

Permabond®

Engineering Adhesives

SAFETY DATA SHEET

Permabond ET510A

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

1.1. Product identifier

Product name Permabond ET510A

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.
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.

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Supplemental label information	EUH205 Contains epoxy constituents. May produce an allergic reaction.
Contains	EPOXY RESIN (Number average MW <= 700)
Supplementary precautionary statements	<p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.</p> <p>P337+P313 If eye irritation persists: Get medical advice/ attention.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P391 Collect spillage.</p> <p>P501 Dispose of contents/container in accordance with existing Community, National and local regulations.</p>

2.3. Other hazards

None under normal conditions.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

EPOXY RESIN (Number average MW <= 700)	60-100%
CAS number: 25068-38-6	EC number: 500-033-5
	REACH registration number: 01-2119456619-26-XXXX
Classification	Classification (67/548/EEC or 1999/45/EC)
Skin Irrit. 2 - H315	R43 Xi;R36/38 N;R51/53
Eye Irrit. 2 - H319	
Skin Sens. 1 - H317	
Aquatic Chronic 2 - H411	
3-PENTADECYLPHENOL	5-10%
CAS number: 501-24-6	
Classification	
Acute Tox. 4 - H302	
Acute Tox. 4 - H312	
Acute Tox. 4 - H332	
Skin Irrit. 2 - H315	
Eye Irrit. 2 - H319	
STOT SE 3 - H335	
CASHEW, NUTSHELL LIQ.	<1%
CAS number: 8007-24-7	EC number: 232-355-4
Classification	
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

Inhalation Move the exposed person to fresh air. Get medical attention if any discomfort continues.

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Ingestion	Rinse mouth thoroughly with water. Give plenty of water to drink. Do not induce vomiting. Get medical attention if any discomfort continues.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. If symptoms develop, obtain medical attention
Eye contact	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

Skin contact	Skin irritation. Mild dermatitis, allergic skin rash.
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.
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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. Nitrous gases (NOx). Carbon monoxide, carbon dioxide, and unknown hydrocarbons.
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5.3. Advice for firefighters

Special protective equipment for firefighters	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

Personal precautions	Wear protective clothing as described in Section 8 of this safety data sheet.
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6.2. Environmental precautions

Environmental precautions	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

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.
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6.4. Reference to other sections

Reference to other sections	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

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

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

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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

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	Liquid.
Colour	Colourless.
Odour	Mild.
Odour threshold	Not available.
pH	Not available.
Melting point	Not determined.
Initial boiling point and range	Not applicable.
Flash point	>100°C
Evaporation rate	Not available.
Vapour pressure	Not determined.
Vapour density	Not available.

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Relative density	1.1
Solubility(ies)	Insoluble in water. Soluble in the following materials: Organic solvents.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not available.
Viscosity	≈23000 mPa s @ 23°C
Explosive properties	Not determined.
Oxidising properties	Not determined.

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: Amines.
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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	Strong oxidising agents. Strong acids. Strong alkalis.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Thermal decomposition could produce carbon monoxide, carbon dioxide, and unidentified organic compounds.
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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.
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Skin sensitisation

Skin sensitisation	May cause sensitisation by skin contact.
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Aspiration hazard

Aspiration hazard	None under normal conditions.
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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.

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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 (LD₅₀ mg/kg) 11,400.0

Species Rat

ATE oral (mg/kg) 11,400.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ 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

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 LC₅₀, 24 hours: 4.4 mg/l, Onchorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates LC₅₀, 24 hours: 4.9 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 48 hours: 9.1 mg/l, Selenastrum capricornutum

Acute toxicity - microorganisms IC₅₀, 3 hours: > 100 mg/l, Activated sludge

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

12.2. Persistence and degradability

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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,

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)

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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

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)
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	15/05/2017
Revision	4
Supersedes date	29/05/2015

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Risk phrases in full

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.

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.