

# Permabond®

## Engineering Adhesives

### SAFETY DATA SHEET

#### Permabond ET536A

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

##### 1.1. Product identifier

**Product name** Permabond ET536A

##### 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** 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)

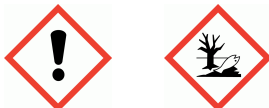
**Physical hazards** Not Classified

**Health hazards** 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.

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

## Permabond ET536A

### Supplemental label information

EUH205 Contains epoxy constituents. May produce an allergic reaction.

### Contains

EPOXY RESIN (Number average MW  $\leq$  700 ), FORMALDEHYDE, OLIGOMERIC REACTION PRODUCT WITH 1-CHLORO, 2,3-EPOXYPROPANE AND PHENOL

### Supplementary precautionary statements

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.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

<b>EPOXY RESIN (Number average MW <math>\leq</math> 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>	<b>Classification (67/548/EEC or 1999/45/EC)</b>
Skin Irrit. 2 - H315	R43 Xi;R36/38 N;R51/53
Eye Irrit. 2 - H319	
Skin Sens. 1 - H317	
Aquatic Chronic 2 - H411	
<b>3-PENTADECYLPHENOL</b>	<b>5-10%</b>
CAS number: 501-24-6	
<b>Classification</b>	
Acute Tox. 4 - H302	
Acute Tox. 4 - H312	
Acute Tox. 4 - H332	
Skin Irrit. 2 - H315	
Eye Irrit. 2 - H319	
STOT SE 3 - H335	
<b>FORMALDEHYDE, OLIGOMERIC REACTION PRODUCT WITH 1-CHLORO, 2,3-EPOXYPROPANE AND PHENOL</b>	<b>1-5%</b>
CAS number: 9003-36-5	
EC number: 500-006-8	
REACH registration number: 01-2119454392-40-XXXX	
<b>Classification</b>	
Skin Irrit. 2 - H315	
Skin Sens. 1 - H317	
Aquatic Chronic 2 - H411	

## Permabond ET536A

<b>CASHEW, NUTSHELL LIQ.</b>	<b>&lt;1%</b>
CAS number: 8007-24-7	EC number: 232-355-4
<b>Classification</b>	
Eye Dam. 1 - H318	
Skin Sens. 1 - H317	

The Full Text for all R-Phrases and Hazard Statements are 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 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.
-----------------------------	---

### 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.
--------------------------------------	---

#### 5.3. Advice for firefighters

<b>Special protective equipment for firefighters</b>	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

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

#### 6.2. Environmental precautions

<b>Environmental precautions</b>	Do not discharge into drains or watercourses or onto the ground.
----------------------------------	--

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

## Permabond ET536A

**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 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.

### 7.3. Specific end use(s)

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

## SECTION 8: Exposure Controls/personal protection

### 8.1. Control parameters

### 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

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

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.

## SECTION 9: Physical and Chemical Properties

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

**Appearance** Paste.

**Colour** White.

**Odour** Mild.

## Permabond ET536A

<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>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>Auto-ignition temperature</b>	Not determined.
<b>Decomposition Temperature</b>	Not available.
<b>Viscosity</b>	≈225000 mPa s @ 23°C Thixotropic
<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

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

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

## Permabond ET536A

### 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

**ATE dermal (mg/kg)** 2,000.1

#### 3-PENTADECYLPHENOL

##### Acute toxicity - oral

**ATE oral (mg/kg)** 500.0

##### Acute toxicity - dermal

**ATE dermal (mg/kg)** 1,100.0

##### Acute toxicity - inhalation

**ATE inhalation (vapours mg/l)** 11.0

#### FORMALDEHYDE, OLIGOMERIC REACTION PRODUCT WITH 1-CHLORO, 2,3-EPOXYPROPANE AND PHENOL

##### Acute toxicity - oral

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 10,000.0

**Species** Rat

**ATE oral (mg/kg)** 10,000.0

## Permabond ET536A

### Acute toxicity - dermal

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

Species Rat

ATE dermal (mg/kg) 2,000.1

## SECTION 12: Ecological Information

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

### 12.1. Toxicity

**Toxicity** No data available.

### Ecological information on ingredients.

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

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

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

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

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

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

#### FORMALDEHYDE, OLIGOMERIC REACTION PRODUCT WITH 1-CHLORO, 2,3-EPOXYPROPANE AND PHENOL

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours: 2.54 mg/l, Leuciscus idus (Golden orfe)

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 48 hours: 2.55 mg/l, Daphnia magna

**Acute toxicity - aquatic plants** EC<sub>50</sub>, 72 hours: 1.8 mg/l, Fish

### 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

### 12.3. Bioaccumulative potential

### Ecological information on ingredients.

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

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

## Permabond ET536A

**Partition coefficient**                      log Pow: 3.242

### 12.4. Mobility in soil

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

### Ecological information on ingredients.

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

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

### 12.5. Results of PBT and vPvB assessment

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

### 12.6. Other adverse effects

**Other adverse effects**                      None known.

## **SECTION 13: Disposal considerations**

### 13.1. Waste treatment methods

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

**Disposal methods**                              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 ET536A

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

<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>	09/05/2017
<b>Revision</b>	6
<b>Supersedes date</b>	11/04/2017
<b>Risk phrases in full</b>	R22 Harmful if swallowed. R34 Causes burns. R36/38 Irritating to eyes and skin. R43 May cause sensitisation by skin contact. R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R62 Possible risk of impaired fertility. R63 Possible risk of harm to the unborn child.

## Permabond ET536A

### Hazard statements in full

H302 Harmful if swallowed.  
H312 Harmful in contact with skin.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
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 ET536B

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

##### 1.1. Product identifier

**Product name** Permabond ET536B

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

**Environmental hazards** Not Classified

**Classification (67/548/EEC or 1999/45/EC)** R43.

##### 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.

## Permabond ET536B

<b>Precautionary statements</b>	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>Contains</b>	POLYAMINOAMIDE, 2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL
<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. 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>POLYAMINOAMIDE</b>	<b>30-60%</b>
CAS number: 68082-29-1	EC number: 500-191-5
<b>Classification</b>	<b>Classification (67/548/EEC or 1999/45/EC)</b>
Skin Irrit. 2 - H315	Xi;R36/38. R43.
Eye Irrit. 2 - H319	
Skin Sens. 1 - H317	
<b>2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL</b>	<b>1-5%</b>
CAS number: 90-72-2	EC number: 202-013-9
<b>Classification</b>	<b>Classification (67/548/EEC or 1999/45/EC)</b>
Skin Corr. 1A - H314	Xn;R22 Xi;R36/38
Skin Sens. 1 - H317	
Aquatic Chronic 3 - H412	

The Full Text for all R-Phrases and Hazard Statements are 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>	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.
<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. 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

<b>Skin contact</b>	Skin irritation. Mild dermatitis, allergic skin rash.
---------------------	---

## Permabond ET536B

**Eye contact** May cause severe eye irritation.

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

**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 (NO<sub>x</sub>). 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 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

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

### 8.2. Exposure controls

## Permabond ET536B

### 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

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

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

### Hygiene measures

Wash hands 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.

### Respiratory protection

No specific recommendations. Respiratory protection may be required if excessive airborne contamination occurs.

## SECTION 9: Physical and Chemical Properties

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

Appearance	Paste.
Colour	Black.
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.
Vapour pressure	Not determined.
Vapour density	Not determined.
Relative density	1.2
Solubility(ies)	Slightly soluble in water. Soluble in the following materials: Organic solvents.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not determined.
Viscosity	≈300000 mPa s @ 23°C Thixotropic
Explosive properties	Not determined.
Oxidising properties	Not applicable.

## Permabond ET536B

### 9.2. Other information

Other information Not relevant.

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

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

#### 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: Epoxy resin

#### 10.4. Conditions to avoid

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

#### 10.5. Incompatible materials

Materials to avoid Avoid contact with the following materials: Acids. Oxidising agents.

#### 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

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

Irritating to skin. May cause sensitisation by skin contact.

#### Eye contact

Irritating and may cause redness and pain.

#### Toxicological information on ingredients.

#### POLYAMINOAMIDE

##### Acute toxicity - oral

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

Species Rat

ATE oral (mg/kg) 2,000.1

##### Acute toxicity - dermal

## Permabond ET536B

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

**Species** Rat

**ATE dermal (mg/kg)** 2,000.1

### 2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL

#### Acute toxicity - oral

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

**Species** Rat

#### Acute toxicity - dermal

**Acute toxicity dermal (LD<sub>50</sub>)** 1,280.0  
mg/kg)

**Species** Rat

## SECTION 12: Ecological Information

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

### 12.1. Toxicity

**Toxicity** There are no data on the ecotoxicity of this product.

### Ecological information on ingredients.

#### POLYAMINOAMIDE

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours: 7.07 mg/l, Danio rerio (Zebrafish)

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 24 hours: 9.72 mg/l, Daphnia magna

**Acute toxicity - aquatic plants** EC<sub>50</sub>, 72 hours: 4.34 mg/l, Pseudokirchneriella subcapitata

**Acute toxicity - microorganisms** EC<sub>50</sub>, 3 hours: 384 mg/l, Activated sludge

### 2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours: > 180 - < 240 mg/l, Onchorhynchus mykiss (Rainbow trout)

**Acute toxicity - aquatic invertebrates** LC<sub>50</sub>, 96 hours: 718 mg/l, Palaemonetes vulgaris

**Acute toxicity - aquatic plants** EC<sub>50</sub>, 72 hours: 84 mg/l, Desmodemus subspicatus

**Acute toxicity - microorganisms** NOEC, 28 days: 2 mg/l, Activated sludge

### 12.2. Persistence and degradability

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

### Ecological information on ingredients.



## Permabond ET536B

### 2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL

**Biodegradation** Water - 4%: 28 days

#### 12.3. Bioaccumulative potential

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

#### 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

**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

## Permabond ET536B

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

### SECTION 15: Regulatory information

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

<b>National regulations</b>	The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716). Control of Substances Hazardous to Health Regulations 2002 (as amended).
<b>EU legislation</b>	Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
<b>Guidance</b>	Workplace Exposure Limits EH40. 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>	16/04/2015
<b>Revision</b>	2
<b>Supersedes date</b>	12/09/2013
<b>Risk phrases in full</b>	R21 Harmful in contact with skin. R22 Harmful if swallowed. R34 Causes burns. R36/38 Irritating to eyes and skin. R43 May cause sensitisation by skin contact. R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<b>Hazard statements in full</b>	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. 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.