



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

### 1.1. Product identifier

Product name INFLATABLE HOT TUB REPAIR KIT 2 PARTS 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 LAYZREPAIR  
12 DON STREET  
DONCASTER  
SOUTH YORKSHIRE  
DN1 2SF  
  
LAYZREPAIR@GMAIL.COM

### 1.4. Emergency telephone number

Emergency telephone +44 7561170137

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification

Physical hazards Flam. Liq. 2 - H225  
Health hazards Eye Irrit. 2 - H319 Skin Sens. 1 - H317 STOT SE 3 - H336  
Environmental hazards Not Classified

Classification (67/548/EEC or 1999/45/EC) Xi;R36. R43. F;R11. R66,R67.

Human health May cause skin sensitisation or allergic reactions in sensitive individuals. Organic solvents may be absorbed into the body by inhalation and ingestion.

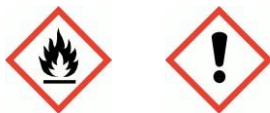
Environmental The product is not expected to be hazardous to the environment.

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

### 2.2. Label elements

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Pictogram



Signal word

Danger

Hazard statements

H336 May cause drowsiness or dizziness.  
H319 Causes serious eye irritation.  
H317 May cause an allergic skin reaction.  
H225 Highly flammable liquid and vapour.

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.  
P312 Call a POISON CENTER/doctor if you feel unwell.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P501 Dispose of contents/container in accordance with national regulations.

Contains

BUTANONE, EPOXY RESIN (Number average MW  $\leq$  700 ), Hexamethylene-1,6diisocyanate homopolymer

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.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
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).  
P333+P313 If skin irritation or rash 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.  
P403+P235 Store in a well-ventilated place. Keep cool.  
P405 Store locked up.

2.3. Other hazards

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

**SECTION 3: Composition/information on ingredients**

3.2. Mixtures

BUTANONE

60-100%

CAS number: 78-93-3

EC number: 201-159-0

REACH registration number:  
012119457290-43

<p>Classification            Flam. Liq. 2 - H225            Eye Irrit. 2 - H319            STOT SE 3 - H336</p>	<p>Classification (67/548/EEC or 1999/45/EC)            F;R11 Xi;R36 R66 R67</p>
<p>EPOXY RESIN (Number average MW &lt;= 700 )            CAS number: 25068-38-6                      EC number: 500-033-5                      REACH registration number:            012119456619-26</p>	<p>1-5%</p>
<p>Classification            Skin Irrit. 2 - H315            Eye Irrit. 2 - H319            Skin Sens. 1 - H317            Aquatic Chronic 2 - H411</p>	<p>Classification (67/548/EEC or 1999/45/EC)            R43 Xi;R36/38 N;R51/53</p>
<p>Hexamethylene- 1,6-diisocyanate homopolymer            CAS number: 28182-81-2                      REACH registration number: 012119485796-17</p>	<p>&lt;1%</p>
<p>Classification            Acute Tox. 3 - H331            Skin Sens. 1 - H317            STOT SE 3 - H335            Aquatic Chronic 3 - H412</p>	<p>Classification (67/548/EEC or 1999/45/EC)            Xn;R20. Xi;R37. R43,R52/53.</p>
<p>Bis(trimethoxysilylpropyl)amine            CAS number: 82985-35-1</p>	<p>&lt;1%</p>
<p>Classification            Skin Irrit. 2 - H315            Eye Dam. 1 - H318            Aquatic Chronic 2 - H411</p>	<p>Classification (67/548/EEC or 1999/45/EC)            Xi;R41,R38. N;R51/53.</p>
<p>TOLUENE            CAS number: 108-88-3                      EC number: 203-625-9                      REACH registration number:            012119471310-51</p>	<p>&lt;1%</p>
<p>Classification            Flam. Liq. 2 - H225            Skin Irrit. 2 - H315            Repr. 2 - H361d            STOT SE 3 - H336            STOT RE 2 - H373            Asp. Tox. 1 - H304</p>	<p>Classification (67/548/EEC or 1999/45/EC)            F;R11 Repr. Cat. 3;R63 Xn;R48/20,R65 Xi;R38 R67</p>

2-METHOXY-1-METHYLETHYL ACETATE			<1%
CAS number: 108-65-6	EC number: 203-603-9	REACH registration number: 012119475791-29	
Classification Flam. Liq. 3 - H226	Classification (67/548/EEC or 1999/45/EC) R10		
XYLENE			<1%
CAS number: 1330-20-7	EC number: 215-535-7	REACH registration number: 012119488216-32	
Classification Flam. Liq. 3 - H226 Acute Tox. 4 - H312 Acute Tox. 3 - H331 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 STOT SE 3 - H335	Classification (67/548/EEC or 1999/45/EC) R10 Xn;R20/21 Xi;R38		
ETHYLBENZENE			<1%
CAS number: 100-41-4	EC number: 202-849-4	REACH registration number: 012119489370-35	
Classification Flam. Liq. 2 - H225 Acute Tox. 4 - H332	Classification (67/548/EEC or 1999/45/EC) F;R11 Xn;R20		
HEXAMETHYLENE-DI-ISOCYANATE			<1%
CAS number: 822-06-0	EC number: 212-485-8	REACH registration number: 012119457571-37-0000	
Classification Acute Tox. 3 - H331 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 STOT SE 3 - H335	Classification (67/548/EEC or 1999/45/EC) T;R23 R42/43 Xi;R36/37/38		

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.,The product contains organic solvents.,Any substance showing % has less than 0.1 %,Toluene content = 0.0991%

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

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General information	Move affected person to fresh air at once. Get medical attention if any discomfort continues.
Inhalation	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 if any discomfort continues.
Ingestion	Do not induce vomiting. Rinse mouth thoroughly with water. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention immediately.
Skin contact	Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if irritation persists after washing.
Eye contact	Remove affected person from source of contamination. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.
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. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves.

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

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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 discomfort if swallowed.
Skin contact	Skin irritation.
Eye contact	May cause temporary eye irritation.

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

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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

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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	Toxic gases or vapours. Fire creates: Vapours/gases/fumes of: Carbon monoxide (CO). Carbon dioxide (CO <sub>2</sub> ). Cyanides. Isocyanate vapours Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back.
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Hazardous combustion products Heating may generate the following products: Carbon monoxide (CO). Oxides of nitrogen. Hydrogen chloride (HCl). Isocyanates.

### 5.3. Advice for firefighters

Protective actions during firefighting Avoid breathing fire gases or vapours. Control run-off water by containing and keeping it out of sewers and watercourses.

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

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate.

For non-emergency personnel emergency responders Wear protective clothing as described in Section 8 of this safety data sheet. For emergency responders Wear protective clothing as described in Section 8 of this safety data sheet. 6.2.

### Environmental precautions

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

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Avoid the spillage or runoff entering drains, sewers or watercourses. Collect spillage for reclamation or disposal in sealed containers via a licensed waste contractor. Avoid water contacting spilled material or leaking containers.

### 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 Avoid spilling. Keep away from heat, sparks and open flame. Provide adequate ventilation. Avoid inhalation of vapours. Use approved respirator if air contamination is above an acceptable level.

Advice on general occupational hygiene When using do not eat, drink or smoke. Provide eyewash station. 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. Store in tightly-closed, original container in a well-ventilated place.

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

##### 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)

##### Hexamethylene- 1,6-diisocyanate homopolymer

Long-term exposure limit (8-hour TWA): WEL 0.07 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 0.02 mg/m<sup>3</sup>

##### Bis(trimethoxysilylpropyl)amine

Long-term exposure limit (8-hour TWA): 0 0 Short-

term exposure limit (15-minute): 0 0

##### TOLUENE

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

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

##### 2-METHOXY-1-METHYLETHYL ACETATE

Long-term exposure limit (8-hour TWA): WEL 50 ppm 274 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 100 ppm 548 mg/m<sup>3</sup>

##### XYLENE

Long-term exposure limit (8-hour TWA): WEL 50 ppm 220 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 100 ppm 441 mg/m<sup>3</sup>

##### ETHYLBENZENE

Long-term exposure limit (8-hour TWA): WEL 100 ppm(Sk) 441 mg/m<sup>3</sup>(Sk)

Short-term exposure limit (15-minute): WEL 125 ppm(Sk) 552 mg/m<sup>3</sup>(Sk)

##### HEXAMETHYLENE-DI-ISOCYANATE

Long-term exposure limit (8-hour TWA): WEL 0.02 mg/m<sup>3</sup>(Sen) Short-

term exposure limit (15-minute): WEL 0.07 mg/m<sup>3</sup>(Sen)

##### METHANOL

Long-term exposure limit (8-hour TWA): WEL 200 ppm(Sk) 266 mg/m<sup>3</sup>(Sk)

Short-term exposure limit (15-minute): WEL 250 ppm(Sk) 333 mg/m<sup>3</sup>(Sk)

WEL = Workplace Exposure Limit

Ingredient comments WEL = Workplace Exposure Limits

#### 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/m <sup>3</sup> Industry - Inhalation; Long term systemic effects: 600 mg/m <sup>3</sup>
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

EPOXY RESIN (Number average MW <= 700 ) (CAS: 25068-38-6)

- DNEL
- Dermal; : 8.33 mg/kg/day
  - Inhalation; : 12.25 mg/m<sup>3</sup>
- PNEC
- STP; 10 mg/l
  - Fresh water; 0.006 mg/l
  - Sediment (Freshwater); 0.0627 mg/kg
    - Marine water; 0.0006 mg/l
  - Sediment (Marinewater); 0.00627 mg/kg
    - Soil; 0.0478 mg/kg

TOLUENE (CAS: 108-88-3)

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

2-METHOXY-1-METHYLETHYL ACETATE (CAS: 108-65-6)

- DNEL
- Consumer - Oral; Long term systemic effects: 1.67 mg/kg/day
  - Industry - Dermal; Long term systemic effects: 153.5 mg/kg/day
  - Consumer - Inhalation; Long term systemic effects: 33 mg/m<sup>3</sup>
  - Industry - Inhalation; Long term systemic effects: 275 mg/m<sup>3</sup>
  - Consumer - Dermal; Long term systemic effects: 54.8 mg/kg/day
- PNEC
- Fresh water; 0.635 mg/l
  - Sediment (Freshwater); 3.29 mg/kg
  - Sediment (Marinewater); 0.329 mg/kg
    - STP; 100 mg/l
    - Soil; 0.29 mg/kg
    - Marine water; 0.0635 mg/l
  - Intermittent release; 6.35 mg/l

XYLENE (CAS: 1330-20-7)

- Ingredient comments
- WEL = Workplace Exposure Limits
- DNEL
- Consumer - Dermal; Long term systemic effects: 108 mg/kg/day
  - Industry - Dermal; Long term systemic effects: 180 mg/kg/day
  - Consumer - Inhalation; Short term local effects: 174 mg/m<sup>3</sup>



Consumer - Inhalation; Short term systemic effects: 174 mg/m<sup>3</sup>  
 Industry - Inhalation; Short term systemic effects: 289 mg/m<sup>3</sup>  
 Industry - Inhalation; Short term local effects: 289 mg/m<sup>3</sup>  
 Consumer - Inhalation; Long term systemic effects: 14.8 mg/m<sup>3</sup>  
 Industry - Inhalation; Long term systemic effects: 77 mg/m<sup>3</sup>

HEXAMETHYLENE-DI-ISOCYANATE (CAS: 822-06-0)

**DNEL** Industry - Inhalation; Short term systemic effects: 0.07 mg/m<sup>3</sup>  
 Industry - Inhalation; Long term systemic effects: 0.035 mg/m<sup>3</sup>  
 Industry - Inhalation; Long term local effects: 0.035 mg/m<sup>3</sup>

**PNEC** Industry - Fresh water; Long term 0.0774 mg/l  
 Industry - Marine water; Long term 0.00774 mg/l  
 Industry - Sediment (Freshwater); Long term 0.01334 mg/kg  
 Industry - Sediment (Marinewater); Long term 0.001334 mg/kg  
 Industry - Soil; Long term > 0.0026 mg/kg  
 Industry - STP; Long term 8.42 mg/l

METHANOL (CAS: 67-56-1)

**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/m<sup>3</sup>  
 Industry - Inhalation; Short term systemic effects: 260 mg/m<sup>3</sup>  
 Consumer - Inhalation; Short term local effects: 50 mg/m<sup>3</sup>  
 Consumer - Inhalation; Long term systemic effects: 50 mg/m<sup>3</sup>

**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 general and local exhaust ventilation. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

The following protection should be worn: Chemical splash goggles or face shield.

Hand protection

Use protective gloves. It is recommended that gloves are made of the following material: Butyl rubber. To protect hands from chemicals, gloves should comply with European Standard EN374. When used with mixtures, the protection time of gloves cannot be accurately estimated.

Other skin and body protection

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

Hygiene measures	Do not smoke in work area. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly with soap and water if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. Do not eat, drink or smoke when using this product.
Respiratory protection	Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Combination filter, type A2/P3.
Thermal hazards	Contact with hot product can cause serious thermal burns.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

## SECTION 9: Physical and Chemical Properties

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

Appearance	Liquid.
Colour	Colourless.
Odour	Ketonic.

Odour threshold	Not available.
pH	Not relevant.
Melting point	Not applicable.
Initial boiling point and range	80°C @
Flash point	-6°C CC (Closed cup).
Evaporation rate	Not available.
Evaporation factor	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 1.8 Upper flammable/explosive limit: 11.5
Other flammability	Not applicable.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	0.864 @ 20°C
Bulk density	Not applicable.
Solubility(ies)	Not available. Slightly soluble in water.
Partition coefficient	Not available.
Auto-ignition temperature	Not available.
Decomposition Temperature	Not available.
Viscosity	2,000 - 2,500 cP @ 20°C
Explosive properties	Not determined.
Explosive under the influence of a flame	Yes
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 relevant.
Particle size	Not available.
Molecular weight	Not available.
Saturation concentration	Not available.
Critical temperature	Not available.
Volatile organic compound	This product contains a maximum VOC content of 692 g/l.

## 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.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Not applicable. Not relevant.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials to avoid Isocyanates react with water, alcohols, amines and acids with generation of heat. In the case of water carbon dioxide gas is evolved and closed containers may rupture due to pressure increase if contaminated with water.

10.6. Hazardous decomposition products

Hazardous decomposition products Heating may generate the following products: Carbon monoxide (CO). Oxides of nitrogen. Hydrogen chloride (HCl). Isocyanates.

**SECTION 11: Toxicological information**

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD<sub>50</sub>) Not determined.

Acute toxicity - dermal

Notes (dermal LD<sub>50</sub>) Not determined.

Acute toxicity - inhalation

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

ATE inhalation (dusts/mists mg/l) 126.45

General information The product contains small quantities of isocyanate. May cause respiratory allergy. May cause respiratory system irritation.

Inhalation Vapours may cause drowsiness and dizziness.

Ingestion May cause nausea, headache, dizziness and intoxication.

Skin contact Product has a defatting effect on skin. May cause allergic contact eczema. Irritating to skin. May cause sensitisation by skin contact.

Eye contact Irritating to eyes. May cause serious eye damage.

Acute and chronic health hazards

Toxicological information on ingredients.

BUTANONE

Acute toxicity - oral

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

Rat

Acute toxicity - dermal

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

Species Rabbit

ATE dermal (mg/kg) 2,500.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC<sub>50</sub> vapours mg/l) 5,000

Species Rat

ATE inhalation (vapours mg/l) 5,000

Antihydrolysis Agent

Acute toxicity - oral

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

Species Rat

ATE oral (mg/kg) 2,500.0

EPOXY RESIN (Number average MW <= 700 )

Acute toxicity - oral

Acute toxicity oral (LD<sub>50</sub> 15,000 mg/kg)

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD<sub>50</sub> 23,000 mg/kg)

Species Rabbit

Hexamethylene- 1,6-diisocyanate homopolymer

Acute toxicity - oral

Acute toxicity oral (LD<sub>50</sub> 5,000.0 mg/kg)

Species Rat

ATE oral (mg/kg) 5,000.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC<sub>50</sub> dust/mist mg/l) 0.554

Rat

ATE inhalation (dusts/mists mg/l) 0.554

Skin sensitisation

Skin sensitisation Guinea pig maximization test (GPMT) - Guinea pig: Sensitising.

Bis(trimethoxysilylpropyl)amine

Acute toxicity - dermal

Acute toxicity dermal (LD<sub>50</sub> mg/kg) 2,000

Species Rabbit

TOLUENE

Acute toxicity - oral

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

Species Rat

ATE oral (mg/kg) 6,000.0

Acute toxicity - dermal

Acute toxicity dermal (LD<sub>50</sub> mg/kg) 6,000.0

Species Rabbit

ATE dermal (mg/kg) 6,000.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC<sub>50</sub> vapours mg/l) 21.0

Species Rat

ATE inhalation (vapours mg/l) 21.0

2-METHOXY-1-METHYLETHYL ACETATE

Acute toxicity - oral

Acute toxicity oral (LD<sub>50</sub> mg/kg) 5,500.0

Species	Rat
ATE oral (mg/kg)	5,500.0

Acute toxicity - dermal

Acute toxicity dermal (LD <sub>50</sub> mg/kg)	5,500.0
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Rabbit

ATE dermal (mg/kg) 5,500.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC<sub>50</sub> vapours mg/l) 20.0

Species Rat

ATE inhalation (vapours mg/l) 20

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Ames test: Negative.

Genotoxicity - in vivo Negative.

Carcinogenicity

Carcinogenicity Data lacking.

Reproductive toxicity

Reproductive toxicity - fertility Two-generation study - NOAEL 1000 ppm, Inhalation,

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

XYLENE

Acute toxicity - oral

Acute toxicity oral (LD<sub>50</sub> mg/kg) 2,050.0

Species Rat

ATE oral (mg/kg) 2,050.0

Acute toxicity - dermal

Acute toxicity dermal (LD<sub>50</sub> mg/kg) 2,700

Species Rabbit

Acute toxicity - inhalation

Acute toxicity inhalation (LC<sub>50</sub> vapours mg/l) 10.0

Species Rat

ATE inhalation (vapours mg/l) 10.0

ETHYLBENZENE

Acute toxicity - oral



Acute toxicity oral (LD<sub>50</sub> 3,500 mg/kg)

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD<sub>50</sub> mg/kg) 17,800

Species Rabbit

HEXAMETHYLENE-DI-ISOCYANATE

Acute toxicity - oral

Acute toxicity oral (LD<sub>50</sub> 746 mg/kg)

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD<sub>50</sub> mg/kg) 7,000

Species Rat

Notes (dermal LD<sub>50</sub>)

Acute toxicity - inhalation

Acute toxicity inhalation (LC<sub>50</sub> vapours mg/l) 124

Species Rat

ATE inhalation (vapours) 124 mg/l

Skin sensitisation

Skin sensitisation Guinea pig maximization test (GPMT) - Guinea pig: Sensitising.

METHANOL

Acute toxicity - oral

Acute toxicity oral (LD<sub>50</sub> 2,000 mg/kg)

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD<sub>50</sub> mg/kg) 2,000

Species Rabbit

Acute toxicity -  
inhalation

Acute toxicity  
inhalation  
(LC<sub>50</sub> vapours mg/l) 20  
Species Rat

ATE inhalation 20  
(vapours mg/l)

SECTION 12: Ecological  
Information

Ecotoxicity

Not regarded as dangerous for the environment. The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

Ecological information on ingredients.

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	EC <sub>50</sub> , 48 hours, 48 hours: > 100 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC <sub>50</sub> , 96 hours, 96 hours: 2029 , Freshwater algae

Acute toxicity microorganisms	EC <sub>50</sub> , 96 hours, 96 hours: > 50 mg/l, Activated sludge
Ecotoxicity	The product contains a substance which is 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.

#### Bis(trimethoxysilylpropyl)amine

#### Ecological information on ingredients.

#### BUTANONE

Acute toxicity microorganisms	EC <sub>20</sub> , 48 hours, 48 hours: > 1000 mg/l, Activated sludge
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#### EPOXY RESIN (Number average MW ≤ 700 )

Acute toxicity - fish	LC <sub>50</sub> , 96 hours, 96 hours: 2.0 mg/l, Leuciscus idus (Golden orfe)
Acute toxicity - aquatic invertebrates	EC <sub>50</sub> , 48 hours, 48 hours: 1.8 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC <sub>50</sub> , 72 hours, 72 hours: 11 mg/l, Freshwater algae

#### Hexamethylene- 1,6-diisocyanate homopolymer

Acute toxicity - fish	LC <sub>50</sub> , 96 hours, 96 hours: > 100 mg/l, Brachydanio rerio (Zebra Fish)
Acute toxicity - aquatic invertebrates	EC <sub>50</sub> , 48 hours, 48 hours: > 100 mg/l, Daphnia magna
Acute toxicity - aquatic plants	IC <sub>50</sub> , 72 hours, 72 hours: > 100 mg/l, Scenedesmus subspicatus

Acute toxicity microorganisms EC<sub>50</sub>, 3 hours, 3 hours: > 100 mg/l, Activated sludge

Bis(trimethoxysilylpropyl)amine

Acute toxicity - fish LC50, 96 hours, 96 hours: 130 mg/l, Freshwater fish

Acute toxicity - aquatic invertebrates EC<sub>50</sub>, 48 hours, 48 hours: 3.5 mg/l, Daphnia magna

TOLUENE

Acute toxicity - fish LC50, 96 hours, 96 hours: 13 mg/l, Carassius auratus (Goldfish)  
LC50, 96 hours, 96 hours: 24 mg/l, Onchorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates EC<sub>50</sub>, 48 hours, 48 hours: 11.5 mg/l, Daphnia magna

Acute toxicity - aquatic plants IC<sub>50</sub>, 72 hours, 72 hours: 12 mg/l, Selenastrum capricornutum

Acute toxicity microorganisms NOEC, : 29 mg/l, Activated sludge

Acute toxicity - aquatic invertebrates

Antihydrolysis Agent EC<sub>0</sub>, 48

hours, 48 hours: > 100 mg/l, Daphnia magna

Acute toxicity - fish

2-METHOXY-1-METHYLETHYL ACETATE

LC50, 96 hours, 96 hours: > 100 mg/l, Oryzias latipes (Red killifish)

Acute toxicity - aquatic invertebrates

EC<sub>50</sub>, 48 hours, 48 hours: 408 - 500 mg/l, Daphnia

Acute toxicity - aquatic plants EC<sub>50</sub>, 72 hours, 72 hours: > 1000 mg/l, Freshwater algae

Acute toxicity microorganisms EC<sub>20</sub>, 30 min, 30 minutes: > 1,000 mg/l, Activated sludge

XYLENE

Acute toxicity - fish LC<sub>50</sub>, 96 hours, 96 hours: 13.4 mg/l, Pimephales promelas (Fat-head Minnow)  
LC<sub>50</sub>, 96 hours, 96 hours: < 11.9 mg/l, Onchorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates EC<sub>50</sub>, 48 hours, 48 hours: 81 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC<sub>50</sub>, 48 hours, 48 hours: 110 mg/l, Freshwater algae

Acute toxicity microorganisms EC<sub>50</sub>, 48 hours, 48 hours: 1000 mg/l, Activated sludge

ETHYLBENZENE

Acute toxicity - fish LC<sub>50</sub>, 96 hours, 96 hours: 4.2 mg/l, Onchorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates EC<sub>50</sub>, 48 hours, 48 hours: 1.8 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC<sub>50</sub>, 72 hours, 72 hours: 4.6 mg/l, Freshwater algae

Acute toxicity microorganisms EC<sub>0</sub>, 3 hours, 3 hours: 12 mg/l, Activated sludge

HEXAMETHYLENE-DI-ISOCYANATE

Acute toxicity - fish LC<sub>0</sub>, 96 hours, 96 hours: > 82.8 mg/l, Brachydanio rerio (Zebra Fish)

Acute toxicity - aquatic invertebrates EC<sub>0</sub>, 48 hours, 48 hours: mg/l, Daphnia magna

Acute toxicity - aquatic plants EC<sub>50</sub>, 72 hours, 72 hours: > 77.4 mg/l, Freshwater algae

Acute toxicity microorganisms EC<sub>50</sub>, 3 hours, 3 hours: 842 mg/l, Activated sludge

METHANOL

Acute toxicity - fish LC<sub>50</sub>, 96 hours: >7900 mg/l, Fish

Acute toxicity - aquatic invertebrates EC<sub>50</sub>, 48 hours, 48 hours: > 10,000 mg/l, Daphnia magna

magna

Acute toxicity - aquatic plants

EC<sub>50</sub>, >: > 500 mg/l, Freshwater algae

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.

Ecological information on ingredients.

BUTANONE

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

Antihydrolysis Agent

Persistence and degradability	The product is not readily biodegradable.
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Hexamethylene- 1,6-diisocyanate homopolymer

Biodegradation	- Degradation (%) 1: 28 days
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TOLUENE

Persistence and degradability	The product is readily biodegradable.
Biodegradation	- Degradation (%) 86: 20 days readily biodegradable
Biological oxygen demand	1.23 g O <sub>2</sub> /g substance

XYLENE

Biodegradation	Air. - Degradation (%) 60: > 28 days readily biodegradable
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ETHYLBENZENE

Biodegradation	water - Degradation (%) 70 - 80: 28 days readily biodegradable
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HEXAMETHYLENE-DI-ISOCYANATE

Biodegradation	Water and sediment - Degradation (%) 42: 28 days
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12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient Not available.

Ecological information on ingredients.

BUTANONE

Bioaccumulative potential The product is not bioaccumulating.

TOLUENE

Bioaccumulative potential The product is not bioaccumulating. BCF: ,

HEXAMETHYLENE-DI-ISOCYANATE

Bioaccumulative potential BCF: 57.6, An accumulation in aquatic organisms is not to be expected

METHANOL

Bioaccumulative potential BCF: 28,400,

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.

TOLUENE

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

HEXAMETHYLENE-DI-ISOCYANATE

Henry's law constant 5 Pa m<sup>3</sup>/mol @ 25°C

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.

TOLUENE

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

XYLENE

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      None known.

**SECTION 13: Disposal considerations**

13.1. Waste treatment methods

General information      Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor.

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

Waste class      08 04 09 MH

**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

Proper shipping name (IMDG)      ADHESIVES

Proper shipping name (ICAO) ADHESIVES

Proper shipping name (ADN) ADHESIVES

14.3. Transport hazard class(es)

ADR/RID class      3



ADR/RID subsidiary risk  
ADR/RID label 3  
IMDG class 3  
IMDG subsidiary risk  
ICAO class/division 3  
ICAO subsidiary risk

## S 49 Part A Adhesive

## 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

No.

## 14.6. Special precautions for user

EmS F-E, S-D

Emergency Action Code •3YE

Hazard Identification Number 33  
(ADR/RID)

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	EH40/2005 Workplace exposure limits.
EU legislation	System of specific information relating to Dangerous Preparations. 2001/58/EC.
Guidance	Workplace Exposure Limits EH40. Introduction to Local Exhaust Ventilation HS(G)37. CHIP for everyone HSG228. Approved Classification and Labelling Guide (Sixth edition) L131.
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	<p>ADR : European Agreement concerning the International Transport of Dangerous Goods by Road</p> <p>RID : Regulations Concerning the International Transport of Dangerous Goods by Rail</p> <p>IMDG : International Maritime Code for Dangerous Goods</p> <p>IATA : International Air Transport Association</p> <p>ICAO : International Civil Aviation Organization</p> <p>GHS : Globally Harmonized System of Classification and Labelling of Chemicals</p> <p>EINECS : European Inventory of Existing Commercial Chemical Substances</p> <p>CAS : Chemical Abstracts Service</p> <p>DNEL ; Derived No Effect Level (REACH)</p> <p>PNEC : Predicted No Effect Concentration (REACH)</p> <p>LC50 : Lethal Concentration 50 percent</p> <p>LD50 : Lethal Dose 50 percent</p>
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	06/05/2015
Revision	9
SDS number	
Risk phrases in full	<p>R10 Flammable.</p> <p>R11 Highly flammable.</p> <p>R20 Harmful by inhalation.</p> <p>R20/21 Harmful by inhalation and in contact with skin.</p> <p>R23 Toxic by inhalation.</p> <p>R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.</p> <p>R36 Irritating to eyes.</p> <p>R36/37/38 Irritating to eyes, respiratory system and skin.</p> <p>R36/38 Irritating to eyes and skin.</p> <p>R37 Irritating to respiratory system.</p> <p>R38 Irritating to skin.</p> <p>R39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.</p> <p>R41 Risk of serious damage to eyes.</p> <p>R42/43 May cause sensitisation by inhalation and skin contact.</p> <p>R43 May cause sensitisation by skin contact.</p> <p>R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.</p> <p>R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.</p> <p>R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.</p> <p>R63 Possible risk of harm to the unborn child.</p> <p>R65 Harmful: may cause lung damage if swallowed.</p> <p>R66 Repeated exposure may cause skin dryness or cracking.</p> <p>R67 Vapours may cause drowsiness and dizziness.</p>

Hazard statements in full

- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- H304 May be fatal if swallowed and enters airways.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.
- H332 Harmful if inhaled.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H361d Suspected of damaging the unborn child.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H411 Toxic to aquatic life with long lasting effects.
- H412 Harmful to aquatic life with long lasting effects.

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.