

SECTION 1: Identification of the substance/mixture and of the company/undertaking1.1. Product identifier

Product name ToobBond Hypalon 2 part Adhesive TF (Part A)

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 Inflatex Ltd
Uxmore Barn, Uxmore Farm
Kit Lane
Checkendon
RG8 0TY
Email: info@ribstore.co.uk

1.4. Emergency telephone number

Emergency telephone +44 1491 340010

SECTION 2: Hazards identification2.1. Classification of the substance or mixture Classification

Physical hazards Flam. Liq. 2 - H225

Health hazards Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Elicitation - EUH208 STOT SE 3 - H336

Environmental hazards Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410

Classification (67/548/EEC or 1999/45/EC) Xi;R36/38. F;R11. N;R50/53. R67.

Human health Irritating to eyes. Irritating to skin. Product has a defatting effect on skin.

Environmental The product contains a substance which is very 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

Hazard statements	H225 Highly flammable liquid and vapour. H315 Causes skin irritation. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. H410 Very toxic to aquatic life with long lasting effects. EUH208 Contains ROSIN. May produce an allergic reaction.
Precautionary statements	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P243 Take precautionary measures against static discharge. P261 Avoid breathing vapour/spray. P273 Avoid release to the environment. P312 Call a POISON CENTER/doctor if you feel unwell. P403+P233 Store in a well-ventilated place. Keep container tightly closed.
Contains	CYCLOHEXANE, BUTANONE, Hydrocarbons,C7-C9,n-alkanes,isoalkanes,cyclics<0.1%benzene, Hydrocarbons,C6 isoalkanes< 5% n-hexane, Hydrocarbons,C7,n-alkanes,isoalkanes,cyclics
Supplementary precautionary statements	P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical equipment. P242 Use only non-sparking tools. P264 Wash contaminated skin thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/protective clothing/eye protection/face protection. 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. P321 Specific treatment (see medical advice on this label). 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.

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

CYCLOHEXANE		30-60%
CAS number: 110-82-7	EC number: 203-806-2	REACH registration number: 012119463273-41
M factor (Acute) = 1	M factor (Chronic) = 1	

<p>Classification (67/548/EEC or 1999/45/EC) F;R11 Xn;R65 Xi;R38 R67 N;R50/53</p> <p>Classification Flam. Liq. 2 - H225 Skin Irrit. 2 - H315 STOT SE 3 - H336 Asp. Tox. 1 - H304 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410</p>		
<p>BUTANONE</p> <p>CAS number: 78-93-3</p>	<p>EC number: 201-159-0</p>	<p>REACH registration number: 012119457290-43</p> <p>30-60%</p>
<p>Classification (67/548/EEC or 1999/45/EC) F;R11 Xi;R36 R66 R67</p> <p>Classification Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336</p>		
<p>Hydrocarbons,C7-C9,n- alkanes,isoalkanes,cyclics<0.1%benzene</p> <p>CAS number: —</p>	<p>EC number: 920-750-0</p>	<p>REACH registration number: 012119473851-33</p> <p>5-10%</p>
<p>Classification (67/548/EEC or 1999/45/EC) Xn;R65. F;R11. N;R51/53. R66,R67.</p> <p>Classification Flam. Liq. 2 - H225 STOT SE 3 - H336 Asp. Tox. 1 - H304 Aquatic Chronic 2 - H411</p>		
<p>Hydrocarbons,C6 isoalkanes< 5% n- hexane</p> <p>CAS number: —</p>	<p>EC number: 931-254-9</p>	<p>REACH registration number: 012119484651-34</p> <p>1-5%</p>
<p>Classification (67/548/EEC or 1999/45/EC) Xn;R65. Xi;R38. F;R11. N;R51/53. R67.</p> <p>Classification Flam. Liq. 2 - H225 Skin Irrit. 2 - H315 Asp. Tox. 1 - H304 STOT SE 3 - H336 STOT SE 3 - H336 Aquatic Chronic 2 - H411</p>		
<p>Hydrocarbons,C7,n- alkanes,isoalkanes,cyclics</p> <p>CAS number: —</p>	<p>EC number: 927-510-4</p>	<p>REACH registration number: 012119475515-33</p> <p>1-5%</p>

Classification Flam. Liq. 2 - H225 Skin Irrit. 2 - H315 Asp. Tox. 1 - H304 STOT SE 3 - H336 STOT SE 3 - H336 Aquatic Chronic 2 - H411	Classification (67/548/EEC or 1999/45/EC) Xn;R65. Xi;R38. F;R11. N;R51/53. R67.	
ZINC OXIDE CAS number: 1314-13-2 M factor (Acute) = 1	EC number: 215-222-5 M factor (Chronic) = 1	<1%
Classification Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	Classification (67/548/EEC or 1999/45/EC) N;R50/53.	
ROSIN CAS number: 8050-09-7 M factor (Acute) = 1	EC number: 232-475-7	<1%
Classification Skin Sens. 1 - H317	Classification (67/548/EEC or 1999/45/EC) R43	
Butylated reaction product of p-cresol & dicyclopentadiene CAS number: 68610-51-5 M factor (Acute) = 1	EC number: 271-867-2	<1%
Classification Aquatic Chronic 4 - H413	Classification (67/548/EEC or 1999/45/EC) R53.	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Composition comments The product contains organic solvents.

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.
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 goggles. for firefighters	Wear chemical protective suit. Use air-supplied respirator, gloves and protective

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

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 hygiene Wash promptly with soap and water if skin becomes contaminated. Use appropriate hand occupational hygiene 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

CYCLOHEXANE

Long-term exposure limit (8-hour TWA): WEL 100 350 mg/m³

Short-term exposure limit (15-minute): WEL 300 1050 mg/m³

BUTANONE

Long-term exposure limit (8-hour TWA): WEL 200 ppm(Sk) 600 mg/m³(Sk)

Short-term exposure limit (15-minute): WEL 300 ppm(Sk) 899 mg/m³(Sk)

Hydrocarbons,C7-C9,n-alkanes,isoalkanes,cyclics<0.1%benzene

Long-term exposure limit (8-hour TWA): WEL 200 ppm 1,000 mg/m³

Hydrocarbons,C7,n-alkanes,isoalkanes,cyclics

Long-term exposure limit (8-hour TWA): OES 500 ppm 2085 mg/m³

ZINC OXIDE

Long-term exposure limit (8-hour TWA): WEL 5 mg/m³

Short-term exposure limit (15-minute): WEL 10 mg/m³

ROSIN

Long-term exposure limit (8-hour TWA): WEL 0.05 mg/m³

Short-term exposure limit (15-minute): WEL 0.15 mg/m³

WEL = Workplace Exposure Limit

CYCLOHEXANE (CAS: 110-82-7)

DNEL

Industry - Inhalation; Short term systemic effects: 700 mg/m³

Industry - Inhalation; Short term local effects: 700 mg/m³

Industry - Dermal; Long term systemic effects: 2016 mg/kg/day

Industry - Inhalation; Long term systemic effects: 700 mg/m³

Industry - Oral; Long term local effects: 700 mg/m³

Consumer - Inhalation; Long term systemic effects: 412 mg/m³

Consumer - Inhalation; Long term local effects: 412 mg/m³

Consumer - Oral; Long term systemic effects: 59.4 mg/kg/day

Consumer - Dermal; Long term systemic effects: 1186 mg/kg/day

PNEC
- Fresh water; 0.207 mg/l
- Marine water; 0.207 mg/l
- STP; 3.24 mg/l
- Sediment (Freshwater); 3.627 mg/kg
- Sediment (Marinewater); 3.627 mg/kg
- Soil; 2.99 mg/kg

BUTANONE (CAS: 78-93-3)

DNEL
Consumer - Oral; Long term systemic effects: 31 mg/kg/day
Consumer - Dermal; Long term systemic effects: 412 mg/kg/day
Industry - Dermal; Long term systemic effects: 1161 mg/kg/day
Consumer - Inhalation; Long term systemic effects: 106 mg/m³
Industry - Inhalation; Long term systemic effects: 600 mg/m³

PNEC
- Fresh water; 55.8 mg/l
- Marine water; 55.8 mg/l
- Intermittent release; 55.8 mg/l
- STP; 709 mg/l
- Sediment (Marinewater); 284.7 mg/kg
- Soil; 22.5 mg/kg
- Sediment (Freshwater); 284.7 mg/kg

Hydrocarbons,C7-C9,n-alkanes,isoalkanes,cyclics<0.1%benzene

DNEL
Consumer - Oral; Long term systemic effects: 699 mg/kg/day
Consumer - Dermal; Long term systemic effects: 699 mg/kg/day
Industry - Dermal; Long term systemic effects: 773 mg/kg/day
Consumer - Inhalation; Long term systemic effects: 608 mg/m³
Industry - Inhalation; Long term systemic effects: 2035 mg/m³

Hydrocarbons,C6 isoalkanes< 5% n-hexane

Ingredient comments
No exposure limits known for ingredient(s).

DNEL
Industry - Dermal; Long term systemic effects: 13,964 mg/kg/day
Industry - Inhalation; Long term systemic effects: 5,306 mg/m³
Consumer - Dermal; Long term systemic effects: 1,377 mg/kg/day
Consumer - Inhalation; Long term systemic effects: 1,131 mg/m³
Consumer - Oral; Long term systemic effects: 1301 mg/kg/day
Hydrocarbons,C7,n-alkanes,isoalkanes,cyclics

DNEL
Industry - Dermal; Long term : 300 mg/kg/day
Industry - Inhalation; Long term : 2085 mg/m³
Consumer - Dermal; Long term : 149 mg/kg/day
Consumer - Inhalation; Long term : 447 mg/m³

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

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 hands 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.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	White/off-white.
Odour	Organic solvents.
Odour threshold	Not determined.
pH	Not available.
Melting point	Not applicable.
Flash point	-6°C CC (Closed cup).
Evaporation rate	Not available.
Evaporation factor	Not determined.
Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 1 Upper flammable/explosive limit: 11.5

Vapour pressure	Not available.
Vapour density	Not available.
Relative density	0.84 - 0.85 @ @ 20°C
Bulk density	Not applicable.
Solubility(ies)	Slightly soluble in water.
Partition coefficient	Not determined.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not determined.
Viscosity	2,700-2,800 cP @ 25°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 660 g/litre.

SECTION 10: Stability and reactivity

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 heat, flames and other sources of ignition.

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: Toxic gases/vapours/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.

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.

Inhalation Vapours may irritate throat/respiratory system. Symptoms following overexposure may include the following: Headache. Dizziness. Drowsiness. Vapours may cause drowsiness and dizziness.

Ingestion May cause stomach pain or vomiting.

Skin contact Irritating to skin. May produce an allergic reaction.

Eye contact Irritating to eyes. Causes serious eye irritation.

Route of entry Inhalation Skin and/or eye contact

Toxicological information on ingredients.

CYCLOHEXANE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 12,705.0

Species Rat

ATE oral (mg/kg) 12,705.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 2,500.0

Species Rabbit

ATE dermal (mg/kg) 2,500.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 2,593.0

Species Rat

BUTANONE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ 2,500.0 mg/kg)

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ 2,500.0 mg/kg)

Species Rabbit

ATE dermal (mg/kg) 2,500.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 5,000.0

Species Rat

ATE inhalation (vapours mg/l) 5,000.0

Hydrocarbons,C7-C9,n-alkanes,isoalkanes,cyclics<0.1%benzene Acute toxicity - oral

Acute toxicity oral (LD₅₀ 5,850.0 mg/kg)

Species Rat

ATE oral (mg/kg) 5,850.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ 3,000.0 mg/kg)

Species Rabbit

ATE dermal (mg/kg) 3,000.0

Hydrocarbons,C6 isoalkanes< 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 Rat

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 20.0

Species Rat

Notes (inhalation LC₅₀) 9.0 - 10.0, ISO 976

ATE inhalation (vapours
mg/l) 20.0

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

ATE inhalation
(dusts/mists mg/l) 163.0

Specific target organ toxicity - repeated exposure

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

Acute toxicity - oral

Acute toxicity oral (LD₅₀
mg/kg) 630.0

Species Rat

ATE oral (mg/kg) 630.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀
mg/kg) 5,390.0

Species Rabbit

ATE dermal (mg/kg) 5,390.0

Acute toxicity - inhalation

Acute toxicity inhalation
(LC₅₀ gases ppmV) 1,318.0

Species Rat

ATE inhalation (gases
ppm) 1,318.0

SECTION 12: Ecological Information

Ecotoxicity Dangerous for the environment if discharged into watercourses. Very toxic to aquatic life with long lasting effects.

12.1. Toxicity

Toxicity Toxic to aquatic organisms

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.

Ecological information on ingredients.

CYCLOHEXANE

Acute aquatic toxicity

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

M factor (Acute) 1

Acute toxicity - fish LC₅₀, 96 hours, 96 hours: 4.53 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours, 48 hours: 31.9 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours, 72 hours: 3.4 mg/l, Selenastrum capricornutum

Chronic aquatic toxicity

M factor (Chronic) 1

BUTANONE

Acute toxicity - fish LC₅₀, 96 hours, 96 hours: 2993 mg/l, Pimephales promelas (Fat-head Minnow) LC₅₀, 48 hours, 48 hours: > 100 mg/l, Leuciscus idus (Golden orfe)

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

Acute toxicity - aquatic plants EC₅₀, 96 hours, 96 hours: 2029 , Freshwater algae

Acute toxicity microorganisms EC₅₀, 96 hours, 96 hours: > 50 mg/l, Activated sludge Hydrocarbons,C7-C9,n-alkanes,isoalkanes,cyclics<0.1%benzene

Acute toxicity - fish	LC ₅₀ , 96 hours: 1-10 mg/l, Fish
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 10-100 mg/l, Daphnia magna
Acute toxicity microorganisms	IC ₅₀ , : 1-10 mg/l, Activated sludge

Hydrocarbons,C6 isoalkanes< 5% n-hexane

Acute toxicity - fish	NOEC, : 1 - 10 mg/l, LC ₅₀ , 96 hours: 10 - 100 mg/l, Fish
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 1 - 10 mg/l, Daphnia magna
Acute toxicity - aquatic plants	IC ₅₀ , 72 hours: 10 - 100 mg/l, Algae
Acute toxicity microorganisms	NOEC, : 1 - 10 mg/l, Activated sludge

ZINC OXIDE

Acute aquatic toxicity

LE(C) ₅₀	0.1 < L(E)C ₅₀ ≤ 1
M factor (Acute)	1
Acute toxicity - fish	LC ₅₀ , 96 hours: 1.1 mg/l, Fish
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: > 1000 mg/l, Daphnia magna
Acute toxicity - aquatic plants	IC ₅₀ , 72 hours: 0.1- 1 mg/l, Algae

Chronic aquatic toxicity

M factor (Chronic)	1
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Butylated reaction productOf p-cresol & dicyclopentadiene

Acute aquatic toxicity

LE(C) ₅₀	0.1 < L(E)C ₅₀ ≤ 1
M factor (Acute)	1
Acute toxicity - fish	LC ₅₀ , 48 hours, 48 hours: > 1000 mg/l, Leuciscus idus (Golden orfe) , 96 hours, 96 hours: > 0.2 mg/l, Onchorhynchus mykiss (Rainbow trout)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours, 48 hours: > 0.2 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours, 72 hours: > 0.2 mg/l, Selenastrum capricornutum NOEC, 72 hours, 72 hours: > 0.2 mg/l, Selenastrum capricornutum

12.2. Persistence and degradability

Persistence and degradability	The product is slowly degradable.
Phototransformation	Not relevant.
Stability (hydrolysis)	Not determined.

Biodegradation Not determined.
Biological oxygen demand Not determined.
Chemical oxygen demand Not determined.

Ecological information on ingredients.

BUTANONE

Persistence and degradability The product is biodegradable.
Biodegradation Air. - Degradation (%) 98: 28 days readily biodegradable

Butylated reaction productOf p-cresol & dicyclopentadiene

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

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.
Partition coefficient Not determined.

Ecological information on ingredients.

BUTANONE

Bioaccumulative potential The product is not bioaccumulating.

Butylated reaction productOf 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.

Ecological information on ingredients.

BUTANONE

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

12.5. Results of PBT and vPvB assessment

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

Ecological information on ingredients.

BUTANONE

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 ADHESIVES (CYCLOHEXANE) (ADR/RID)

Proper shipping name ADHESIVES (CYCLOHEXANE) (IMDG)

Proper shipping name (ICAO) ADHESIVES (CYCLOHEXANE)

Proper shipping name (ADN) ADHESIVES (CYCLOHEXANE)

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

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 MARPOL73/78 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

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	Workplace Exposure Limits EH40. 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

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

26/05/2016

Revision

8

Risk phrases in full

R11 Highly flammable.
R36 Irritating to eyes.
R36/38 Irritating to eyes and skin.
R38 Irritating to skin.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65 Harmful: may cause lung damage if swallowed.
R66 Repeated exposure may cause skin dryness or cracking.
R67 Vapours may cause drowsiness and dizziness.

Hazard statements in full

- H225 Highly flammable liquid and vapour.
- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H411 Toxic to aquatic life with long lasting effects.
- 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.