

# ALPHA

## SAFETY DATA SHEET THIXOFIX (Improved)

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

#### 1.1. Product identifier

Product name THIXOFIX (Improved)

#### 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

Physical hazards Flam. Liq. 2 - H225

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

Environmental hazards Aquatic Chronic 2 - H411

Classification (67/548/EEC or 1999/45/EC) Xi;R36/38. F;R11. N;R51/53. R67.

**Human health** The product is irritating to eyes and skin. Product has a defatting effect on skin.

**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** Vapours are heavier than air and may travel along the floor and accumulate in the bottom of containers.

#### 2.2. Label elements

##### Pictogram



## THIXOFIX (Improved)

<b>Signal word</b>	Danger
<b>Hazard statements</b>	H225 Highly flammable liquid and vapour. H315 Causes skin irritation. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. H411 Toxic to aquatic life with long lasting effects. EUH208 Contains ROSIN. May produce an allergic reaction.
<b>Precautionary statements</b>	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.
<b>Contains</b>	CYCLOHEXANE, BUTANONE, Hydrocarbons,C7-C9,n-alkanes,isoalkanes,cyclics<0.1%benzene, ACETONE, ETHYL ACETATE
<b>Supplementary precautionary statements</b>	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

**THIXOFIX (Improved)**

<b>CYCLOHEXANE</b> <span style="float: right;"><b>10-30%</b></span>		
CAS number: 110-82-7	EC number: 203-806-2	REACH registration number: 01-2119463273-41
M factor (Acute) = 1	M factor (Chronic) = 1	
<b>Classification</b> Flam. Liq. 2 - H225 Skin Irrit. 2 - H315 STOT SE 3 - H336 Asp. Tox. 1 - H304 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	<b>Classification (67/548/EEC or 1999/45/EC)</b> F;R11 Xn;R65 Xi;R38 R67 N;R50/53	
<b>BUTANONE</b> <span style="float: right;"><b>10-30%</b></span>		
CAS number: 78-93-3	EC number: 201-159-0	REACH registration number: 01-2119457290-43
<b>Classification</b> Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336	<b>Classification (67/548/EEC or 1999/45/EC)</b> F;R11 Xi;R36 R66 R67	
<b>Hydrocarbons,C7-C9,n-alkanes,isoalkanes,cyclics&lt;0.1%benzene</b> <span style="float: right;"><b>10-30%</b></span>		
CAS number: —	EC number: 920-750-0	REACH registration number: 01-2119473851-33
<b>Classification</b> Flam. Liq. 2 - H225 STOT SE 3 - H336 Asp. Tox. 1 - H304 Aquatic Chronic 2 - H411	<b>Classification (67/548/EEC or 1999/45/EC)</b> Xn;R65. F;R11. N;R51/53. R66,R67.	
<b>ACETONE</b> <span style="float: right;"><b>10-30%</b></span>		
CAS number: 67-64-1	EC number: 200-662-2	REACH registration number: 01-2119471330-49
<b>Classification</b> Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336	<b>Classification (67/548/EEC or 1999/45/EC)</b> F;R11 Xi;R36 R66 R67	

**THIXOFIX (Improved)**

<b>ETHYL ACETATE</b>		<b>10-30%</b>
CAS number: 141-78-6	EC number: 205-500-4	REACH registration number: 01-2119475103-46
<b>Classification</b> Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336	<b>Classification (67/548/EEC or 1999/45/EC)</b> F;R11 Xi;R36 R66 R67	
<b>ROSIN</b>		<b>&lt;1%</b>
CAS number: 8050-09-7	EC number: 232-475-7	
<b>Classification</b> Skin Sens. 1 - H317	<b>Classification (67/548/EEC or 1999/45/EC)</b> R43	

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

**Composition comments** The data shown are in accordance with the latest EC Directives., Toluene content = 0.0003%

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

<b>General information</b>	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.
<b>Inhalation</b>	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.
<b>Ingestion</b>	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.
<b>Skin contact</b>	Remove contaminated clothing immediately and wash skin with soap and water.
<b>Eye contact</b>	Remove contact lenses, if present and easy to do. Continue rinsing. Continue to rinse for at least 15 minutes and get medical attention.
<b>Protection of first aiders</b>	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**

<b>General information</b>	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
<b>Inhalation</b>	Vapours may cause headache, fatigue, dizziness and nausea.
<b>Ingestion</b>	May cause stomach pain or vomiting.
<b>Skin contact</b>	Prolonged contact may cause redness, irritation and dry skin.
<b>Eye contact</b>	Irritating to eyes. Symptoms following overexposure may include the following: Redness. Pain.

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

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

## THIXOFIX (Improved)

### 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<sub>2</sub>). 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.

#### 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.

#### 6.4. Reference to other sections

**Reference to other sections** Wear protective clothing as described in Section 8 of this safety data sheet.

### 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 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

## THIXOFIX (Improved)

**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/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 300 1050 mg/m<sup>3</sup>

##### BUTANONE

Long-term exposure limit (8-hour TWA): WEL 200 ppm(Sk) 600 mg/m<sup>3</sup>(Sk)

Short-term exposure limit (15-minute): WEL 300 ppm(Sk) 899 mg/m<sup>3</sup>(Sk)

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

Long-term exposure limit (8-hour TWA): WEL 200 ppm 1,000 mg/m<sup>3</sup>

##### ACETONE

Long-term exposure limit (8-hour TWA): WEL 500 ppm 1210 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 1500 ppm 3620 mg/m<sup>3</sup>

##### ETHYL ACETATE

Long-term exposure limit (8-hour TWA): WEL 200 ppm

Short-term exposure limit (15-minute): WEL 400 ppm

##### ROSIN

Long-term exposure limit (8-hour TWA): WEL 0.05 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 0.15 mg/m<sup>3</sup>

##### TOLUENE

Long-term exposure limit (8-hour TWA): 50 191

Short-term exposure limit (15-minute): 100 384

WEL = Workplace Exposure Limit

### CYCLOHEXANE (CAS: 110-82-7)

#### DNEL

Industry - Inhalation; Short term systemic effects: 700 mg/m<sup>3</sup>

Industry - Inhalation; Short term local effects: 700 mg/m<sup>3</sup>

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

Industry - Inhalation; Long term systemic effects: 700 mg/m<sup>3</sup>

Industry - Oral; Long term local effects: 700 mg/m<sup>3</sup>

Consumer - Inhalation; Long term systemic effects: 412 mg/m<sup>3</sup>

Consumer - Inhalation; Long term local effects: 412 mg/m<sup>3</sup>

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

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

**THIXOFIX (Improved)**

<b>PNEC</b>	<ul style="list-style-type: none"> <li>- Fresh water; 0.207 mg/l</li> <li>- Marine water; 0.207 mg/l</li> <li>- STP; 3.24 mg/l</li> <li>- Sediment (Freshwater); 3.627 mg/kg</li> <li>- Sediment (Marinewater); 3.627 mg/kg</li> <li>- Soil; 2.99 mg/kg</li> </ul>
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**BUTANONE (CAS: 78-93-3)**

<b>DNEL</b>	<p>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/m<sup>3</sup>          Industry - Inhalation; Long term systemic effects: 600 mg/m<sup>3</sup></p>
<b>PNEC</b>	<ul style="list-style-type: none"> <li>- Fresh water; 55.8 mg/l</li> <li>- Marine water; 55.8 mg/l</li> <li>- Intermittent release; 55.8 mg/l</li> <li>- STP; 709 mg/l</li> <li>- Sediment (Marinewater); 284.7 mg/kg</li> <li>- Soil; 22.5 mg/kg</li> <li>- Sediment (Freshwater); 284.7 mg/kg</li> </ul>

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

<b>DNEL</b>	<p>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/m<sup>3</sup>          Industry - Inhalation; Long term systemic effects: 2035 mg/m<sup>3</sup></p>
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**ACETONE (CAS: 67-64-1)**

<b>Ingredient comments</b>	WEL = Workplace Exposure Limits
<b>DNEL</b>	<p>Industry - Dermal; Short term systemic effects: 186 mg/m<sup>3</sup>          Industry - Inhalation; Short term local effects: 2420 mg/m<sup>3</sup>          Industry - Inhalation; Long term systemic effects: 1210 mg/m<sup>3</sup>          Consumer - Dermal; Long term systemic effects: 62 mg/kg/day          Consumer - Inhalation; Long term systemic effects: 200 mg/m<sup>3</sup>          Consumer - Oral; Long term systemic effects: 62 mg/m<sup>3</sup>          Industry - Dermal; Long term systemic effects: 186 mg/kg/day</p>
<b>PNEC</b>	<ul style="list-style-type: none"> <li>- Fresh water; 10.6 mg/l</li> <li>- Marine water; 1.06 mg/l</li> <li>- Sediment (Freshwater); 30.4 mg/kg</li> <li>- Sediment (Marinewater); 3.04 mg/kg</li> <li>- Soil; 29.5 mg/kg</li> <li>- STP; 100 mg/l</li> </ul>

**ETHYL ACETATE (CAS: 141-78-6)**

## THIXOFIX (Improved)

<b>DNEL</b>	Industry - Inhalation; Short term systemic effects: 1468 mg/m <sup>3</sup>
	Industry - Inhalation; Short term local effects: 1468 mg/m <sup>3</sup>
	Consumer - Inhalation; Short term systemic effects: 734 mg/m <sup>3</sup>
	Consumer - Inhalation; Short term local effects: 734 mg/m <sup>3</sup>
	Industry - Inhalation; Long term local effects: 734 mg/m <sup>3</sup>
	Industry - Dermal; Long term systemic effects: 63 mg/kg/day
	Industry - Inhalation; Long term systemic effects: 734 mg/m <sup>3</sup>
	Consumer - Dermal; Long term systemic effects: 37 mg/kg/day
Consumer - Inhalation; Long term systemic effects: 367 mg/m <sup>3</sup>	

<b>PNEC</b>	- Fresh water; 0.26 mg/l
	- Intermittent release; 1.65 mg/l
	- Sediment (Freshwater); 1.25 mg/kg
	- Sediment (Marinewater); 0.125 mg/kg
	- Soil; 0.24 mg/kg
	- STP; 650 mg/l

### TOLUENE (CAS: 108-88-3)

<b>DNEL</b>	Consumer - Oral; Long term systemic effects: 8.13 mg/m <sup>3</sup>
	Industry - Dermal; Long term systemic effects: 384 mg/kg/day
	Consumer - Inhalation; Short term local effects: 226 mg/m <sup>3</sup>
	Consumer - Inhalation; Short term systemic effects: 226 mg/m <sup>3</sup>
	Industry - Inhalation; Short term systemic effects: 384 mg/m <sup>3</sup>
	Industry - Inhalation; Short term local effects: 384 mg/m <sup>3</sup>
	Industry - Inhalation; Long term local effects: 192 mg/m <sup>3</sup>
	Consumer - Inhalation; Long term systemic effects: 56.5 mg/m <sup>3</sup>
Industry - Inhalation; Long term systemic effects: 192 mg/m <sup>3</sup>	

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

## 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.



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<b>Hand protection</b>	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.
<b>Other skin and body protection</b>	Wear suitable protective clothing as protection against splashing or contamination.
<b>Hygiene measures</b>	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.
<b>Respiratory protection</b>	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.
<b>Thermal hazards</b>	Contact with hot product can cause serious thermal burns.
<b>Environmental exposure controls</b>	Keep container tightly sealed when not in use.

### SECTION 9: Physical and Chemical Properties

#### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Coloured gel.
<b>Colour</b>	Amber.
<b>Odour</b>	Organic solvents.
<b>Odour threshold</b>	Not determined.
<b>pH</b>	Not available.
<b>Melting point</b>	Not applicable.
<b>Initial boiling point and range</b>	56°C @ 760 mm Hg
<b>Flash point</b>	-17°C CC (Closed cup).
<b>Evaporation rate</b>	Not available.
<b>Evaporation factor</b>	Not determined.
<b>Upper/lower flammability or explosive limits</b>	Upper flammable/explosive limit: 13 Lower flammable/explosive limit: 1
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Relative density</b>	0.85 - 0.86 @ @ 20°C
<b>Bulk density</b>	Not applicable.
<b>Solubility(ies)</b>	Slightly soluble in water.
<b>Partition coefficient</b>	Not determined.
<b>Auto-ignition temperature</b>	Not determined.

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<b>Decomposition Temperature</b>	Not determined.
<b>Viscosity</b>	GEL @ 20°C in excess of 500,000 cP @ 20°C
<b>Explosive properties</b>	Not determined.
<b>Oxidising properties</b>	Not determined.
<b>Comments</b>	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

<b>Refractive index</b>	Not applicable.
<b>Particle size</b>	Not available.
<b>Molecular weight</b>	Not applicable.
<b>Volatility</b>	Volatile.
<b>Saturation concentration</b>	Not available.
<b>Critical temperature</b>	Not determined.
<b>Volatile organic compound</b>	This product contains a maximum VOC content of 684 g/litre.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

<b>Reactivity</b>	There are no known reactivity hazards associated with this product.
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### 10.2. Chemical stability

<b>Stability</b>	Stable at normal ambient temperatures and when used as recommended.
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### 10.3. Possibility of hazardous reactions

<b>Possibility of hazardous reactions</b>	Not applicable.
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### 10.4. Conditions to avoid

<b>Conditions to avoid</b>	Avoid heat, flames and other sources of ignition.
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### 10.5. Incompatible materials

<b>Materials to avoid</b>	No specific material or group of materials is likely to react with the product to produce a hazardous situation.
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### 10.6. Hazardous decomposition products

<b>Hazardous decomposition products</b>	Fire creates: Toxic gases/vapours/fumes of: Carbon monoxide (CO). Carbon dioxide (CO <sub>2</sub> ). Hydrogen chloride (HCl).
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## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity - oral

<b>Notes (oral LD<sub>50</sub>)</b>	Not determined.
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#### Acute toxicity - dermal

<b>Notes (dermal LD<sub>50</sub>)</b>	Not determined.
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#### Acute toxicity - inhalation

<b>Notes (inhalation LC<sub>50</sub>)</b>	Not determined.
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### 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**

Extensive use of the product in areas with inadequate ventilation may result in the accumulation of hazardous vapour concentrations. May cause eye and respiratory system irritation. Symptoms following overexposure may include the following: Headache. Vapours may cause drowsiness and dizziness.

### **Ingestion**

May cause stomach pain or vomiting.

### **Skin contact**

Irritating to skin. May cause allergic contact eczema.

### **Eye contact**

Irritating to eyes. May cause severe eye irritation.

### **Route of entry**

Inhalation Skin absorption

### Toxicological information on ingredients.

#### CYCLOHEXANE

##### Acute toxicity - oral

Acute toxicity oral (LD<sub>50</sub> mg/kg) 12,705.0

Species Rat

ATE oral (mg/kg) 12,705.0

##### Acute toxicity - dermal

Acute toxicity dermal (LD<sub>50</sub> mg/kg) 2,500.0

Species Rabbit

ATE dermal (mg/kg) 2,500.0

##### Acute toxicity - inhalation

Acute toxicity inhalation (LC<sub>50</sub> vapours mg/l) 2,593.0

Species Rat

#### BUTANONE

##### Acute toxicity - oral

Acute toxicity oral (LD<sub>50</sub> mg/kg) 2,500.0

Species Rat

##### Acute toxicity - dermal

**THIXOFIX (Improved)**

**Acute toxicity dermal (LD<sub>50</sub> mg/kg)** 2,500.0

**Species** Rabbit

**ATE dermal (mg/kg)** 2,500.0

**Acute toxicity - inhalation**

**Acute toxicity inhalation (LC<sub>50</sub> 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 (LD<sub>50</sub> mg/kg)** 5,850.0

**Species** Rat

**ATE oral (mg/kg)** 5,850.0

**Acute toxicity - dermal**

**Acute toxicity dermal (LD<sub>50</sub> mg/kg)** 3,000.0

**Species** Rabbit

**ATE dermal (mg/kg)** 3,000.0

**ACETONE****Acute toxicity - oral**

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 5,800.0

**Species** Rat

**ATE oral (mg/kg)** 5,800.0

**Acute toxicity - dermal**

**Acute toxicity dermal (LD<sub>50</sub> mg/kg)** 7,400.0

**Species** Rabbit

**Acute toxicity - inhalation**

**Acute toxicity inhalation (LC<sub>50</sub> vapours mg/l)** 76.0

**Species** Rat

**ATE inhalation (vapours mg/l)** 76.0

**ETHYL ACETATE**

**THIXOFIX (Improved)****Acute toxicity - oral**

Acute toxicity oral (LD<sub>50</sub> mg/kg) 4,100.0

Species Mouse

ATE oral (mg/kg) 4,100.0

**Acute toxicity - dermal**

Acute toxicity dermal (LD<sub>50</sub> mg/kg) 2,005.0

Species Rabbit

ATE dermal (mg/kg) 2,005.0

**Acute toxicity - inhalation**

Acute toxicity inhalation (LC<sub>50</sub> vapours mg/l) 30.0

Species Rat

ATE inhalation (vapours mg/l) 30.0

**Skin sensitisation**

Skin sensitisation Guinea pig maximization test (GPMT) - Guinea pig: Negative

**Reproductive toxicity**

Reproductive toxicity - fertility - NOAEL 16000 ppm, Inhalation, Rat P

Reproductive toxicity - development - NOAEL: 20000 ppm, Inhalation, Rat

**Specific target organ toxicity - repeated exposure**

STOT - repeated exposure Conclusive data but not sufficient for classification.

**Poly(2-chloro-1,3-butadiene)****Acute toxicity - oral**

Acute toxicity oral (LD<sub>50</sub> mg/kg) 7,800.0

Species Rat

ATE oral (mg/kg) 7,800.0

**Acute toxicity - dermal**

Acute toxicity dermal (LD<sub>50</sub> mg/kg) 2,505.0

Species Rabbit

ATE dermal (mg/kg) 2,505.0

**Acute toxicity - inhalation**

Acute toxicity inhalation (LC<sub>50</sub> dust/mist mg/l) 2,300.0

**THIXOFIX (Improved)**

<b>Species</b>	Mouse
<b>ATE inhalation (dusts/mists mg/l)</b>	2,300.0

**THIXATROL ST**

<b><u>Acute toxicity - oral</u></b>	
<b>Acute toxicity oral (LD<sub>50</sub> mg/kg)</b>	6,000.0

**SECTION 12: Ecological Information**

**Ecotoxicity** Dangerous for the environment if discharged into watercourses. 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**

<b>Acute toxicity - fish</b>	Not determined.
<b>Acute toxicity - aquatic invertebrates</b>	Not determined.
<b>Acute toxicity - aquatic plants</b>	Not determined.
<b>Acute toxicity - microorganisms</b>	Not determined.
<b>Acute toxicity - terrestrial</b>	Not determined.
<b>Chronic toxicity - fish early life stage</b>	Not determined.
<b>Short term toxicity - embryo and sac fry stages</b>	Not determined.
<b>Chronic toxicity - aquatic invertebrates</b>	Not determined.

**Ecological information on ingredients.****CYCLOHEXANE**

<b><u>Acute aquatic toxicity</u></b>	
<b>LE(C)<sub>50</sub></b>	0.1 < L(E)C <sub>50</sub> ≤ 1
<b>M factor (Acute)</b>	1
<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 96 hours, 96 hours: 4.53 mg/l, Pimephales promelas (Fat-head Minnow)
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 48 hours, 48 hours: 31.9 mg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	EC <sub>50</sub> , 72 hours, 72 hours: 3.4 mg/l, Selenastrum capricornutum
<b><u>Chronic aquatic toxicity</u></b>	
<b>M factor (Chronic)</b>	1

**BUTANONE**

## THIXOFIX (Improved)

<b>Acute toxicity - fish</b>	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)
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 48 hours, 48 hours: > 100 mg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	EC <sub>50</sub> , 96 hours, 96 hours: 2029 , Freshwater algae
<b>Acute toxicity - microorganisms</b>	EC <sub>50</sub> , 96 hours, 96 hours: > 50 mg/l, Activated sludge

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

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

### ACETONE

<b>Acute toxicity - fish</b>	LC50, 96 hours, 96 hours: 5540 mg/l, Onchorhynchus mykiss (Rainbow trout) LC50, 96 hours, 96 hours: 8,300 mg/l, Lepomis macrochirus (Bluegill) LC <sub>50</sub> , 96 hours: >100 mg/l, Fish
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 48 hours, 48 hours: 8,800 mg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	NOEC, 96 hours, 96 hours: 430 mg/l, Freshwater algae IC <sub>50</sub> , 72 hours: >100 mg/l, Algae
<b>Chronic toxicity - aquatic invertebrates</b>	NOEC, 28 days, 28 days: 10-<100 mg/l, Freshwater invertebrates

### ETHYL ACETATE

<b>Acute toxicity - fish</b>	LC50, 96 hours, 96 hours: 230 mg/l, Pimephales promelas (Fat-head Minnow) NOEC, 192 hours: >9.65 mg/l, Pimephales promelas (Fat-head Minnow)
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 48 hours, 48 hours: 610 mg/l, Daphnia magna NOEC, 192 hours, 192 hours: 2.4 mg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	EC <sub>50</sub> , 48 hours, 48 hours: 5,600 mg/l, Freshwater algae

## 12.2. Persistence and degradability

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

**Phototransformation** Not relevant.

**Stability (hydrolysis)** Not determined.

**Biodegradation** Not determined.

**Biological oxygen demand** Not determined.

**Chemical oxygen demand** Not determined.

## THIXOFIX (Improved)

### Ecological information on ingredients.

#### BUTANONE

**Persistence and degradability** The product is biodegradable.

**Biodegradation** Air. - Degradation (%) 98: 28 days  
readily biodegradable

#### ACETONE

**Persistence and degradability** The product is readily biodegradable.

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

**Biological oxygen demand** 1.9 g O<sub>2</sub>/g substance

**Chemical oxygen demand** 2.1 g O<sub>2</sub>/g substance

#### ETHYL ACETATE

**Persistence and degradability** The product is readily biodegradable.

**Biodegradation** - Degradation (%) 79: 20 days  
readily biodegradable

### 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.

#### ACETONE

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

#### ETHYL ACETATE

**Bioaccumulative potential** The product does not contain any substances expected to be bioaccumulating.  
BCF: 30, Leuciscus idus (Golden orfe) readily biodegradable

**Partition coefficient** log Pow: 0.73

### 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.



## THIXOFIX (Improved)

**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.

#### ETHYL ACETATE

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

**Adsorption/desorption coefficient** Soil - Koc: 1.43 @ 25°C

### 12.5. Results of PBT and vPvB assessment

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

### Ecological information on ingredients.

#### BUTANONE

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

#### ACETONE

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

#### ETHYL ACETATE

**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

**THIXOFIX (Improved)**

UN No. (ADN) 1133

**14.2. UN proper shipping name**

Proper shipping name (ADR/RID) ADHESIVES

Proper shipping name (IMDG) ADHESIVES (CONTAINS CYCLOHEXANE, Hydrocarbons,C7-C9,n-alkanes,isoalkanes,cyclics&lt;0.1%benzene)

Proper shipping name (ICAO) ADHESIVES

Proper shipping name (ADN) ADHESIVES

**14.3. Transport hazard class(es)**

ADR/RID class 3

ADR/RID classification code F1

ADR/RID label 3

IMDG class 3

ICAO class/division 3

ADN class 3

**Transport labels****14.4. Packing group**

ADR/RID packing group III section 2.2.3.1.4

IMDG packing group III section 2.3.2.2

ADN packing group III section 2.2.3.1.4

ICAO packing group III section 3.3.3.1.1

**14.5. Environmental hazards**

Environmentally hazardous substance/marine pollutant

**14.6. Special precautions for user**

EmS F-E, S-D

ADR transport category 2

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**

## THIXOFIX (Improved)

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

<b>National regulations</b>	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.
<b>EU legislation</b>	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).
<b>Guidance</b>	Workplace Exposure Limits EH40. Safety Data Sheets for Substances and Preparations.
<b>Authorisations (Title VII Regulation 1907/2006)</b>	No specific authorisations are known for this product.
<b>Restrictions (Title VIII Regulation 1907/2006)</b>	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

## THIXOFIX (Improved)

### 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.  
 LC<sub>50</sub>: Lethal Concentration to 50 % of a test population.  
 LD<sub>50</sub>: 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.  
 EC<sub>50</sub>: 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

24/06/2016

### Revision

15

### 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.

## THIXOFIX (Improved)

### 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.  
EUH208 Contains ROSIN. May produce an allergic reaction.

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.