

# Permabond®

## Engineering Adhesives

### SAFETY DATA SHEET

#### Permabond F201HV

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

##### 1.1. Product identifier

**Product name** Permabond F201HV

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

**Identified uses** Adhesive. Sealant.

##### 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 (SI 2019 No. 720)

**Physical hazards** Not Classified

**Health hazards** Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Repr. 1B - H360D STOT SE 3 - H335

**Environmental hazards** Aquatic Chronic 3 - H412

##### 2.2. Label elements

###### Hazard pictograms



**Signal word**

Danger

## Permabond F201HV

<b>Hazard statements</b>	H315 Causes skin irritation. H318 Causes serious eye damage. H317 May cause an allergic skin reaction. H360D May damage the unborn child. H335 May cause respiratory irritation. H412 Harmful to aquatic life with long lasting effects.
<b>Precautionary statements</b>	P202 Do not handle until all safety precautions have been read and understood. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P302+P352a IF ON SKIN: Wash with plenty of soap and water P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 IF exposed or concerned: Get medical advice/ attention.
<b>Contains</b>	TETRAHYDROFURFURYL METHACRYLATE, HYDROXYPROPYL METHACRYLATE, METHACRYLIC ACID, CUMENE HYDROPEROXIDE, METHYL METHACRYLATE
<b>Supplementary precautionary statements</b>	P264 Wash contaminated skin thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P273 Avoid release to the environment. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P333+P313 If skin irritation or rash occurs: Get medical advice/ attention. P362+P364 Take off contaminated clothing and wash it before reuse. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/container in accordance with existing Community, National and local regulations.

### 2.3. Other hazards

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

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

<b>TETRAHYDROFURFURYL METHACRYLATE</b>	<b>30-60%</b>
CAS number: 2455-24-5	EC number: 219-529-5
<b>Classification</b> Skin Sens. 1 - H317 Repr. 1B - H360D Aquatic Chronic 3 - H412	
<b>HYDROXYPROPYL METHACRYLATE</b>	<b>10-30%</b>
CAS number: 27813-02-1	EC number: 248-666-3
<b>Classification</b> Eye Irrit. 2 - H319 Skin Sens. 1 - H317	

## Permabond F201HV

<b>METHACRYLIC ACID</b>	<b>1-5%</b>
CAS number: 79-41-4	EC number: 201-204-4
<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>CUMENE HYDROPEROXIDE</b>	<b>1-&lt; 2.5%</b>
CAS number: 80-15-9	EC number: 201-254-7
<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	
<b>METHYL METHACRYLATE</b>	<b>&lt;1%</b>
CAS number: 80-62-6	EC number: 201-297-1
<b>Classification</b> Flam. Liq. 2 - H225 Skin Irrit. 2 - H315 Skin Sens. 1 - H317 STOT SE 3 - H335	

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.
<b>Skin contact</b>	Remove contaminated clothing. Wash skin thoroughly with soap and water. If symptoms develop, obtain medical attention
<b>Eye contact</b>	Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention.

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

<b>Inhalation</b>	May cause irritation.
-------------------	-----------------------

## Permabond F201HV

**Skin contact** Skin irritation. 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** Foam, carbon dioxide or dry powder.

**Unsuitable extinguishing media** Water.

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

**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** Wear protective clothing as described in Section 8 of this safety data sheet.

### **6.2. Environmental precautions**

**Environmental precautions** Not considered to be a significant hazard due to the small quantities used. Avoid discharge into drains.

### **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** Use in a well ventilated area. Avoid contact with skin and eyes. Do not ingest or inhale. Avoid eating, drinking and smoking when using the product.

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

**Storage precautions** Store in closed original container at temperatures between 5°C and 25°C. Never return unused material to storage receptacle.

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

**Specific end use(s)** This product is not recommended for use in joints which will be in contact with either pure oxygen or steam.

**Usage description** Adhesive. Sealant.

## **SECTION 8: Exposure controls/Personal protection**

### **8.1. Control parameters**

## Permabond F201HV

### Occupational exposure limits

#### **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>

#### **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.

#### TETRAHYDROFURFURYL METHACRYLATE (CAS: 2455-24-5)

<b>DNEL</b>	Workers - Inhalation; Long term systemic effects: 3.53 mg/m <sup>3</sup> Workers - Dermal; Long term systemic effects: 1 mg/kg/day
<b>PNEC</b>	Fresh water; 0.347 mg/l marine water; 0.035 mg/l Sediment (Freshwater); 2.12 mg/kg Sediment (Marinewater); 0.212 mg/kg Soil; 0.221 mg/kg STP; 15.8 mg/l

#### HYDROXYPROPYL METHACRYLATE (CAS: 27813-02-1)

<b>DNEL</b>	Workers - Inhalation; Long term systemic effects: 14.7 mg/m <sup>3</sup> Workers - Dermal; Long term systemic effects: 4.2 mg/kg/day
<b>PNEC</b>	Fresh water; 0.904 mg/l marine water; 0.904 mg/l STP; 10 mg/l Sediment (Freshwater); 6.28 mg/kg Sediment (Marinewater); 6.28 mg/kg Soil; 0.727 mg/kg

#### 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

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

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

## Permabond F201HV

<b>PNEC</b>	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

### 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

## 8.2. Exposure controls

### Protective equipment



### Appropriate engineering controls

Provide adequate 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. 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:  $\geq 0.4$  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/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. 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. (EN14387)

## SECTION 9: Physical and chemical properties

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

Appearance	Liquid.
Colour	Brown.

## Permabond F201HV

<b>Odour</b>	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>	Not applicable.
<b>Flash point</b>	>100°C
<b>Evaporation rate</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	Not available.
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Relative density</b>	1.0
<b>Solubility(ies)</b>	Slightly soluble in water. Miscible with the following materials: Organic solvents.
<b>Partition coefficient</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition Temperature</b>	Not available.
<b>Viscosity</b>	≈32500 mPa s @ 23°C Thixotropic
<b>Oxidising properties</b>	Not available.
<b><u>9.2. Other information</u></b>	
<b>Other information</b>	Not relevant.

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

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

#### 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.

#### 10.4. Conditions to avoid

**Conditions to avoid** Avoid the absence of air, and metal contamination.

#### 10.5. Incompatible materials

**Materials to avoid** Metals and their salts. Free radical initiators.

#### 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 F201HV

**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 corrosion/irritation

**Animal data** Irritating to skin.

### Serious eye damage/irritation

**Serious eye damage/irritation** Causes serious eye damage.

### Skin sensitisation

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

### Reproductive toxicity

**Reproductive toxicity - development** May damage the unborn child.

### Aspiration hazard

**Aspiration hazard** None under normal conditions.

### Inhalation

In high concentrations, vapours may irritate throat and respiratory system and cause coughing.

### Toxicological information on ingredients.

#### TETRAHYDROFURFURYL METHACRYLATE

##### Acute toxicity - oral

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 4,000.0

**Species** Rat

##### Skin corrosion/irritation

**Skin corrosion/irritation** Not irritating.

##### Serious eye damage/irritation

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

##### Skin sensitisation

**Skin sensitisation** Sensitising.

##### Germ cell mutagenicity

**Genotoxicity - in vitro** Negative.

##### Carcinogenicity

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

##### Reproductive toxicity

**Reproductive toxicity - fertility** Screening - NOAEL 120 mg/kg/day, Oral, Rat F1

##### Specific target organ toxicity - single exposure

**STOT - single exposure** Not classified as a specific target organ toxicant after a single exposure.



## Permabond F201HV

### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** NOAEL 300 mg/kg, Oral, Rat

### Aspiration hazard

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

### HYDROXYPROPYL METHACRYLATE

### Acute toxicity - oral

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

**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** Not irritating.

### Serious eye damage/irritation

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

### Respiratory sensitisation

**Respiratory sensitisation** There is no evidence that the material can lead to respiratory hypersensitivity.

### Skin sensitisation

**Skin sensitisation** Epidemiological studies have shown evidence of skin sensitisation.

### Germ cell mutagenicity

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

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

### Carcinogenicity

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

### Reproductive toxicity

**Reproductive toxicity - fertility** Screening - NOAEL 300 mg/kg/day, Oral, Rat P

**Reproductive toxicity - development** Developmental toxicity: - NOAEL: 1000 mg/kg/day, Oral, Rat

### Specific target organ toxicity - single exposure

**STOT - single exposure** Not classified as a specific target organ toxicant after a single exposure.

### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** Not classified as a specific target organ toxicant after repeated exposure.

## Permabond F201HV

### Aspiration hazard

**Aspiration hazard** No information available.

### METHACRYLIC ACID

#### Acute toxicity - oral

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

**Species** Rat

#### Acute toxicity - dermal

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

**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

## Permabond F201HV

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

### CUMENE HYDROPEROXIDE

#### Acute toxicity - oral

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

**Species** Rat

#### Acute toxicity - dermal

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

**Species** Rat

#### Acute toxicity - inhalation

**Acute toxicity inhalation (LC<sub>50</sub> dust/mist mg/l)** 1.37

**Species** Rat

#### 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: ≥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.

## Permabond F201HV

### 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

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

## Permabond F201HV

### Aspiration hazard

Based on available data the classification criteria are not met.

### 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.

#### TETRAHYDROFURFURYL METHACRYLATE

##### Acute aquatic toxicity

##### Acute toxicity - fish

LC<sub>50</sub>, 96 hours: 34.7 mg/l, Pimephales promelas (Fat-head Minnow)

##### Acute toxicity - aquatic plants

EC<sub>50</sub>, 72 hours: >100 mg/l, Desmodemus subspicatus  
NOEC, 72 hours: >100 mg/l, Desmodemus subspicatus

##### Chronic aquatic toxicity

##### Chronic toxicity - aquatic invertebrates

NOEC, 21 days: 37.2 mg/l, Daphnia magna

#### HYDROXYPROPYL METHACRYLATE

##### Acute aquatic toxicity

##### Acute toxicity - fish

LC<sub>50</sub>, 48 hours: 493 mg/l, Leuciscus idus (Golden orfe)

##### Acute toxicity - aquatic invertebrates

EC<sub>50</sub>, 48 hours: 380 mg/l, Daphnia magna

##### Acute toxicity - aquatic plants

EC<sub>50</sub>, 72 hours: > 97.2 mg/l, Pseudokirchneriella subcapitata  
NOEC, 72 hours: 97.2 mg/l, Pseudokirchneriella subcapitata

##### Chronic aquatic toxicity

##### Chronic toxicity - aquatic invertebrates

NOEC, 21 days: 24.1 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)

## Permabond F201HV

**Chronic toxicity - aquatic invertebrates** NOEC, 21 days: 53 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)

### 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

**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

### 12.2. Persistence and degradability

**Persistence and degradability** No data available.

### Ecological information on ingredients.

#### TETRAHYDROFURFURYL METHACRYLATE

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

**Biodegradation** - 75%: 28 days

#### HYDROXYPROPYL METHACRYLATE

**Biodegradation** Water - Degradation 94.2%: 28 days

#### METHACRYLIC ACID

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

#### CUMENE HYDROPEROXIDE

**Biodegradation** The substance is readily biodegradable.

#### METHYL METHACRYLATE

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

### 12.3. Bioaccumulative potential

## Permabond F201HV

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

**Partition coefficient** Not available.

### 12.4. Mobility in soil

**Mobility** No data available.

### 12.5. Results of PBT and vPvB assessment

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

### 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** Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.

**Waste class** 08 04 09\* waste adhesives and sealants containing organic solvents or other dangerous substances.

## SECTION 14: Transport information

**General** The product is not classified as dangerous for carriage.

### 14.1. UN number

Not applicable.

### 14.2. UN proper shipping name

Not applicable.

### 14.3. Transport hazard class(es)

Not applicable.

### 14.4. Packing group

Not applicable.

### 14.5. Environmental hazards

**Environmentally hazardous substance/marine pollutant**  
No.

### 14.6. Special precautions for user

Not applicable.

### 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

## Permabond F201HV

### 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>	COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 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. Approved Classification and Labelling Guide (Sixth edition) L131. Safety Data Sheets for Substances and Preparations.

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

### SECTION 16: Other information

<b>Revision date</b>	28/10/2022
<b>Revision</b>	7
<b>Supersedes date</b>	21/09/2018
<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. H360D May damage 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.