

# Permabond®

## Engineering Adhesives

### SAFETY DATA SHEET

#### Permabond TA4246

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

##### 1.1. Product identifier

Product name Permabond TA4246

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

Identified uses Adhesive.

##### 1.3. Details of the supplier of the safety data sheet

Supplier Permabond Engineering Adhesives Ltd.  
Wessex Way  
Colden Common  
Winchester  
Hampshire SO21 1WP  
United Kingdom  
Tel: +44 (0)1962 711 661  
Fax: +44 (0)1962 711 662  
info.europe@permabond.com

##### 1.4. Emergency telephone number

Emergency telephone UK +44 (0)1962 711 661 USA 0800 640 7599 Asia +86 (0)21 5773 4913

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

###### Classification (EC 1272/2008)

Physical hazards Flam. Liq. 2 - H225

Health hazards Skin Corr. 1A - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317 STOT SE 3 - H335

Environmental hazards Aquatic Chronic 3 - H412

##### 2.2. Label elements

###### Pictogram



###### Signal word

Danger

###### Hazard statements

H225 Highly flammable liquid and vapour.  
H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.  
H335 May cause respiratory irritation.  
H412 Harmful to aquatic life with long lasting effects.

## Permabond TA4246

<b>Precautionary statements</b>	<p>P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</p> <p>P280 Wear protective gloves, eye and face protection.</p> <p>P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</p> <p>P302+P352a IF ON SKIN: Wash with plenty of soap and water</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P308+P313 IF exposed or concerned: Get medical advice/ attention.</p>
<b>Supplemental label information</b>	EUH205 Contains epoxy constituents. May produce an allergic reaction.
<b>Contains</b>	METHYL METHACRYLATE, METHACRYLIC ACID, EPOXY RESIN (Number average MW <= 700 )
<b>Supplementary precautionary statements</b>	<p>P243 Take action to prevent static discharges.</p> <p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P273 Avoid release to the environment.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.</p> <p>P337+P313 If eye irritation persists: Get medical advice/ attention.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P403+P235 Store in a well-ventilated place. Keep cool.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/container in accordance with existing Community, National and local regulations.</p>

### 2.3. Other hazards

None under normal conditions. This substance is not classified as PBT or vPvB according to current EU criteria.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

<b>METHYL METHACRYLATE</b>	<b>30-60%</b>
CAS number: 80-62-6	EC number: 201-297-1
	REACH registration number: 01-2119452498-28-XXXX
<b>Classification</b>	
Flam. Liq. 2 - H225	
Skin Irrit. 2 - H315	
Skin Sens. 1 - H317	
STOT SE 3 - H335	

## Permabond TA4246

<b>METHACRYLIC ACID</b>		<b>5-10%</b>
CAS number: 79-41-4	EC number: 201-204-4	REACH registration number: 01-2119463884-26-XXXX
<b>Classification</b>		
Acute Tox. 4 - H302		
Acute Tox. 3 - H311		
Acute Tox. 4 - H332		
Skin Corr. 1A - H314		
Eye Dam. 1 - H318		
STOT SE 3 - H335		
<b>EPOXY RESIN (Number average MW &lt;= 700 )</b>		<b>5-10%</b>
CAS number: 25068-38-6	EC number: 500-033-5	REACH registration number: 01-2119456619-26-XXXX
<b>Classification</b>		
Skin Irrit. 2 - H315		
Eye Irrit. 2 - H319		
Skin Sens. 1 - H317		
Aquatic Chronic 2 - H411		
<b>CUMENE HYDROPEROXIDE</b>		<b>&lt;1%</b>
CAS number: 80-15-9	EC number: 201-254-7	REACH registration number: 01-2119475796-19-XXXX
<b>Classification</b>		
Org. Perox. E - H242		
Acute Tox. 4 - H302		
Acute Tox. 4 - H312		
Acute Tox. 3 - H331		
Skin Corr. 1B - H314		
Eye Dam. 1 - H318		
STOT SE 3 - H335		
STOT RE 2 - H373		
Aquatic Chronic 2 - H411		

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

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

<b>Inhalation</b>	Move the exposed person to fresh air. Get medical attention if any discomfort continues.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Give plenty of water to drink. Do not induce vomiting. Get medical attention if any discomfort continues.
<b>Skin contact</b>	Remove contaminated clothing. Wash skin thoroughly with soap and water. If symptoms develop, obtain medical attention
<b>Eye contact</b>	Remove any contact lenses and open eyelids wide apart. Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Get medical attention.

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

## Permabond TA4246

<b>Inhalation</b>	Irritating to respiratory system.
<b>Skin contact</b>	Chemical burns. Mild dermatitis, allergic skin rash.
<b>Eye contact</b>	Causes serious eye damage.

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

<b>Notes for the doctor</b>	No specific recommendations. Treat symptomatically.
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## **SECTION 5: Firefighting measures**

### **5.1. Extinguishing media**

<b>Suitable extinguishing media</b>	Extinguish with foam, carbon dioxide, dry powder or water fog.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.

### **5.2. Special hazards arising from the substance or mixture**

<b>Specific hazards</b>	Flammable liquid and vapour. Vapours are heavier than air and may travel along the floor and accumulate in the bottom of containers. Vapours may be ignited by a spark, a hot surface or an ember.
<b>Hazardous combustion products</b>	Burning produces irritating, toxic and obnoxious fumes. Carbon monoxide, carbon dioxide, and unknown hydrocarbons.

### **5.3. Advice for firefighters**

<b>Special protective equipment for firefighters</b>	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.
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## **SECTION 6: Accidental release measures**

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

<b>Personal precautions</b>	Eliminate all sources of ignition. Ensure adequate ventilation of the working area. Do not breathe vapour. Wear protective clothing as described in Section 8 of this safety data sheet.
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### **6.2. Environmental precautions**

<b>Environmental precautions</b>	Avoid the spillage or runoff entering drains, sewers or watercourses.
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### **6.3. Methods and material for containment and cleaning up**

<b>Methods for cleaning up</b>	Absorb spillage with sand or other inert absorbent. Transfer to suitable, labelled containers for disposal.
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### **6.4. Reference to other sections**

<b>Reference to other sections</b>	For personal protection, see Section 8. For waste disposal, see section 13.
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## **SECTION 7: Handling and storage**

### **7.1. Precautions for safe handling**

<b>Usage precautions</b>	Avoid contact with skin and eyes. Use in a well ventilated area. Do not ingest or inhale. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges.
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### **7.2. Conditions for safe storage, including any incompatibilities**

<b>Storage precautions</b>	Keep container tightly closed, in a cool, well ventilated place. Keep container dry. Store in closed original container at temperatures between 2°C and 7°C.
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### **7.3. Specific end use(s)**

## Permabond TA4246

**Specific end use(s)** Adhesive.

### SECTION 8: Exposure Controls/personal protection

#### 8.1. Control parameters

##### Occupational exposure limits

##### METHYL METHACRYLATE

Long-term exposure limit (8-hour TWA): WEL 50 ppm 208 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 100 ppm 416 mg/m<sup>3</sup>

##### METHACRYLIC ACID

Long-term exposure limit (8-hour TWA): WEL 20 ppm 72 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 40 ppm 143 mg/m<sup>3</sup>

WEL = Workplace Exposure Limit

#### 8.2. Exposure controls

##### Protective equipment



##### Appropriate engineering controls

Provide adequate ventilation. Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients.

##### Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles or face shield. Personal eye protection should conform to EN 166

##### Hand protection

It is recommended that chemical-resistant, impervious gloves are worn. Gloves should conform to EN 374. For exposure up to 4 hours, wear gloves made of the following material: Nitrile rubber. Thickness: ≥ 0.4 mm The selected gloves should have a breakthrough time of at least 0.5 hours. For exposure up to 8 hours, wear gloves made of the following material: Nitrile rubber. Thickness: ≥ 0.4 mm The selected gloves should have a breakthrough time of at least 8 hours. The breakthrough time for any glove material may be different for different glove manufacturers. 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. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected.

##### Other skin and body protection

Employee must wear appropriate protective clothing and equipment to prevent any possibility of skin contact with this substance.

##### Hygiene measures

Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke. Use of good industrial hygiene practices is required.

##### Respiratory protection

Ensure adequate ventilation of the working area. Respiratory protection may be required if excessive airborne contamination occurs. Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Organic vapour filter. Type A.

### SECTION 9: Physical and Chemical Properties

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

**Appearance** Viscous liquid.

**Colour** Amber.

## Permabond TA4246

<b>Odour</b>	Pungent. Acrylic
<b>Odour threshold</b>	Not available.
<b>pH</b>	Not relevant.
<b>Melting point</b>	Not available.
<b>Initial boiling point and range</b>	~100°C
<b>Flash point</b>	11°C
<b>Evaporation rate</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	Not available.
<b>Vapour pressure</b>	28 mm Hg
<b>Vapour density</b>	3.46
<b>Relative density</b>	1.0
<b>Solubility(ies)</b>	Slightly soluble in water. Soluble in the following materials: Organic solvents.
<b>Auto-ignition temperature</b>	Not available.
<b>Viscosity</b>	≈23000 mPa s @ 23°C
<b>Oxidising properties</b>	Not available.

### 9.2. Other information

**Other information** Not relevant.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

**Reactivity** The following materials may react with the product: Strong oxidising agents. Strong acids. Strong alkalis.

### 10.2. Chemical stability

**Stability** Stable at normal ambient temperatures.

### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** There are no known reactivity hazards associated with this product. Reactions with the following materials may generate heat: Amines. Organic peroxides/hydroperoxides.

### 10.4. Conditions to avoid

**Conditions to avoid** Take precautionary measures against static discharges. Avoid heat, flames and other sources of ignition.

### 10.5. Incompatible materials

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

### 10.6. Hazardous decomposition products

**Hazardous decomposition products** Thermal decomposition could produce carbon monoxide, carbon dioxide, and unidentified organic compounds.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

## Permabond TA4246

### Toxicological effects

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

### Skin sensitisation

**Skin sensitisation** May cause sensitisation by skin contact.

### Aspiration hazard

**Aspiration hazard** None under normal conditions.

### Inhalation

May cause respiratory system irritation.

### Skin contact

Causes burns.

### Eye contact

Causes serious eye damage.

### Toxicological information on ingredients.

#### METHYL METHACRYLATE

##### Acute toxicity - oral

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

**Species** Rat

**ATE oral (mg/kg)** 5,000.0

##### Acute toxicity - dermal

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

**Species** Rat

**ATE dermal (mg/kg)** 5,000.0

##### Acute toxicity - inhalation

**Acute toxicity inhalation (LC<sub>50</sub> vapours mg/l)** 29.8

**Species** Rat

**ATE inhalation (vapours mg/l)** 29.8

##### Skin corrosion/irritation

**Skin corrosion/irritation** Not irritating. Prolonged skin contact may cause temporary irritation.

##### Serious eye damage/irritation

**Serious eye damage/irritation** Not irritating.

##### Respiratory sensitisation

**Respiratory sensitisation** Mouse: Sensitising.

##### Skin sensitisation

**Skin sensitisation** Local Lymph Node Assay (LLNA) - Mouse: Sensitising.

## Permabond TA4246

### Germ cell mutagenicity

<b>Genotoxicity - in vitro</b>	Inconclusive.
<b>Genotoxicity - in vivo</b>	This substance has no evidence of mutagenic properties.

### Carcinogenicity

<b>Carcinogenicity</b>	CMR: no
<b>IARC carcinogenicity</b>	IARC Group 3 Not classifiable as to its carcinogenicity to humans.

### Reproductive toxicity

<b>Reproductive toxicity - fertility</b>	No evidence of reproductive toxicity in animal studies.
<b>Reproductive toxicity - development</b>	No evidence of reproductive toxicity in animal studies. non-teratogenic, not embryotoxic

### Specific target organ toxicity - single exposure

<b>Target organs</b>	Respiratory tract Irritation.
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### Specific target organ toxicity - repeated exposure

<b>Target organs</b>	No specific target organs known.
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### Aspiration hazard

<b>Aspiration hazard</b>	Based on available data the classification criteria are not met.
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## METHACRYLIC ACID

### Acute toxicity - oral

<b>Acute toxicity oral (LD<sub>50</sub> mg/kg)</b>	1,320.0
<b>Species</b>	Rat
<b>ATE oral (mg/kg)</b>	500.0

### Acute toxicity - dermal

<b>Acute toxicity dermal (LD<sub>50</sub> mg/kg)</b>	1,000.0
<b>Species</b>	Rabbit
<b>ATE dermal (mg/kg)</b>	1,000.0

### Acute toxicity - inhalation

<b>Acute toxicity inhalation (LC<sub>50</sub> vapours mg/l)</b>	7.1
<b>Species</b>	Rat
<b>ATE inhalation (vapours mg/l)</b>	11.0

### Skin corrosion/irritation

<b>Animal data</b>	Dose: Method: OECD 404, 3 minutes, Rabbit Corrosive.
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### Serious eye damage/irritation



## Permabond TA4246

<b>Serious eye damage/irritation</b>	Method: OECD 405, Rabbit Corrosive
<b><u>Respiratory sensitisation</u></b>	
<b>Respiratory sensitisation</b>	Guinea pig: Not sensitising. Method: various test systems
<b><u>Skin sensitisation</u></b>	
<b>Skin sensitisation</b>	Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising.
<b><u>Germ cell mutagenicity</u></b>	
<b>Genotoxicity - in vitro</b>	Based on available data the classification criteria are not met.
<b><u>Carcinogenicity</u></b>	
<b>Carcinogenicity</b>	CMR: no
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	No evidence of reproductive toxicity in animal studies.
<b>Reproductive toxicity - development</b>	Non-teratogenic, not embryotoxic
<b><u>Specific target organ toxicity - single exposure</u></b>	
<b>Target organs</b>	Respiratory tract Irritating.
<b><u>Specific target organ toxicity - repeated exposure</u></b>	
<b>Target organs</b>	No specific target organs known.
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	Based on available data the classification criteria are not met.
<b><u>EPOXY RESIN (Number average MW &lt;= 700 )</u></b>	
<b><u>Acute toxicity - oral</u></b>	
<b>Acute toxicity oral (LD<sub>50</sub> mg/kg)</b>	11,400.0
<b>Species</b>	Rat
<b>ATE oral (mg/kg)</b>	11,400.0
<b><u>Acute toxicity - dermal</u></b>	
<b>Acute toxicity dermal (LD<sub>50</sub> mg/kg)</b>	2,000.1
<b>Species</b>	Rabbit
<b>ATE dermal (mg/kg)</b>	2,000.1
<b><u>Acute toxicity - inhalation</u></b>	
<b>Notes (inhalation LC<sub>50</sub>)</b>	No specific test data are available.
<b><u>Skin corrosion/irritation</u></b>	
<b>Skin corrosion/irritation</b>	Not irritating.
<b>Animal data</b>	Oedema score: Very slight oedema - barely perceptible (1).
<b><u>Serious eye damage/irritation</u></b>	

## Permabond TA4246

<b>Serious eye damage/irritation</b>	Not irritating.
<b><u>Respiratory sensitisation</u></b>	
<b>Respiratory sensitisation</b>	No specific test data are available.
<b><u>Skin sensitisation</u></b>	
<b>Skin sensitisation</b>	Local Lymph Node Assay (LLNA) - Mouse: Sensitising.
<b><u>Germ cell mutagenicity</u></b>	
<b>Genotoxicity - in vitro</b>	Conclusive data but not sufficient for classification.
<b><u>Carcinogenicity</u></b>	
<b>Carcinogenicity</b>	Conclusive data but not sufficient for classification.
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	Fertility - NOAEL 750 mg/kg/day, Oral, Rat
<b>Reproductive toxicity - development</b>	Developmental toxicity: - NOAEL: 180 mg/kg/day, Oral, Rat
<b><u>Specific target organ toxicity - single exposure</u></b>	
<b>STOT - single exposure</b>	No specific test data are available.
<b><u>Specific target organ toxicity - repeated exposure</u></b>	
<b>STOT - repeated exposure</b>	Conclusive data but not sufficient for classification.
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	Based on available data the classification criteria are not met.

### CUMENE HYDROPEROXIDE

<b><u>Acute toxicity - oral</u></b>	
<b>Acute toxicity oral (LD<sub>50</sub> mg/kg)</b>	328.0
<b>Species</b>	Rat
<b>ATE oral (mg/kg)</b>	328.0
<b><u>Acute toxicity - dermal</u></b>	
<b>Acute toxicity dermal (LD<sub>50</sub> mg/kg)</b>	1,200.0
<b>Species</b>	Rat
<b>ATE dermal (mg/kg)</b>	1,200.0
<b><u>Acute toxicity - inhalation</u></b>	
<b>Acute toxicity inhalation (LC<sub>50</sub> dust/mist mg/l)</b>	1.37
<b>Species</b>	Rat
<b>ATE inhalation (dusts/mists mg/l)</b>	0.5

## Permabond TA4246

### Skin corrosion/irritation

**Animal data** Highly irritating.

### Serious eye damage/irritation

**Serious eye damage/irritation** Irritating to eyes.

### Skin sensitisation

**Skin sensitisation** Not sensitising.

### Germ cell mutagenicity

**Genotoxicity - in vitro** Positive.

**Genotoxicity - in vivo** This substance has no evidence of mutagenic properties.

### Carcinogenicity

**Carcinogenicity** CMR: No

### Reproductive toxicity

**Reproductive toxicity - fertility** No specific test data are available.

**Reproductive toxicity - development** Developmental toxicity: - NOAEL:  $\geq 100$  mg/kg/day, Oral, Rat

### Specific target organ toxicity - single exposure

**STOT - single exposure** No specific test data are available.

### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** Toxic: danger of serious damage to health by prolonged exposure through inhalation.

### Aspiration hazard

**Aspiration hazard** No specific test data are available.

## SECTION 12: Ecological Information

**Ecotoxicity** Harmful to aquatic life with long lasting effects.

### 12.1. Toxicity

**Toxicity** The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

### Ecological information on ingredients.

#### METHYL METHACRYLATE

### Acute aquatic toxicity

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours: > 79 mg/l, Oncorhynchus mykiss (Rainbow trout)

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 48 hours: 69 mg/l, Daphnia magna

**Acute toxicity - aquatic plants** NOEC, 72 hours: > 110 mg/l, Selenastrum capricornutum  
EC<sub>50</sub>, 72 hours: > 100 mg/l, Selenastrum capricornutum

## Permabond TA4246

**Acute toxicity - microorganisms** EC<sub>20</sub>, 30 minutes: 150 - 200 mg/l, Activated sludge

### Chronic aquatic toxicity

**Chronic toxicity - fish early life stage** NOEC, 35 days: 9.4 mg/l, Danio rerio (Zebrafish)

**Chronic toxicity - aquatic invertebrates** NOEC, 21 days: 37 mg/l, Daphnia magna

## METHACRYLIC ACID

### Acute aquatic toxicity

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours: 85 mg/l, Oncorhynchus mykiss (Rainbow trout)

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 48 hours: > 130 mg/l, Daphnia magna

**Acute toxicity - aquatic plants** EC<sub>50</sub>, 72 hours: 45 mg/l, Selenastrum capricornutum  
LOEC, 72 hours: 45 mg/l, Selenastrum capricornutum

**Acute toxicity - microorganisms** EC<sub>50</sub>, 17 hours: 270 mg/l, Pseudomonas putida

### Chronic aquatic toxicity

**Chronic toxicity - fish early life stage** NOEC, 35 days: 10 mg/l, Danio rerio (Zebrafish)

**Chronic toxicity - aquatic invertebrates** NOEC, 21 days: 53 mg/l, Daphnia magna

## EPOXY RESIN (Number average MW ≤ 700 )

### Acute aquatic toxicity

**Acute toxicity - fish** LC<sub>50</sub>, 24 hours: 4.4 mg/l, Oncorhynchus mykiss (Rainbow trout)

**Acute toxicity - aquatic invertebrates** LC<sub>50</sub>, 24 hours: 4.9 mg/l, Daphnia magna

**Acute toxicity - aquatic plants** EC<sub>50</sub>, 48 hours: 9.1 mg/l, Selenastrum capricornutum

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

### Chronic aquatic toxicity

**Chronic toxicity - aquatic invertebrates** NOEC, 21 days: 0.3 mg/l, Daphnia magna

## CUMENE HYDROPEROXIDE

### Acute aquatic toxicity

**Acute toxicity - fish** LC<sub>50</sub>, 96 hour: 3.9 mg/l, Oncorhynchus mykiss (Rainbow trout)

## 12.2. Persistence and degradability

**Persistence and degradability** The product is not readily biodegradable.

## Ecological information on ingredients.

## Permabond TA4246

### METHYL METHACRYLATE

**Biodegradation** Water - Degradation 94%: 14 days

### METHACRYLIC ACID

**Biodegradation** Water - Degradation 86%: 28 days

### EPOXY RESIN (Number average MW <= 700 )

**Biodegradation** Water - 6 - 12%: 28 days

### CUMENE HYDROPEROXIDE

**Biodegradation** The substance is readily biodegradable.

#### 12.3. Bioaccumulative potential

**Bioaccumulative potential** No data available on bioaccumulation.

#### Ecological information on ingredients.

### EPOXY RESIN (Number average MW <= 700 )

**Bioaccumulative potential** BCF: 100 - 3000,

**Partition coefficient** log Pow: 3.242

#### 12.4. Mobility in soil

**Mobility** No data available. The product has poor water-solubility.

#### Ecological information on ingredients.

### EPOXY RESIN (Number average MW <= 700 )

**Adsorption/desorption coefficient** Water - log Koc: 2.65 @ 20°C

#### 12.5. Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment** This substance is not classified as PBT or vPvB according to current EU criteria.

#### 12.6. Other adverse effects

**Other adverse effects** None known.

### **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

**General information** Waste disposal should be in accordance with existing Community, National and local regulations Empty containers may contain product residue; follow SDS and label warnings even after they have been emptied.

**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\* waste adhesives and sealants containing organic solvents or other dangerous substances.

### **SECTION 14: Transport information**

## Permabond TA4246

### 14.1. UN number

2924

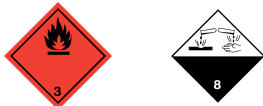
### 14.2. UN proper shipping name

FLAMMABLE LIQUID, CORROSIVE, N.O.S. (contains Methylmethacrylate and Methacrylic Acid)

### 14.3. Transport hazard class(es)

3(8)

### Transport labels



### 14.4. Packing group

II

### 14.5. Environmental hazards

#### Environmentally hazardous substance/marine pollutant

No.

### 14.6. Special precautions for user

EmS F-E, S-C

Hazard Identification Number (ADR/RID) 338 Highly flammable liquid, corrosive.

Tunnel restriction code (D/E)

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

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

## SECTION 15: Regulatory information

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

<b>National regulations</b>	The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716). EH40/2005 Workplace exposure limits. Health and Safety at Work etc. Act 1974 (as amended).
<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). COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
<b>Guidance</b>	Workplace Exposure Limits EH40. CHIP for everyone HSG228. Safety Data Sheets for Substances and Preparations. Approved Classification and Labelling Guide (Sixth edition) L131.

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

## Permabond TA4246

### SECTION 16: Other information

<b>Revision date</b>	01/11/2017
<b>Revision</b>	6
<b>Supersedes date</b>	05/07/2017
<b>Hazard statements in full</b>	H225 Highly flammable liquid and vapour. H242 Heating may cause a fire. H302 Harmful if swallowed. H311 Toxic in contact with skin. H312 Harmful in contact with skin. H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H319 Causes serious eye irritation. H331 Toxic if inhaled. H332 Harmful if inhaled. H335 May cause respiratory irritation. 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.