

# Permabond®

## Engineering Adhesives

### SAFETY DATA SHEET

#### Permabond A025

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

##### 1.1. Product identifier

**Product name** Permabond A025

##### 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 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)

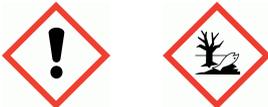
**Physical hazards** Not Classified

**Health hazards** Eye Irrit. 2 - H319 STOT SE 3 - H335

**Environmental hazards** Aquatic Chronic 2 - H411

##### 2.2. Label elements

###### Pictogram



**Signal word** Warning

**Hazard statements** H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H411 Toxic to aquatic life with long lasting effects.

**Precautionary statements** P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
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.

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**Contains** CUMENE HYDROPEROXIDE

**Supplementary precautionary statements** P261 Avoid breathing vapour/ spray.  
 P264 Wash contaminated skin thoroughly after handling.  
 P271 Use only outdoors or in a well-ventilated area.  
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P337+P313 If eye irritation persists: Get medical advice/ attention.  
 P391 Collect spillage.  
 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.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

<b>TRIMETHYLOLPROPANE TRIMETHACRYLATE</b>	<b>60-100%</b>
CAS number: 3290-92-4	EC number: 221-950-4
<b>Classification</b>	
Aquatic Chronic 2 - H411	
<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

### 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.

**Skin contact** Wash skin thoroughly with soap and water. If symptoms develop, obtain medical attention

**Eye contact** 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 if any discomfort continues.

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

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**Inhalation** Irritation of nose, throat and airway.

**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**

**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** Avoid contact with skin and eyes. Do not eat, drink or smoke when using this 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**

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**Ingredient comments** No exposure limits known for ingredient(s).

### 8.2. Exposure controls

#### Protective equipment



#### Appropriate engineering controls

Normal (mechanical) room ventilation should be adequate for small volumes. For higher volume activities, or if needed for worker comfort, local mechanical exhaust should be provided.

#### 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

Nitrile rubber or Viton™ gloves are recommended. Cotton or other absorbent gloves should not be worn. Gloves should conform to EN 374. 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.

#### Other skin and body protection

Uniforms, coveralls, or a lab coat should be worn

#### 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.

### SECTION 9: Physical and Chemical Properties

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

Appearance	Liquid.
Colour	Orange.
Odour	Acrylic
Odour threshold	Not available.
pH	Not relevant.
Melting point	Not available.
Initial boiling point and range	Not applicable.
Flash point	>100°C
Evaporation rate	Not available.
Upper/lower flammability or explosive limits	Not available.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	1.1
Solubility(ies)	Insoluble in water. Miscible with the following materials: Organic solvents.

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<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition Temperature</b>	Not available.
<b>Viscosity</b>	≈750 mPa s @ 23°C
<b>Oxidising properties</b>	Not available.

### 9.2. Other information

#### 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

**Toxicological effects** The toxicological properties of this product have not been fully evaluated. Avoid direct contact with skin or eyes. Do not ingest or inhale.

##### Aspiration hazard

**Aspiration hazard** None under normal conditions.

##### Inhalation

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

##### Ingestion

No harmful effects expected from quantities likely to be ingested by accident.

##### Eye contact

Irritating to eyes.

##### Toxicological information on ingredients.

#### TRIMETHYLOLPROPANE TRIMETHACRYLATE

##### Acute toxicity - oral

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

**Species** Rat

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ATE oral (mg/kg)	2,000.1
<u>Acute toxicity - dermal</u>	
Acute toxicity dermal (LD <sub>50</sub> mg/kg)	2,000.1
Species	Rat
ATE dermal (mg/kg)	2,000.1
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	- NOAEL > 900 mg/kg/day, Oral, Rat P, F1

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<u>Acute toxicity - oral</u>	
ATE oral (mg/kg)	500.0
<u>Acute toxicity - dermal</u>	
ATE dermal (mg/kg)	1,100.0
<u>Acute toxicity - inhalation</u>	
ATE inhalation (vapours mg/l)	3.0
<u>Skin corrosion/irritation</u>	
Animal data	Highly irritating.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Irritating to eyes.
<u>Skin sensitisation</u>	
Skin sensitisation	Not sensitising.

## SECTION 12: Ecological Information

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

### 12.1. Toxicity

**Toxicity** No data available.

### Ecological information on ingredients.

#### TRIMETHYLOLPROPANE TRIMETHACRYLATE

Acute toxicity - fish	LC <sub>50</sub> , 96 hours: 2 mg/l, Onchorhynchus mykiss (Rainbow trout)
Acute toxicity - aquatic invertebrates	EC <sub>50</sub> , 48 hours: > 9.22 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC <sub>50</sub> , 72 hours: 3.88 mg/l, Pseudokirchneriella subcapitata NOEC, 72 hours: 0.177 mg/l, Pseudokirchneriella subcapitata
Acute toxicity - microorganisms	EC <sub>50</sub> , 3 hours: > 1000 mg/l, Activated sludge

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**Chronic toxicity - fish early life stage** NOEC, 21 days: 0.138 mg/l, Pimephales promelas (Fat-head Minnow)

### CUMENE HYDROPEROXIDE

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

#### 12.2. Persistence and degradability

**Persistence and degradability** No data available.

#### Ecological information on ingredients.

### TRIMETHYLOLPROPANE TRIMETHACRYLATE

**Stability (hydrolysis)** pH7 - Half-life : > 9.999 hours @ 25°C

**Biodegradation** Water - Degradation 53%: 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.

### TRIMETHYLOLPROPANE TRIMETHACRYLATE

**Partition coefficient** log Kow: 2.75 - 4.2

#### 12.4. Mobility in soil

**Mobility** No data available.

#### Ecological information on ingredients.

### TRIMETHYLOLPROPANE TRIMETHACRYLATE

**Surface tension** 53 mN/m @ 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** 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.

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### SECTION 14: Transport information

**Road transport notes** Applies only to inner containers >5 litres. See SP 375

**Sea transport notes** Applies only to inner containers >5 litres. See 2.10.2.7 of the IMDG code.

**Air transport notes** Applies only to inner containers >5 litres. See SP A197 (375)

#### 14.1. UN number

3082

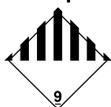
#### 14.2. UN proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains Trimethylolpropane trimethacrylate)

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

9

#### Transport labels



#### 14.4. Packing group

III

#### 14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



#### 14.6. Special precautions for user

Not applicable.

**EmS** F-A, S-F

**Tunnel restriction code** (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)

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**Guidance** 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>	12/07/2017
<b>Revision</b>	6
<b>Supersedes date</b>	04/05/2017
<b>Hazard statements in full</b>	H242 Heating may cause a fire. H302 Harmful if swallowed. H312 Harmful in contact with skin. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H319 Causes serious eye irritation. H331 Toxic 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.

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