



## SAFETY DATA SHEET

### Permabond TA4202A

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

##### 1.1. Product identifier

**Product name** Permabond TA4202A

##### 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 GmbH  
Niederkasseler Lohweg 18  
40547 Düsseldorf  
Germany  
info.europe@permabond.com

**Manufacturer** 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@permabond.co.uk

##### 1.4. Emergency telephone number

**Emergency telephone** CHEMTREC UK: +(44)-870-8200418 CHEMTREC US: 800-424-9300 (CCN: 829878)

**National emergency telephone number** CHEMTREC Ireland: +(353)-19014670  
CHEMTREC Australia: +(61)-290372994  
CHEMTREC New Zealand: +(64)-98010034

#### 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 2 - H411

##### 2.2. Label elements

###### Hazard pictograms



**Signal word**

Danger

## Permabond TA4202A

<b>Hazard statements</b>	<p>H225 Highly flammable liquid and vapour.</p> <p>H314 Causes severe skin burns and eye damage.</p> <p>H317 May cause an allergic skin reaction.</p> <p>H335 May cause respiratory irritation.</p> <p>H411 Toxic to aquatic life with long lasting effects.</p>
<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/ protective clothing/ eye protection/ 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 ), CUMENE HYDROPEROXIDE
<b>Supplementary precautionary statements</b>	<p>P243 Take action to prevent static discharges.</p> <p>P261 Avoid breathing vapour/ spray.</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>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.</p> <p>P391 Collect spillage.</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 TA4202A

<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: 1675-54-3	EC number: 216-823-5	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>2,6-DI-TERT-BUTYL-P-CRESOL</b>			<b>1-5%</b>
CAS number: 128-37-0	EC number: 204-881-4		
M factor (Acute) = 1	M factor (Chronic) = 1		
REACH registration exemption – < 1 tonne			
<b>Classification</b> Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410			

<b>CUMENE HYDROPEROXIDE</b>			<b>1-&lt; 2.5%</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

## Permabond TA4202A

### 4.1. Description of first aid measures

Inhalation	Move the exposed person to fresh air. Get medical attention if any discomfort continues.
Ingestion	Rinse mouth thoroughly with water. Give plenty of water to drink. Do not induce vomiting. Get medical attention if any discomfort continues.
Skin contact	Remove contaminated clothing. Wash skin thoroughly with soap and water. If symptoms develop, obtain medical attention
Eye contact	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

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

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

Notes for the doctor	No specific recommendations. Treat symptomatically.
----------------------	---

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	Extinguish with foam, carbon dioxide, dry powder or water fog.
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	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.
Hazardous combustion products	Burning produces irritating, toxic and obnoxious fumes. Carbon monoxide, carbon dioxide, and unknown hydrocarbons.

### 5.3. Advice for firefighters

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

## SECTION 6: Accidental release measures

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

Personal precautions	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.
----------------------	--

### 6.2. Environmental precautions

Environmental precautions	Avoid the spillage or runoff entering drains, sewers or watercourses.
---------------------------	---

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

Methods for cleaning up	Absorb spillage with sand or other inert absorbent. Transfer to suitable, labelled containers for disposal.
-------------------------	---

### 6.4. Reference to other sections

Reference to other sections	For personal protection, see Section 8. For waste disposal, see section 13.
-----------------------------	---

## PermaBond TA4202A

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

**Usage precautions** 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.

#### 7.2. Conditions for safe storage, including any incompatibilities

**Storage precautions** 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.

#### 7.3. Specific end use(s)

**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>

##### 2,6-DI-TERT-BUTYL-P-CRESOL

Long-term exposure limit (8-hour TWA): WEL 10 mg/m<sup>3</sup>

WEL = Workplace Exposure Limit.

#### METHYL METHACRYLATE (CAS: 80-62-6)

<b>DNEL</b>	Workers, Industry/Professional - Inhalation; Long term : 208 mg/m <sup>3</sup>
	Workers, Industry/Professional - Dermal; Long term : 13.67 mg/kg/day
	Workers, Industry/Professional - Inhalation; Short term : 416 mg/m <sup>3</sup>
<b>PNEC</b>	Workers, Industry/Professional - Water; Long term <0.94 mg/l

#### METHACRYLIC ACID (CAS: 79-41-4)

<b>DNEL</b>	Workers, Industry - Inhalation; Long term local effects: 88 mg/m <sup>3</sup>
	Workers, Industry - Dermal; Long term systemic effects: 4.25 mg/kg/day
	Workers, Industry - Inhalation; Long term systemic effects: 29.6 mg/m <sup>3</sup>
<b>PNEC</b>	Workers, Industry - Fresh water; 0.82 mg/l
	Workers, Industry - marine water; 0.82 mg/l
	Workers, Industry - STP; 10 mg/l
	Workers, Industry - Soil; 1.2 mg/kg

#### EPOXY RESIN (Number average MW ≤ 700 ) (CAS: 1675-54-3)

<b>DNEL</b>	Workers - Inhalation; Long term systemic effects: 12.25 mg/m <sup>3</sup>
	Workers - Dermal; Long term systemic effects: 8.33 mg/kg/day
	Workers - Inhalation; Short term systemic effects: 12.25 mg/m <sup>3</sup>
	Workers - Dermal; Short term systemic effects: 8.33 mg/kg/day

## PermaBond TA4202A

### PNEC

- Fresh water; Long term 0.006 mg/l
- Sediment (Freshwater); Long term 0.996 mg/l
- Sediment (Marinewater); 0.0996 mg/l
- STP; Long term 10 mg/l
- Soil; Long term 0.196 mg/l
- marine water; 0.0006 mg/l
- Water; 0.0018 mg/l

### 2,6-DI-TERT-BUTYL-P-CRESOL (CAS: 128-37-0)

### DNEL

Workers - Inhalation; Long term systemic effects: 3.5 mg/m<sup>3</sup>  
Workers - Dermal; Long term systemic effects: 0.5 mg/kg/day

### PNEC

Fresh water; 0.199 µg/l  
marine water; 0.02 µg/l  
STP; 0.17 mg/l  
Sediment (Freshwater); 99.6 µg/kg  
Sediment (Marinewater); 9.96 µg/kg  
Soil; 8.33 mg/kg

### CUMENE HYDROPEROXIDE (CAS: 80-15-9)

### DNEL

Workers - Inhalation; Long term systemic effects: 6 mg/m<sup>3</sup>

### PNEC

Workers - Fresh water; 0.0031 mg/l  
Workers - marine water; 0.00031 mg/l  
Workers - Intermittent release; 0.031 mg/l  
Workers, Industry - Soil; 1.2 mg/kg  
Workers - STP; 0.35 mg/l  
Workers - Sediment (Freshwater); 0.023 mg/kg  
Workers - Sediment (Marinewater); 0.0023 mg/kg  
Workers - Soil; 0.0029 mg/kg

## 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

## Permabond TA4202A

<b>Hand protection</b>	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: $\geq 0.4$ 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: $\geq 0.4$ 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/manufacture, 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.
<b>Other skin and body protection</b>	Employee must wear appropriate protective clothing and equipment to prevent any possibility of skin contact with this substance.
<b>Hygiene measures</b>	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.
<b>Respiratory protection</b>	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. (EN14387)

### SECTION 9: Physical and chemical properties

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

<b>Appearance</b>	Liquid.
<b>Colour</b>	Pink.
<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>	$\sim 100^{\circ}\text{C}$
<b>Flash point</b>	$32.5^{\circ}\text{C}$ ASTM D3278
<b>Evaporation rate</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	Not available.
<b>Vapour pressure</b>	$\sim 28$ mm Hg
<b>Vapour density</b>	$\sim 3.46$
<b>Relative density</b>	1.1
<b>Solubility(ies)</b>	Slightly soluble in water. Soluble in the following materials: Organic solvents.
<b>Partition coefficient</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Viscosity</b>	$\approx 4000$ mPa s @ $23^{\circ}\text{C}$ Thixotropic
<b>Oxidising properties</b>	Not available.

#### 9.2. Other information

## Permabond TA4202A

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

**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>)** 5,000.0 mg/kg)

**Species** Rat

##### Acute toxicity - dermal



## PermaBond TA4202A

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

**Species** Rat

### Acute toxicity - inhalation

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

**Species** Rat

### 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.

### Germ cell mutagenicity

**Genotoxicity - in vitro** Inconclusive.

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

### Carcinogenicity

**Carcinogenicity** CMR: no

**IARC carcinogenicity** IARC Group 3 Not classifiable as to its carcinogenicity to humans.

### Reproductive toxicity

**Reproductive toxicity - fertility** No evidence of reproductive toxicity in animal studies.

**Reproductive toxicity - development** No evidence of reproductive toxicity in animal studies. non-teratogenic, not embryotoxic

### Specific target organ toxicity - single exposure

**Target organs** Respiratory tract Irritation.

### Specific target organ toxicity - repeated exposure

**Target organs** No specific target organs known.

### Aspiration hazard

**Aspiration hazard** Based on available data the classification criteria are not met.

## METHACRYLIC ACID

### Acute toxicity - oral

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 1,320.0

**Species** Rat

## Permabond TA4202A

### Acute toxicity - dermal

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

Species Rabbit

### Acute toxicity - inhalation

Acute toxicity inhalation (LC<sub>50</sub> vapours mg/l) 7.1

Species Rat

### Skin corrosion/irritation

Animal data Dose: Method: OECD 404, 3 minutes, Rabbit Corrosive.

### Serious eye damage/irritation

Serious eye damage/irritation Method: OECD 405, Rabbit Corrosive.

### Respiratory sensitisation

Respiratory sensitisation Guinea pig: Not sensitising. Method: various test systems

### Skin sensitisation

Skin sensitisation Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising.

### Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

### Carcinogenicity

Carcinogenicity CMR: no

### Reproductive toxicity

Reproductive toxicity - fertility No evidence of reproductive toxicity in animal studies.

Reproductive toxicity - development Non-teratogenic, not embryotoxic

### Specific target organ toxicity - single exposure

Target organs Respiratory tract Irritating.

### Specific target organ toxicity - repeated exposure

Target organs No specific target organs known.

### Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

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

### Acute toxicity - oral

Acute toxicity oral (LD<sub>50</sub> 11,400.0 mg/kg)

Species Rat

### Acute toxicity - dermal

**Permabond TA4202A**

**Acute toxicity dermal (LD<sub>50</sub>)** 2,000.1 mg/kg)

**Species** Rabbit

**Acute toxicity - inhalation**

**Notes (inhalation LC<sub>50</sub>)** No specific test data are available.

**Skin corrosion/irritation**

**Skin corrosion/irritation** Not irritating.

**Animal data** Oedema score: Very slight oedema - barely perceptible (1).

**Serious eye damage/irritation**

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

**Respiratory sensitisation**

**Respiratory sensitisation** No specific test data are available.

**Skin sensitisation**

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

**Germ cell mutagenicity**

**Genotoxicity - in vitro** Conclusive data but not sufficient for classification.

**Carcinogenicity**

**Carcinogenicity** Conclusive data but not sufficient for classification.

**IARC carcinogenicity** IARC Group 3 Not classifiable as to its carcinogenicity to humans.

**Reproductive toxicity**

**Reproductive toxicity - fertility** Fertility - NOAEL 750 mg/kg/day, Oral, Rat

**Reproductive toxicity - development** Developmental toxicity: - NOAEL: 180 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** Conclusive data but not sufficient for classification.

**Aspiration hazard**

**Aspiration hazard** Based on available data the classification criteria are not met.

**2,6-DI-TERT-BUTYL-P-CRESOL**

**Acute toxicity - oral**

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

**Species** Rat

**Acute toxicity - dermal**

## Permabond TA4202A

**Acute toxicity dermal (LD<sub>50</sub>)** 2,000.1 mg/kg)

**Species** Rat

### Skin corrosion/irritation

**Animal data** Erythema/eschar score: No erythema (0). Not irritating.

### Serious eye damage/irritation

**Serious eye damage/irritation** Method: OECD 405, Rabbit Not irritating.

### Skin sensitisation

**Skin sensitisation** - Guinea pig: Not sensitising.

### Germ cell mutagenicity

**Genotoxicity - in vitro** Gene mutation: Negative.

**Genotoxicity - in vivo** Chromosome aberration: Negative.

### Carcinogenicity

**Carcinogenicity** No evidence of carcinogenicity in animal studies.

**IARC carcinogenicity** IARC Group 3 Not classifiable as to its carcinogenicity to humans.

### Reproductive toxicity

**Reproductive toxicity - fertility** Two-generation study - NOAEL 100 mg/kg/day, Oral, Rat F1

**Reproductive toxicity - development** Developmental toxicity: - LOAEL: 500 mg/kg/day, Oral, Rat

### Specific target organ toxicity - single exposure

**STOT - single exposure** No information available.

### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** No information available.

### Aspiration hazard

**Aspiration hazard** No information available. No information available.

## CUMENE HYDROPEROXIDE

### Acute toxicity - oral

**Acute toxicity oral (LD<sub>50</sub>)** 328.0 mg/kg)

**Species** Rat

### Acute toxicity - dermal

**Acute toxicity dermal (LD<sub>50</sub>)** 1,200.0 mg/kg)

**Species** Rat

### Acute toxicity - inhalation

## Permabond TA4202A

<b>Acute toxicity inhalation</b> (LC <sub>50</sub> dust/mist mg/l)	1.37
<b>Species</b>	Rat
<b><u>Skin corrosion/irritation</u></b>	
<b>Animal data</b>	Highly irritating.
<b><u>Serious eye damage/irritation</u></b>	
<b>Serious eye damage/irritation</b>	Irritating to eyes.
<b><u>Skin sensitisation</u></b>	
<b>Skin sensitisation</b>	Not sensitising.
<b><u>Germ cell mutagenicity</u></b>	
<b>Genotoxicity - in vitro</b>	Positive.
<b>Genotoxicity - in vivo</b>	This substance has no evidence of mutagenic properties.
<b><u>Carcinogenicity</u></b>	
<b>Carcinogenicity</b>	CMR: No
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	No specific test data are available.
<b>Reproductive toxicity - development</b>	Developmental toxicity: - NOAEL: ≥100 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>	Toxic: danger of serious damage to health by prolonged exposure through inhalation.
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	No specific test data are available.

### SECTION 12: Ecological information

**Ecotoxicity** Toxic 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)

## PermaBond TA4202A

<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 48 hours: 69 mg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	NOEC, 72 hours: > 110 mg/l, Selenastrum capricornutum EC <sub>50</sub> , 72 hours: > 100 mg/l, Selenastrum capricornutum
<b>Acute toxicity - microorganisms</b>	EC <sub>20</sub> , 30 minutes: 150 - 200 mg/l, Activated sludge
<b><u>Chronic aquatic toxicity</u></b>	
<b>Chronic toxicity - fish early life stage</b>	NOEC, 35 days: 9.4 mg/l, Danio rerio (Zebrafish)
<b>Chronic toxicity - aquatic invertebrates</b>	NOEC, 21 days: 37 mg/l, Daphnia magna

## METHACRYLIC ACID

<b><u>Acute aquatic toxicity</u></b>	
<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 96 hours: 85 mg/l, Oncorhynchus mykiss (Rainbow trout)
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 48 hours: > 130 mg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	EC <sub>50</sub> , 72 hours: 45 mg/l, Selenastrum capricornutum LOEC, 72 hours: 45 mg/l, Selenastrum capricornutum
<b>Acute toxicity - microorganisms</b>	EC <sub>50</sub> , 17 hours: 270 mg/l, Pseudomonas putida
<b><u>Chronic aquatic toxicity</u></b>	
<b>Chronic toxicity - fish early life stage</b>	NOEC, 35 days: 10 mg/l, Danio rerio (Zebrafish)
<b>Chronic toxicity - aquatic invertebrates</b>	NOEC, 21 days: 53 mg/l, Daphnia magna

## EPOXY RESIN (Number average MW ≤ 700 )

<b><u>Acute aquatic toxicity</u></b>	
<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 24 hours: 4.4 mg/l, Oncorhynchus mykiss (Rainbow trout)
<b>Acute toxicity - aquatic invertebrates</b>	LC <sub>50</sub> , 24 hours: 4.9 mg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	EC <sub>50</sub> , 48 hours: 9.1 mg/l, Selenastrum capricornutum
<b>Acute toxicity - microorganisms</b>	IC <sub>50</sub> , 3 hours: > 100 mg/l, Activated sludge
<b><u>Chronic aquatic toxicity</u></b>	
<b>Chronic toxicity - aquatic invertebrates</b>	NOEC, 21 days: 0.3 mg/l, Daphnia magna

## 2,6-DI-TERT-BUTYL-P-CRESOL

<b><u>Acute aquatic toxicity</u></b>	
<b>LE(C)<sub>50</sub></b>	0.1 < L(E)C <sub>50</sub> ≤ 1

## Permabond TA4202A

M factor (Acute)	1
Acute toxicity - fish	LC <sub>50</sub> , 96 hours: 0.199 mg/l, Fish
Acute toxicity - aquatic invertebrates	EC <sub>50</sub> , 48 hours: 0.48 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC <sub>50</sub> , 96 hours: 0.758 mg/l, Algae
<u>Chronic aquatic toxicity</u>	
M factor (Chronic)	1

### CUMENE HYDROPEROXIDE

<u>Acute aquatic toxicity</u>	
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.

#### 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.

**Partition coefficient** Not available.

### Ecological information on ingredients.

#### EPOXY RESIN (Number average MW ≤ 700 )

Bioaccumulative potential	BCF: 100 - 3000,
Partition coefficient	log Pow: 3.242

#### 2,6-DI-TERT-BUTYL-P-CRESOL

Partition coefficient	log Pow: 5.1
-----------------------	--------------

### 12.4. Mobility in soil

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

## Permabond TA4202A

### Ecological information on ingredients.

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

Adsorption/desorption coefficient      Water - log K<sub>oc</sub>: 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**

### 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

III

### 14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



### 14.6. Special precautions for user

EmS      F-E, S-C



## Permabond TA4202A

**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** 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

<b>National regulations</b>	The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).
<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.

## SECTION 16: Other information

<b>Revision date</b>	24/02/2021
<b>Revision</b>	9
<b>Supersedes date</b>	06/08/2019
<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. 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.

## Permabond TA4202A

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.



## SAFETY DATA SHEET

### Permabond TA4202B

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

##### 1.1. Product identifier

**Product name** Permabond TA4202B

##### 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 GmbH  
Niederkasseler Lohweg 18  
40547 Düsseldorf  
Germany  
info.europe@permabond.com

**Manufacturer** 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@permabond.co.uk

##### 1.4. Emergency telephone number

**Emergency telephone** CHEMTREC UK: +(44)-870-8200418 CHEMTREC US: 800-424-9300 (CCN: 829878)

**National emergency telephone number** CHEMTREC Ireland: +(353)-19014670  
CHEMTREC Australia: +(61)-290372994  
CHEMTREC New Zealand: +(64)-98010034

#### 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 Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317 STOT SE 3 - H335

**Environmental hazards** Not Classified

##### 2.2. Label elements

###### Hazard pictograms



**Signal word** Danger

## PermaBond TA4202B

<b>Hazard statements</b>	<p>H225 Highly flammable liquid and vapour.</p> <p>H315 Causes skin irritation.</p> <p>H319 Causes serious eye irritation.</p> <p>H317 May cause an allergic skin reaction.</p> <p>H335 May cause respiratory irritation.</p>
<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/ protective clothing/ eye protection/ face protection.</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>Contains</b>	METHYL METHACRYLATE, 2-HYDROXYETHYL METHACRYLATE, PHENOTHIAZINE
<b>Supplementary precautionary statements</b>	<p>P241 Use explosion-proof electrical equipment.</p> <p>P242 Use non-sparking tools.</p> <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>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>P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.</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>60-100%</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 TA4202B

<b>2-HYDROXYETHYL METHACRYLATE</b>			<b>10-30%</b>
CAS number: 868-77-9	EC number: 212-782-2	REACH registration number: 01-2119490169-29-XXXX	
<b>Classification</b> Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317			

<b>3,5-DIETHYL-1,2-DIHYDRO-1-PHENYL-2-PROPYLPYRIDINE</b>			<b>1-5%</b>
CAS number: 34562-31-7	EC number: 252-091-3	REACH registration number: 01-2120769712-47-XXXX	
REACH registration exemption – < 1 tonne			
<b>Classification</b> Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Aquatic Chronic 4 - H413			

<b>PHENOTHIAZINE</b>			<b>&lt;1%</b>
CAS number: 92-84-2	EC number: 202-196-5		
M factor (Acute) = 1	M factor (Chronic) = 1		
<b>Classification</b> Acute Tox. 4 - H302 Skin Sens. 1 - H317 STOT RE 2 - H373 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410			

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 if any discomfort continues.

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

<b>Inhalation</b>	Irritating to respiratory system.
<b>Skin contact</b>	Skin irritation. Mild dermatitis, allergic skin rash.

## Permabond TA4202B

**Eye contact** Irritating and may cause redness and pain.

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

**Notes for the doctor** No specific recommendations. Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

**Suitable extinguishing media** Extinguish with foam, carbon dioxide, dry powder or water fog.

**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** 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.

**Hazardous combustion products** Burning produces irritating, toxic and obnoxious fumes. Carbon monoxide, carbon dioxide, and unknown hydrocarbons. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk.

### 5.3. Advice for firefighters

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

## SECTION 6: Accidental release measures

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

**Personal precautions** 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.

### 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** Absorb spillage with sand or other inert absorbent. Transfer to suitable, labelled containers for disposal.

### 6.4. Reference to other sections

**Reference to other sections** For personal protection, see Section 8. For waste disposal, see section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**Usage precautions** 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.

### 7.2. Conditions for safe storage, including any incompatibilities

**Storage precautions** 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.

### 7.3. Specific end use(s)

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

## SECTION 8: Exposure controls/Personal protection

## PermaBond TA4202B

### 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>

WEL = Workplace Exposure Limit.

##### METHYL METHACRYLATE (CAS: 80-62-6)

DNEL	Workers, Industry/Professional - Inhalation; Long term : 208 mg/m <sup>3</sup>
	Workers, Industry/Professional - Dermal; Long term : 13.67 mg/kg/day
	Workers, Industry/Professional - Inhalation; Short term : 416 mg/m <sup>3</sup>
PNEC	Workers, Industry/Professional - Water; Long term <0.94 mg/l

##### 2-HYDROXYETHYL METHACRYLATE (CAS: 868-77-9)

DNEL	Workers, Industry - Inhalation; Long term systemic effects: 4.9 mg/m <sup>3</sup>
	Workers, Industry - Dermal; Long term systemic effects: 1.3 mg/kg/day
PNEC	Workers, Industry - Water; Long term 0.482 mg/l
	Workers, Industry - Soil; Long term 0.476 mg/kg
	Workers, Industry - STP; Long term 10 mg/l
	Workers, Industry - Fresh water; 3.79 mg/kg

##### 3,5-DIETHYL-1,2-DIHYDRO-1-PHENYL-2-PROPYLPYRIDINE (CAS: 34562-31-7)

DNEL	No data available.
PNEC	No data available.

### 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/manufacture, 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.

## Permabond TA4202B

<b>Other skin and body protection</b>	Employee must wear appropriate protective clothing and equipment to prevent any possibility of skin contact with this substance.
<b>Hygiene measures</b>	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.
<b>Respiratory protection</b>	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. (EN14387)

### SECTION 9: Physical and chemical properties

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

<b>Appearance</b>	Liquid.
<b>Colour</b>	Green.
<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>	30°C ASTM D3278
<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>Partition coefficient</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Viscosity</b>	≈4000 mPa s @ 23°C Thixotropic
<b>Oxidising properties</b>	Not available.

#### 9.2. Other information

<b>Other information</b>	Not relevant.
--------------------------	---------------

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

<b>Reactivity</b>	The following materials may react with the product: Strong oxidising agents. Strong acids. Strong alkalis.
-------------------	--

#### 10.2. Chemical stability

<b>Stability</b>	Stable at normal ambient temperatures.
------------------	--



## PermaBond TA4202B

### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** Under normal conditions of storage and use, no hazardous reactions will occur.

### 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

**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

Irritating to skin.

#### Eye contact

Irritating and may cause redness and pain.

### Toxicological information on ingredients.

#### METHYL METHACRYLATE

##### Acute toxicity - oral

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

**Species** Rat

##### Acute toxicity - dermal

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

**Species** Rat

##### Acute toxicity - inhalation

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

**Species** Rat

##### Skin corrosion/irritation

## PermaBond TA4202B

**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.

### Germ cell mutagenicity

**Genotoxicity - in vitro** Inconclusive.

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

### Carcinogenicity

**Carcinogenicity** CMR: no

**IARC carcinogenicity** IARC Group 3 Not classifiable as to its carcinogenicity to humans.

### Reproductive toxicity

**Reproductive toxicity - fertility** No evidence of reproductive toxicity in animal studies.

**Reproductive toxicity - development** No evidence of reproductive toxicity in animal studies. non-teratogenic, not embryotoxic

### Specific target organ toxicity - single exposure

**Target organs** Respiratory tract Irritation.

### Specific target organ toxicity - repeated exposure

**Target organs** No specific target organs known.

### Aspiration hazard

**Aspiration hazard** Based on available data the classification criteria are not met.

## 2-HYDROXYETHYL METHACRYLATE

### Acute toxicity - oral

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

**Species** Rat

### Acute toxicity - dermal

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

**Species** Rabbit

### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)** No information available.

### Skin corrosion/irritation

**Animal data** Erythema/eschar score: Very slight erythema - barely perceptible (1). Not irritating.

## Permabond TA4202B

### Serious eye damage/irritation

**Serious eye damage/irritation** Moderately irritating.

### Respiratory sensitisation

**Respiratory sensitisation** No information available.

### Skin sensitisation

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

### Germ cell mutagenicity

**Genotoxicity - in vitro** Conclusive data but not sufficient for classification.

**Genotoxicity - in vivo** Chromosome aberration: Negative.

### Carcinogenicity

**Carcinogenicity** No specific test data are available.

### Reproductive toxicity

**Reproductive toxicity - fertility** Screening - NOAEL  $\geq 1000$  mg/kg/day, Oral, Rat F1

**Reproductive toxicity - development** Developmental toxicity: - NOAEL:  $\geq 1000$  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** No specific test data are available.

### Aspiration hazard

**Aspiration hazard** Not applicable.

### 3,5-DIETHYL-1,2-DIHYDRO-1-PHENYL-2-PROPYLPYRIDINE

### Acute toxicity - oral

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 500.1

**Species** Rat

### Acute toxicity - dermal

**Acute toxicity dermal (LD<sub>50</sub> mg/kg)** 1,000.1

**Species** Rabbit

### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)** No specific test data are available.

### Skin corrosion/irritation

**Skin corrosion/irritation** Moderately irritating.

### Serious eye damage/irritation

## PermaBond TA4202B

<b>Serious eye damage/irritation</b>	Moderately irritating.
<b><u>Respiratory sensitisation</u></b>	
<b>Respiratory sensitisation</b>	May cause respiratory system irritation.
<b><u>Skin sensitisation</u></b>	
<b>Skin sensitisation</b>	No specific test data are available.
<b><u>Germ cell mutagenicity</u></b>	
<b>Genotoxicity - in vitro</b>	No specific test data are available.
<b><u>Carcinogenicity</u></b>	
<b>Carcinogenicity</b>	No specific test data are available.
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	No specific test data are available.
<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>	No specific test data are available.
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	No specific test data are available.

### PHENOTHIAZINE

<b><u>Acute toxicity - oral</u></b>	
<b>Acute toxicity oral (LD<sub>50</sub> mg/kg)</b>	1,370.0
<b>Species</b>	Rat
<b><u>Acute toxicity - dermal</u></b>	
<b>Acute toxicity dermal (LD<sub>50</sub> mg/kg)</b>	2,000.1
<b>Species</b>	Rat

## SECTION 12: Ecological information

**Ecotoxicity** The product is not expected to be hazardous to the environment.

### 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

## PermaBond TA4202B

<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 96 hours: > 79 mg/l, Oncorhynchus mykiss (Rainbow trout)
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 48 hours: 69 mg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	NOEC, 72 hours: > 110 mg/l, Selenastrum capricornutum EC <sub>50</sub> , 72 hours: > 100 mg/l, Selenastrum capricornutum
<b>Acute toxicity - microorganisms</b>	EC <sub>20</sub> , 30 minutes: 150 - 200 mg/l, Activated sludge
<b><u>Chronic aquatic toxicity</u></b>	
<b>Chronic toxicity - fish early life stage</b>	NOEC, 35 days: 9.4 mg/l, Danio rerio (Zebrafish)
<b>Chronic toxicity - aquatic invertebrates</b>	NOEC, 21 days: 37 mg/l, Daphnia magna

## 2-HYDROXYETHYL METHACRYLATE

<b><u>Acute aquatic toxicity</u></b>	
<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 96 hours: > 100 mg/l, Oryzias latipes (Red killifish)
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 48 hours: 380 mg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	EC <sub>50</sub> , 72 hours: 836 mg/l, Selenastrum capricornutum NOEC, 72 hours: 400 mg/l, Selenastrum capricornutum
<b>Acute toxicity - microorganisms</b>	EC <sub>50</sub> , 16 hours: > 3000 mg/l, Pseudomonas fluorescens
<b><u>Chronic aquatic toxicity</u></b>	
<b>Chronic toxicity - aquatic invertebrates</b>	NOEC, 21 days: 24.1 mg/l, Daphnia magna

## PHENOTHIAZINE

<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: 70.7 mg/l, Oncorhynchus mykiss (Rainbow trout)
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 48 hours: 11.92 mg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	EC <sub>50</sub> , 72 hours: > 100 mg/l, Desmodemus subspicatus
<b><u>Chronic aquatic toxicity</u></b>	
<b>M factor (Chronic)</b>	1

### 12.2. Persistence and degradability

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

### Ecological information on ingredients.

## METHYL METHACRYLATE

**Permabond TA4202B**

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

**2-HYDROXYETHYL METHACRYLATE**

**Biodegradation** Water - Degradation 84%: 28 days

**PHENOTHIAZINE**

**Biodegradation** Water - Degradation 0%: 28 days

**12.3. Bioaccumulative potential**

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

**Partition coefficient** Not available.

**Ecological information on ingredients.****2-HYDROXYETHYL METHACRYLATE**

**Bioaccumulative potential** BCF: 1.34 - 1.54,

**PHENOTHIAZINE**

**Bioaccumulative potential** BCF: 127-660, Cyprinus carpio (Common carp)

**12.4. Mobility in soil**

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

**Ecological information on ingredients.****2-HYDROXYETHYL METHACRYLATE**

**Adsorption/desorption coefficient** Water - Koc: 42.7 @ 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****14.1. UN number**

## Permabond TA4202B

1993

### 14.2. UN proper shipping name

FLAMMABLE LIQUID, N.O.S. (contains Methylmethacrylate)

### 14.3. Transport hazard class(es)

3

### Transport labels



### 14.4. Packing group

III

### 14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

### 14.6. Special precautions for user

EmS F-E, S-E

Hazard Identification Number 33 Highly flammable liquid (flash point below 21°C).  
(ADR/RID)

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 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	The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).
EU legislation	Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). 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)
Guidance	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.

## SECTION 16: Other information

**Permabond TA4202B**

<b>Revision date</b>	24/02/2021
<b>Revision</b>	10
<b>Supersedes date</b>	06/08/2019
<b>Hazard statements in full</b>	<p>H225 Highly flammable liquid and vapour. H302 Harmful if swallowed. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H373 May cause damage to organs through prolonged or repeated exposure. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. H413 May cause long lasting harmful effects to aquatic life.</p>

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.