

# Permabond®

## Engineering Adhesives

### SAFETY DATA SHEET

#### Permabond ET515A

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

##### 1.1. Product identifier

**Product name** Permabond ET515A

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

**Identified uses** Two-component, epoxy-based adhesive.

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

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

##### 1.4. Emergency telephone number

**Emergency telephone** 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)

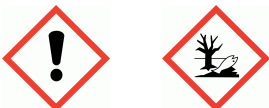
**Physical hazards** Not Classified

**Health hazards** Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317

**Environmental hazards** Aquatic Chronic 2 - H411

##### 2.2. Label elements

###### Pictogram



**Signal word** Warning

**Hazard statements** H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H411 Toxic to aquatic life with long lasting effects.

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<b>Precautionary statements</b>	P273 Avoid release to the environment. 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.
<b>Supplemental label information</b>	EUH205 Contains epoxy constituents. May produce an allergic reaction.
<b>Contains</b>	EPOXY RESIN (Number average MW <= 700 ), (1-METHYL-1,2-ETHANEDIYL)bis[OXY(METHYL-2,1-ETHANEDIYL)] DIACRYLATE
<b>Supplementary precautionary statements</b>	P264 Wash contaminated skin thoroughly after handling. P333+P313 If skin irritation or rash occurs: Get medical advice/ attention. P337+P313 If eye irritation persists: Get medical advice/ attention. P362+P364 Take off contaminated clothing and wash it before reuse. P391 Collect spillage. 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 EU criteria.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

<b>EPOXY RESIN (Number average MW &lt;= 700 )</b>	<b>60-100%</b>
CAS number: 25068-38-6	EC number: 500-033-5
	REACH registration number: 01-2119456619-26-XXXX
<b>Classification</b>	
Skin Irrit. 2 - H315	
Eye Irrit. 2 - H319	
Skin Sens. 1 - H317	
Aquatic Chronic 2 - H411	
<b>(1-METHYL-1,2-ETHANEDIYL)bis[OXY(METHYL-2,1-ETHANEDIYL)] DIACRYLATE</b>	<b>5-10%</b>
CAS number: 42978-66-5	EC number: 256-032-2
	REACH registration number: 01-2119484613-34-XXXX
<b>Classification</b>	
Skin Irrit. 2 - H315	
Eye Irrit. 2 - H319	
Skin Sens. 1 - H317	
STOT SE 3 - H335	
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.

## Permabond ET515A

<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 immediately and wash skin with soap and water. If symptoms develop, obtain medical attention
<b>Eye contact</b>	Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Remove any contact lenses and open eyelids wide apart. Get medical attention if any discomfort continues.

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

<b>Skin contact</b>	Skin irritation. Mild dermatitis, allergic skin rash.
<b>Eye contact</b>	Irritating and may cause redness and pain.

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

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

### 5.1. Extinguishing media

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

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

<b>Hazardous combustion products</b>	Burning produces irritating, toxic and obnoxious fumes. Nitrous gases (NOx). Carbon monoxide, carbon dioxide, and unknown hydrocarbons.
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### 5.3. Advice for firefighters

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

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

<b>Personal precautions</b>	Wear protective clothing as described in Section 8 of this safety data sheet.
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### 6.2. Environmental precautions

<b>Environmental precautions</b>	Do not discharge into drains or watercourses or onto the ground.
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### 6.3. Methods and material for containment and cleaning up

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

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

### 7.1. Precautions for safe handling

<b>Usage precautions</b>	Avoid contact with skin and eyes. Do not ingest or inhale. Do not eat, drink or smoke when using this product.
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### 7.2. Conditions for safe storage, including any incompatibilities

<b>Storage precautions</b>	Store in closed original container at temperatures between 5°C and 25°C.
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### 7.3. Specific end use(s)

## Permabond ET515A

Specific end use(s) Adhesive. Sealant.

### SECTION 8: Exposure Controls/personal protection

#### 8.1. Control parameters

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

**DNEL** 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

**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

##### (1-METHYL-1,2-ETHANEDIYL)bis[OXY(METHYL-2,1-ETHANEDIYL)] DIACRYLATE (CAS: 42978-66-5)

**DNEL** Workers - Inhalation; Long term systemic effects: 24,48 mg/m<sup>3</sup>  
Workers - Dermal; Long term systemic effects: 2.77 mg/kg

**PNEC** - Fresh water; 0.0073 mg/l  
- Marine water; 0.0007 mg/l  
- STP; 100 mg/l  
- Water; 0.73 mg/l  
- Soil; 0.00243 mg/kg  
- Sediment (Freshwater); 0.19 mg/kg

#### 8.2. Exposure controls

##### Protective equipment



Appropriate engineering controls

Provide adequate ventilation.

##### 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: ≥ 0.4 mm The selected gloves should have a breakthrough time of at least 0.5 hours. For exposure up to 8 hours, wear gloves made of the following material: Nitrile rubber. Thickness: ≥ 0.4 mm The selected gloves should have a breakthrough time of at least 8 hours. The breakthrough time for any glove material may be different for different glove manufacturers. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected.

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<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. Use appropriate skin cream to prevent drying of skin. 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>	Colourless.
<b>Odour</b>	Mild.
<b>Odour threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point</b>	Not determined.
<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 applicable.
<b>Vapour pressure</b>	Not determined.
<b>Vapour density</b>	Not available.
<b>Relative density</b>	1.1
<b>Solubility(ies)</b>	Insoluble in water. Soluble in the following materials: Organic solvents.
<b>Partition coefficient</b>	Not applicable.
<b>Auto-ignition temperature</b>	Not determined.
<b>Decomposition Temperature</b>	Not available.
<b>Viscosity</b>	≈15000 mPa s @ 23°C
<b>Explosive properties</b>	Not determined.
<b>Oxidising properties</b>	Not determined.
<b>9.2. Other information</b>	
<b>Other information</b>	Not relevant.

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

<b>Reactivity</b>	Under normal conditions of storage and use, no hazardous reactions will occur.
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### 10.2. Chemical stability

**Stability** Stable at normal ambient temperatures.

### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** Reactions with the following materials may generate heat: Amines.

### 10.4. Conditions to avoid

**Conditions to avoid** Avoid excessive heat for prolonged periods of time.

### 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

Unlikely to be hazardous by inhalation because of the low vapour pressure of the product at ambient temperature. 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.

#### Skin contact

Irritating to skin.

#### Eye contact

Irritating and may cause redness and pain.

### Toxicological information on ingredients.

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

##### Acute toxicity - oral

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

**Species** Rat

**ATE oral (mg/kg)** 11,400.0

##### Acute toxicity - dermal

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

**Species** Rabbit

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<b>ATE dermal (mg/kg)</b>	2,000.1
<b><u>Acute toxicity - inhalation</u></b>	
<b>Notes (inhalation LC<sub>50</sub>)</b>	No specific test data are available.
<b><u>Skin corrosion/irritation</u></b>	
<b>Skin corrosion/irritation</b>	Not irritating.
<b>Animal data</b>	Oedema score: Very slight oedema - barely perceptible (1).
<b><u>Serious eye damage/irritation</u></b>	
<b>Serious eye damage/irritation</b>	Not irritating.
<b><u>Respiratory sensitisation</u></b>	
<b>Respiratory sensitisation</b>	No specific test data are available.
<b><u>Skin sensitisation</u></b>	
<b>Skin sensitisation</b>	Local Lymph Node Assay (LLNA) - Mouse: Sensitising.
<b><u>Germ cell mutagenicity</u></b>	
<b>Genotoxicity - in vitro</b>	Conclusive data but not sufficient for classification.
<b><u>Carcinogenicity</u></b>	
<b>Carcinogenicity</b>	Conclusive data but not sufficient for classification.
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	Fertility - NOAEL 750 mg/kg/day, Oral, Rat
<b>Reproductive toxicity - development</b>	Developmental toxicity: - NOAEL: 180 mg/kg/day, Oral, Rat
<b><u>Specific target organ toxicity - single exposure</u></b>	
<b>STOT - single exposure</b>	No specific test data are available.
<b><u>Specific target organ toxicity - repeated exposure</u></b>	
<b>STOT - repeated exposure</b>	Conclusive data but not sufficient for classification.
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	Based on available data the classification criteria are not met.

### (1-METHYL-1,2-ETHANEDIYL)bis[OXY(METHYL-2,1-ETHANEDIYL)] DIACRYLATE

<b><u>Acute toxicity - oral</u></b>	
<b>Acute toxicity oral (LD<sub>50</sub> mg/kg)</b>	2,001.0
<b>Species</b>	Rat
<b>ATE oral (mg/kg)</b>	2,001.0
<b><u>Acute toxicity - dermal</u></b>	
<b>Acute toxicity dermal (LD<sub>50</sub> mg/kg)</b>	2,001.0
<b>Species</b>	Rabbit

## Permabond ET515A

<b>ATE dermal (mg/kg)</b>	2,001.0
<b><u>Acute toxicity - inhalation</u></b>	
<b>Notes (inhalation LC<sub>50</sub>)</b>	No information available.
<b><u>Skin corrosion/irritation</u></b>	
<b>Animal data</b>	Rabbit Not irritating.
<b><u>Serious eye damage/irritation</u></b>	
<b>Serious eye damage/irritation</b>	Method: OECD 405, Rabbit Irritating to eyes.
<b><u>Respiratory sensitisation</u></b>	
<b>Respiratory sensitisation</b>	No information available.
<b><u>Skin sensitisation</u></b>	
<b>Skin sensitisation</b>	Local Lymph Node Assay (LLNA) - Mouse: Sensitising. Guinea pig maximization test (GPMT) - Guinea pig: Sensitising.
<b><u>Germ cell mutagenicity</u></b>	
<b>Genotoxicity - in vitro</b>	Ames test: Inconclusive.
<b>Genotoxicity - in vivo</b>	Gene mutation: Inconclusive.
<b><u>Carcinogenicity</u></b>	
<b>Carcinogenicity</b>	No information available.
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	- NOAEL 250 mg/kg/day, Oral, Rat P
<b>Reproductive toxicity - development</b>	Developmental toxicity: - NOAEL: >= 750 mg/kg/day, Oral, Rat
<b><u>Specific target organ toxicity - single exposure</u></b>	
<b>Target organs</b>	Respiratory tract
<b><u>Specific target organ toxicity - repeated exposure</u></b>	
<b>STOT - repeated exposure</b>	NOAEL 66.66 mg/kg, Dermal, Rat
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	Not applicable.

### 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.

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

#### Acute aquatic toxicity



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<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

### (1-METHYL-1,2-ETHANEDIYL)bis[OXY(METHYL-2,1-ETHANEDIYL)] DIACRYLATE

<b><u>Acute aquatic toxicity</u></b>	
<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 96 hours: 4.6 - 10 mg/l, Leuciscus idus (Golden orfe)
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 48 hours: 89 mg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	EC <sub>50</sub> , 72 hours: 65.9 mg/l, Desmodesmus subspicatus
<b>Acute toxicity - microorganisms</b>	EC <sub>50</sub> , 3 hours: > 1000 mg/l, Activated sludge

#### 12.2. Persistence and degradability

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

#### Ecological information on ingredients.

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

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

### (1-METHYL-1,2-ETHANEDIYL)bis[OXY(METHYL-2,1-ETHANEDIYL)] DIACRYLATE

**Biodegradation** Water - 48%: 28 days

#### 12.3. Bioaccumulative potential

**Partition coefficient** Not applicable.

#### Ecological information on ingredients.

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

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

**Partition coefficient** log Pow: 3.242

#### 12.4. Mobility in soil

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

#### Ecological information on ingredients.

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

## Permabond ET515A

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

### (1-METHYL-1,2-ETHANEDIYL)bis[OXY(METHYL-2,1-ETHANEDIYL)] DIACRYLATE

Henry's law constant      9E-06 Pa m<sup>3</sup>/mol @ 25°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.

### **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 Epoxy resin)

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

9

#### **Transport labels**



#### 14.4. Packing group

III

#### 14.5. Environmental hazards

## Permabond ET515A

Environmentally hazardous substance/marine pollutant



### 14.6. Special precautions for user

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 Annex II of MARPOL 73/78 and the IBC Code Not applicable.

## SECTION 15: Regulatory information

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

**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

**Revision date** 20/12/2017

**Revision** 5

**Supersedes date** 17/05/2017

**Hazard statements in full** H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H411 Toxic 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.

# Permabond®

## Engineering Adhesives

### SAFETY DATA SHEET

#### Permabond ET515B

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

##### 1.1. Product identifier

Product name Permabond ET515B

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

Identified uses Two-component, epoxy-based adhesive.

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

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

##### 1.4. Emergency telephone number

Emergency telephone 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 Not Classified  
Health hazards Skin Sens. 1 - H317  
Environmental hazards Aquatic Chronic 3 - H412

##### 2.2. Label elements

###### Hazard pictograms



Signal word Warning

Hazard statements H317 May cause an allergic skin reaction.  
H412 Harmful 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.  
P302+P352a IF ON SKIN: Wash with plenty of soap and water

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**Contains** MERCAPTAN-TERMINATED POLYMER, REACTION MASS OF TRIENTINE, MONO-AND DIPROPOXYLATED

**Supplementary precautionary statements** P261 Avoid breathing vapour/ spray.  
P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P362+P364 Take off contaminated clothing and wash it before reuse.  
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 EU criteria.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

<b>MERCAPTAN-TERMINATED POLYMER</b>	<b>60-100%</b>
CAS number: —	EC number: 701-196-7
	REACH registration number: 01-2120118957-46-XXXX
<b>Classification</b>	
Skin Sens. 1B - H317	
Aquatic Chronic 3 - H412	
<b>REACTION MASS OF TRIENTINE, MONO-AND DIPROPOXYLATED</b>	<b>1-5%</b>
CAS number: —	EC number: 942-835-1
	REACH registration number: 01-2120098765-38-XXXX
<b>Classification</b>	
Skin Irrit. 2 - H315	
Eye Irrit. 2 - H319	
Skin Sens. 1B - H317	
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** Never give anything by mouth to an unconscious person. Do not induce vomiting. Rinse mouth thoroughly with water. Give plenty of water to drink. 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. 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

**Skin contact** May cause an allergic skin reaction. Mild dermatitis, allergic skin rash.

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

## Permabond ET515B

**Notes for the doctor** No specific recommendations. If in doubt, get medical attention promptly. 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** No unusual fire or explosion hazards noted.

**Hazardous combustion products** Burning produces irritating, toxic and obnoxious fumes. Nitrous gases (NOx). 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** 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. Wash area with soap and water.

#### 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 ingest or inhale. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

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

**Storage precautions** Store in closed original container at temperatures between 5°C and 25°C.

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

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

### SECTION 8: Exposure controls/Personal protection

#### 8.1. Control parameters

#### MERCAPTAN-TERMINATED POLYMER

DMEL

Workers - Inhalation; Long term systemic effects: 22 mg/m<sup>3</sup>  
Workers - Dermal; Long term systemic effects: 2.7 mg/kg/day

## Permabond ET515B

<b>PNEC</b>	Fresh water; 70 µg/l
	marine water; 7 µg/l
	STP; 10 mg/l
	Sediment (Freshwater); 322 µg/kg, dw
	Sediment (Marinewater); 32 µg/kg, dw
	Soil; 23 µg/kg, dw

### REACTION MASS OF TRIENTINE, MONO-AND DIPROPOXYLATED

<b>DNEL</b>	Workers - Inhalation; Long term systemic effects: 3.51 mg/m <sup>3</sup>
	Workers - Dermal; Long term systemic effects: 2 mg/kg/day
<b>PNEC</b>	Fresh water; 0.004 mg/l
	marine water; 0 mg/l
	STP; 4.3 mg/l
	Sediment (Freshwater); 0.171 mg/kg, dw
	Sediment (Marinewater); 0.017 mg/kg, dw
	Soil; 0.003 mg/kg, dw

## 8.2. Exposure controls

### Protective equipment



### Appropriate engineering controls

Provide adequate general and local exhaust ventilation.

### 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: ≥ 0.4 mm The selected gloves should have a breakthrough time of at least 0.5 hours. For exposure up to 8 hours, wear gloves made of the following material: Nitrile rubber. Thickness: ≥ 0.4 mm The selected gloves should have a breakthrough time of at least 8 hours. The breakthrough time for any glove material may be different for different glove manufacturers. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected.

### Other skin and body protection

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

### Hygiene measures

Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. 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

## Permabond ET515B

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

Appearance	Liquid.
Colour	Colourless.
Odour	Amine.
Odour threshold	Not determined.
pH	Not determined.
Melting point	Not determined.
Initial boiling point and range	Not determined.
Flash point	>100°C
Evaporation rate	Not available.
Upper/lower flammability or explosive limits	Not available.
Vapour pressure	Not determined.
Vapour density	Not determined.
Relative density	1.1
Solubility(ies)	Slightly soluble in water. Soluble in the following materials: Organic solvents.
Partition coefficient	Not available.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not determined.
Viscosity	≈19000 mPa s @ 23°C
Explosive properties	Not determined.
Oxidising properties	Not applicable.

### 9.2. Other information

Other information	Not relevant.
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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reactivity	Under normal conditions of storage and use, no hazardous reactions will occur.
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### 10.2. Chemical stability

Stability	Stable at normal ambient temperatures.
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### 10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Reactions with the following materials may generate heat: Epoxy resin
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### 10.4. Conditions to avoid

Conditions to avoid	Avoid excessive heat for prolonged periods of time.
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### 10.5. Incompatible materials

Materials to avoid	Avoid contact with the following materials: Acids. Oxidising agents.
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### 10.6. Hazardous decomposition products



## Permabond ET515B

**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.

#### Aspiration hazard

**Aspiration hazard** None under normal conditions.

#### **Inhalation**

Unlikely to be hazardous by inhalation because of the low vapour pressure of the product at ambient temperature. Gas or vapour in high concentrations may irritate the respiratory system. Symptoms following overexposure may include the following: Coughing.

#### **Ingestion**

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

#### **Skin contact**

May cause sensitisation by skin contact.

#### Toxicological information on ingredients.

#### MERCAPTAN-TERMINATED POLYMER

##### Acute toxicity - oral

**Acute toxicity oral (LD<sub>50</sub>)** 2,600.0  
mg/kg)

**Species** Rat

##### Acute toxicity - dermal

**Acute toxicity dermal (LD<sub>50</sub>)** 10,200.0  
mg/kg)

**Species** Rabbit

##### Skin corrosion/irritation

**Animal data** Method: OECD 404, Rabbit Not irritating.

##### Serious eye damage/irritation

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

##### Skin sensitisation

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

##### Germ cell mutagenicity

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

##### Carcinogenicity

**Carcinogenicity** No information available.

##### Reproductive toxicity

**Reproductive toxicity - fertility** No information available.

## Permabond ET515B

### 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.

### REACTION MASS OF TRIENTINE, MONO-AND DIPROPOXYLATED

#### Acute toxicity - oral

Acute toxicity oral (LD<sub>50</sub> mg/kg) 4,500.0

Species Rat

#### Acute toxicity - dermal

Acute toxicity dermal (LD<sub>50</sub> mg/kg) 2,150.0

Species Rat

#### Skin corrosion/irritation

Skin corrosion/irritation Irritating to skin.

#### Serious eye damage/irritation

Serious eye damage/irritation Irritating to eyes.

#### Skin sensitisation

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

#### Germ cell mutagenicity

Genotoxicity - in vitro Gene mutation: Negative.

#### Carcinogenicity

Carcinogenicity No information available.

#### Reproductive toxicity

Reproductive toxicity - fertility Screening - NOEL 750 mg/kg/day, Oral, Rat P

Reproductive toxicity - development Developmental toxicity: - NOEL: 750 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.

## Permabond ET515B

**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.

##### MERCAPTAN-TERMINATED POLYMER

###### Acute aquatic toxicity

<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 96 hours: 87 mg/l, Danio rerio (Zebrafish)
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 48 hours: 12 mg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	EC <sub>50</sub> , 72 hours: >733 mg/l, Desmodesmus subspicatus
<b>Acute toxicity - microorganisms</b>	EC <sub>50</sub> , 3 hours: > 1000 mg/l, Activated sludge

###### Chronic aquatic toxicity

<b>Chronic toxicity - aquatic invertebrates</b>	NOEC, 21 days: 3.5 mg/l, Daphnia magna
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##### REACTION MASS OF TRIENTINE, MONO-AND DIPROPOXYLATED

###### Acute aquatic toxicity

<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 96 hours: 4.1 mg/l, Oncorhynchus mykiss (Rainbow trout)
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 48 hours: 48 mg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	EC <sub>20</sub> , 72 hours: 0.43 mg/l, Pseudokirchneriella subcapitata
<b>Acute toxicity - microorganisms</b>	EC <sub>20</sub> , 3 hours: 110 mg/l, Activated sludge

### 12.2. Persistence and degradability

**Persistence and degradability** There are no data on the degradability of this product.

### 12.3. Bioaccumulative potential

**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 substance is not classified as PBT or vPvB according to current EU criteria.

### 12.6. Other adverse effects

## Permabond ET515B

**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** 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).  
Control of Substances Hazardous to Health Regulations 2002 (as amended).

**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)

## PermaBond ET515B

**Guidance**

Workplace Exposure Limits EH40.  
Introduction to Local Exhaust Ventilation HS(G)37.  
CHIP for everyone HSG228.  
Approved Classification and Labelling Guide (Sixth edition) L131.

**15.2. Chemical safety assessment**

No chemical safety assessment has been carried out.

**SECTION 16: Other information**

<b>Revision date</b>	04/05/2020
<b>Revision</b>	6
<b>Supersedes date</b>	16/08/2018
<b>Hazard statements in full</b>	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. 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.