN374. The selected gloves should have a breakthrough time of at least 6 hours. 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. When used with mixtures, the protection time of gloves cannot be accurately estimated.

Other skin and body protection

Wear suitable protective clothing as protection against splashing or contamination.

Hygiene measures

Use engineering controls to reduce air contamination to permissible exposure level. Wash promptly with soap and water if skin becomes contaminated. Wash at the end of each work shift and before eating, smoking and using the toilet.

Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Combination filter, type A2/P3. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.

Thermal hazards

Contact with hot product can cause serious thermal burns.

Environmental exposure controls

Keep container tightly sealed when not in use.

S 248**SECTION 9: Physical and Chemical Properties****9.1. Information on basic physical and chemical properties**

Appearance	Liquid.
Colour	Red. Straw.
Odour	Hydrocarbons.
Odour threshold	Not determined.
pH	Not available.
Melting point	Not applicable.
Initial boiling point and range	80°C @
Flash point	- 18°C CC (Closed cup).
Evaporation rate	Not determined.
Evaporation factor	Not determined.
Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 0.9 Upper flammable/explosive limit: 19
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	0.8 @ 20°C
Bulk density	Not applicable.
Solubility(ies)	Not determined. Insoluble in water. Soluble in the following materials: Organic solvents.
Partition coefficient	Not determined.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not determined.
Viscosity	Less than 100 cP @ *20°C
Explosive properties	Not determined.
Oxidising properties	Not determined.
Comments	Information declared as "Not available" or "Not applicable" is not considered to be relevant to the implementation of the proper control measures.

9.2. Other information

Refractive index	Not applicable.
Particle size	Not available.
Molecular weight	Not applicable.
Volatility	Highly volatile.
Saturation concentration	Not available.
Critical temperature	Not determined.
Volatile organic compound	This product contains a maximum VOC content of 677 g/litre.

SECTION 10: Stability and reactivity

S 248

10.1. Reactivity

Reactivity There are no known reactivity hazards associated with this product.

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 applicable.

10.4. Conditions to avoid

Conditions to avoid Avoid exposure to high temperatures or direct sunlight.

10.5. Incompatible materials

Materials to avoid No specific material or group of materials is likely to react with the product to produce a hazardous situation.

10.6. Hazardous decomposition products

Hazardous decomposition products Fire creates: Vapours/gases/fumes of: Carbon monoxide (CO). Carbon dioxide (CO₂). Hydrogen chloride (HCl).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) Not determined.

ATE oral (mg/kg) 1,890.36

Acute toxicity - dermal

Notes (dermal LD₅₀) Not determined.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Not determined.

Skin corrosion/irritation

Human skin model test Not determined.

Extreme pH Not determined.

Serious eye damage/irritation

Serious eye damage/irritation Not determined.

General information

Prolonged and repeated contact with solvents over a long period may lead to permanent health problems. Avoid contact during pregnancy/while nursing.

Inhalation

Vapours may cause drowsiness and dizziness.

Ingestion

Harmful if swallowed.

Skin contact

Irritating to skin.

Eye contact

Irritating to eyes. May cause serious eye damage.

Acute and chronic health hazards

Contains a substance/a group of substances which may damage the unborn child.

Route of entry

Inhalation Skin absorption

S 248**Medical symptoms**

Gas or vapour in high concentrations may irritate the respiratory system. Symptoms following overexposure may include the following: Headache. Fatigue. Nausea, vomiting.

Hydrocarbons,C6-C7,n-alkanes,isoalkanes,cyclics,<5%n-hexane**Acute toxicity - oral**

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

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ 2,000.0
mg/kg)

Species Rabbit

ACETONE**Acute toxicity - oral**

Acute toxicity oral (LD₅₀ 5,800.0
mg/kg)

Species Rat

ATE oral (mg/kg) 5,800.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ 7,400.0
mg/kg)

Species Rabbit

Acute toxicity - inhalation

Acute toxicity inhalation 76.0
(LC₅₀ vapours mg/l)

Species Rat

ATE inhalation (vapours 76.0
mg/l)

TOLUENE**Acute toxicity - oral**

Acute toxicity oral (LD₅₀ 4,328.0
mg/kg)

Species Rat

ATE oral (mg/kg) 4,328.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ 6,000.0
mg/kg)

Species Rabbit

ATE dermal (mg/kg) 6,000.0

S 248**Acute toxicity - inhalation**

Acute toxicity inhalation (LC₅₀ vapours mg/l) 21.0

Species Rat

ATE inhalation (vapours mg/l) 21.0

ETHANOL**Acute toxicity - oral**

Acute toxicity oral (LD₅₀ mg/kg) 7,060.0

Species Rat

ATE oral (mg/kg) 7,060.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 2,050.0

Species Rabbit

ATE dermal (mg/kg) 2,050.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 20,000.0

Species Rat

ATE inhalation (vapours mg/l) 20,000.0

Butylated reaction product of p-cresol & dicyclopentadiene**Acute toxicity - oral**

Acute toxicity oral (LD₅₀ mg/kg) 5,500.0

Species Rat

ATE oral (mg/kg) 5,500.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 5,500.0

Species Rabbit

ATE dermal (mg/kg) 5,500.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ dust/mist mg/l) 163.0

Species Rat

S 248

ATE inhalation 163.0
(dusts/mists mg/l)

Specific target organ toxicity - repeated exposure

STOT - repeated exposure NOAEL 160.8 mg/l/6hr/day, Dermal, Rat

SECTION 12: Ecological Information

Ecotoxicity The product contains substances which are toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

12.1. Toxicity

Acute toxicity - fish Not determined.

Acute toxicity - aquatic invertebrates Not determined.

Acute toxicity - aquatic plants Not determined.

Acute toxicity - microorganisms Not determined.

Acute toxicity - terrestrial Not determined.

Chronic toxicity - fish early life stage Not determined.

Short term toxicity - embryo and sac fry stages Not determined.

Chronic toxicity - aquatic invertebrates Not determined.

Hydrocarbons,C6-C7,n-alkanes,isoalkanes,cyclics,<5%n-hexane

Acute toxicity - fish NOEC, : 1 - 10 mg/l,
LC₅₀, 96 hours: 1 - 10 mg/l, Algae

Acute toxicity - aquatic plants IC₅₀, 72 hours: 10 - 100 mg/l, Fish

Acute toxicity - microorganisms EC₅₀, : 1 - 10 mg/l, Activated sludge

ACETONE

Acute toxicity - fish LC₅₀, 96 hours: 5540 mg/l, Onchorhynchus mykiss (Rainbow trout)
LC₅₀, 96 hours: 8,300 mg/l, Lepomis macrochirus (Bluegill)
LC₅₀, 96 hours: >100 mg/l, Algae

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 8,800 mg/l, Daphnia magna

Acute toxicity - aquatic plants NOEC, 96 hours: 430 mg/l, Freshwater algae
IC₅₀, 72 hours: >100 mg/l, Fish

Chronic toxicity - aquatic invertebrates NOEC, 28 days: 10-<100 mg/l, Freshwater invertebrates

S 248**TOLUENE**

Acute toxicity - fish	LC50, 96 hours: 13 mg/l, Carassius auratus (Goldfish) LC50, 96 hours: 24 mg/l, Onchorhynchus mykiss (Rainbow trout)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 11.5 mg/l, Daphnia magna
Acute toxicity - aquatic plants	IC ₅₀ , 72 hours: 12 mg/l, Selenastrum capricornutum
Acute toxicity - microorganisms	NOEC, : 29 mg/l, Activated sludge

ETHANOL

Acute toxicity - fish	LC50, 48 hours: > 100 mg/l, Leuciscus idus (Golden orfe) LC ₅₀ , 96 hours: 1030 mg/l, Algae
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: > 100 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , >: > 100 mg/l, Freshwater algae

Butylated reaction product of p-cresol & dicyclopentadiene**Acute aquatic toxicity**LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

M factor (Acute) 1

Acute toxicity - fish LC50, 48 hours: > 1000 mg/l, Leuciscus idus (Golden orfe)
, 96 hours: > 0.2 mg/l, Onchorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: > 0.2 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: > 0.2 mg/l, Selenastrum capricornutum
NOEC, 72 hours: > 0.2 mg/l, Selenastrum capricornutum

12.2. Persistence and degradability

Persistence and degradability The product is expected to be slowly biodegradable.

Phototransformation Not relevant.

Stability (hydrolysis) Not determined.

Biodegradation Not determined.

Biological oxygen demand Not determined.

Chemical oxygen demand Not determined.

ACETONE

Persistence and degradability The product is readily biodegradable.

S 248

Biodegradation - Degradation (%) : days
readily biodegradable
- Degradation (%) 91: 28 days
readily biodegradable

Biological oxygen demand 1.9 g O₂/g substance

Chemical oxygen demand 2.1 g O₂/g substance

TOLUENE

Persistence and degradability The product is readily biodegradable.

Biodegradation - Degradation (%) 86: 20 days
readily biodegradable

Biological oxygen demand 1.23 g O₂/g substance

ETHANOL

Biodegradation - Degradation (%) 70: >

Butylated reaction product of p-cresol & dicyclopentadiene

Biodegradation Degradation (%)
- 1: 28 days
Not readily biodegradable

12.3. Bioaccumulative potential

Bioaccumulative potential The product does not contain any substances expected to be bioaccumulating.

Partition coefficient Not determined.

ACETONE

Bioaccumulative potential The product is not bioaccumulating. BCF: < 10, Will not accumulate

TOLUENE

Bioaccumulative potential The product is not bioaccumulating. BCF: ,

Butylated reaction product of p-cresol & dicyclopentadiene

Partition coefficient log Pow: 7.56

12.4. Mobility in soil

Mobility The product contains volatile organic compounds (VOCs) which will evaporate easily from all surfaces.

Adsorption/desorption coefficient Not determined.

Henry's law constant Not determined.

Surface tension Not determined.

TOLUENE

S 248

Mobility The product contains volatile organic compounds (VOCs) which will evaporate easily from all surfaces.

12.5. Results of PBT and vPvB assessment**ACETONE**

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

TOLUENE

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects Not known.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

General information Waste liquid components should be suitable for incineration at an approved facility.

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

SECTION 14: Transport information**14.1. UN number**

UN No. (ADR/RID) 1133

UN No. (IMDG) 1133

UN No. (ICAO) 1133

14.2. UN proper shipping name

Proper shipping name (ADR/RID) ADHESIVES (Hydrocarbons,C6-C7,n-alkanes,isoalkanes,cyclics,<5%n-hexane)

Proper shipping name (IMDG) ADHESIVES (Hydrocarbons,C6-C7,n-alkanes,isoalkanes,cyclics,<5%n-hexane)

Proper shipping name (ICAO) ADHESIVES (Hydrocarbons,C6-C7,n-alkanes,isoalkanes,cyclics,<5%n-hexane)

Proper shipping name (ADN) ADHESIVES (Hydrocarbons,C6-C7,n-alkanes,isoalkanes,cyclics,<5%n-hexane)

14.3. Transport hazard class(es)

ADR/RID class 3

ADR/RID label 3

IMDG class 3

ICAO class/division 3

Transport labels**14.4. Packing group**

S 248

ADR/RID packing group	II
IMDG packing group	II
ICAO packing group	II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

**14.6. Special precautions for user**

EmS	F-E, S-D
Emergency Action Code	•3YE
Hazard Identification Number (ADR/RID)	33
Tunnel restriction code	(D/E)

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

National regulations	Control of Pollution Act 1974. Control of Substances Hazardous to Health Regulations 2002 (as amended). Health and Safety at Work etc. Act 1974 (as amended). EH40/2005 Workplace exposure limits.
EU legislation	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). 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).
Guidance	Safety Data Sheets for Substances and Preparations.
Authorisations (Title VII Regulation 1907/2006)	No specific authorisations are known for this product.
Restrictions (Title VIII Regulation 1907/2006)	No specific restrictions on use are known for this product.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

S 248**Abbreviations and acronyms used in the safety data sheet**

ATE: Acute Toxicity Estimate.
 ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
 CAS: Chemical Abstracts Service.
 DNEL: Derived No Effect Level.
 GHS: Globally Harmonized System.
 IATA: International Air Transport Association.
 ICAO-TI: Technical Instructions for the Safe Transport of Dangerous Goods by Air.
 IMDG: International Maritime Dangerous Goods.
 Kow: Octanol-water partition coefficient.
 LC₅₀: Lethal Concentration to 50 % of a test population.
 LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
 PBT: Persistent, Bioaccumulative and Toxic substance.
 PNEC: Predicted No Effect Concentration.
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
 SVHC: Substances of Very High Concern.
 vPvB: Very Persistent and Very Bioaccumulative.
 IARC: International Agency for Research on Cancer.
 MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.
 cATpE: Converted Acute Toxicity Point Estimate.
 BCF: Bioconcentration Factor.
 EC₅₀: 50% of maximal Effective Concentration.
 LOAEC: Lowest Observed Adverse Effect Concentration.
 LOAEL: Lowest Observed Adverse Effect Level.
 NOAEC: No Observed Adverse Effect Concentration.
 NOAEL: No Observed Adverse Effect Level.
 NOEC: No Observed Effect Concentration.
 LOEC: Lowest Observed Effect Concentration.
 DMEL: Derived Minimal Effect Level.
 UN: United Nations.
 IBC: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk (International Bulk Chemical Code).

Key literature references and sources for data

Dangerous Properties of Industrial Materials Report, N.Sax et.al.

Revision comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision date

24/01/2018

Revision

10

Supersedes date

30/11/2017

S 248

Hazard statements in full

H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H361d Suspected of damaging the unborn child.
H361f Suspected of damaging fertility.
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.
H413 May cause long lasting harmful effects to aquatic life.

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.