



SAFETY DATA SHEET
Permabond ET5401B

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name Permabond ET5401B

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

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 (1999/45/EEC) C;R34. R43.

2.2. Label elements

Contains 2-PIPERAZIN-1-YLETHYLAMINE
ATBN POLYMER
ISOPHORONEDIAMINE
POLYOXYPROPYLENEDIAMINE

Labelling



Corrosive

Risk Phrases

R34	Causes burns.
R43	May cause sensitisation by skin contact.

Safety Phrases

S24/25	Avoid contact with skin and eyes.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S37/39	Wear suitable gloves and eye/face protection.

2.3. Other hazards

None under normal conditions.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

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2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL		5-10%
CAS-No.: 90-72-2	EC No.: 202-013-9	
Classification (EC 1272/2008) Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319	Classification (67/548/EEC) Xn;R22 Xi;R36/38	
2-PIPERAZIN-1-YLETHYLAMINE		10-30%
CAS-No.: 140-31-8	EC No.: 205-411-0	
Classification (EC 1272/2008) Acute Tox. 4 - H302 Acute Tox. 4 - H312 Skin Corr. 1B - H314 Skin Sens. 1 - H317 Aquatic Chronic 3 - H412	Classification (67/548/EEC) C;R34 Xn;R21/22 R43 R52/53	
ATBN POLYMER		30-60%
CAS-No.: 68683-29-4	EC No.:	
Classification (EC 1272/2008) Skin Sens. 1 - H317	Classification (67/548/EEC) R43.	
ISOPHORONEDIAMINE		1-5%
CAS-No.: 2855-13-2	EC No.: 220-666-8	
Classification (EC 1272/2008) Acute Tox. 4 - H302 Acute Tox. 4 - H312 Skin Corr. 1B - H314 Skin Sens. 1 - H317 Aquatic Chronic 3 - H412	Classification (67/548/EEC) C;R34 Xn;R21/22 R43 R52/53	
POLYOXYPROPYLENEDIAMINE		10-30%
CAS-No.: 9046-10-0	EC No.:	
Classification (EC 1272/2008) Skin Corr. 1B - H314	Classification (67/548/EEC) C;R34.	

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.

Ingestion

Never give liquid to an unconscious person. Do not induce vomiting. Rinse mouth thoroughly. Drink plenty of water. 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

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Eye contact

Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Make sure to remove any contact lenses from the eyes before rinsing. Obtain medical attention and bring these instructions.

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

Inhalation.

Irritation of nose, throat and airway.

Ingestion

May cause chemical burns in mouth and throat.

Skin contact

Chemical burns. Mild dermatitis, allergic skin rash.

Eye contact

May cause severe irritation to eyes.

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

No recommendation given, but first aid may still be required in case of accidental exposure, inhalation or ingestion of this chemical. If in doubt, GET MEDICAL ATTENTION PROMPTLY!

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

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.

Unusual Fire & Explosion Hazards

No unusual fire or explosion hazards noted.

5.3. Advice for firefighters

Protective equipment for fire-fighters

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

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

6.2. Environmental precautions

Do not discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Absorb with sand or other inert absorbent. Transfer to suitable, labelled containers for disposal.

6.4. 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

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

7.2. Conditions for safe storage, including any incompatibilities

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

Storage Class

Corrosive storage.

7.3. Specific end use(s)

Adhesive. Sealant.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

8.2. Exposure controls

Protective equipment



Engineering measures

Provide adequate general and local exhaust ventilation.

Respiratory equipment

No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists.

Hand protection

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

Eye protection

Use approved safety goggles or face shield. Personal eye protection should conform to EN 166

Other 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. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Paste
Colour	Black.
Odour	Amine.
Solubility	Slightly soluble in water. Soluble in: Organic solvents
Initial boiling point and boiling range	Not determined.
Melting point (°C)	Not determined.
Relative density	1.09
Vapour density (air=1)	Not determined.
Vapour pressure	Not determined.
Evaporation rate	Not available.
pH-Value, Conc. Solution	Not determined.
Viscosity	~350000 mPa.s Thixotropic
Decomposition temperature (°C)	Not determined.
Odour Threshold, Lower	Not determined.
Flash point	>100°C
Auto Ignition Temperature (°C)	Not determined.
Explosive properties	Not determined.
Oxidising properties	Not applicable.

9.2. Other information

Not relevant

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No specific reactivity hazards associated with this product.

10.2. Chemical stability

Stable under normal temperature conditions.

10.3. Possibility of hazardous reactions

Exothermic reaction with: Epoxy resin

10.4. Conditions to avoid

Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials

Materials To Avoid

Avoid contact with acids and oxidising substances.

10.6. 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 information

The toxicological properties of this product have not been fully evaluated. Use of good industrial hygiene practices is required. Avoid direct contact with skin or eyes. Do not ingest or inhale.

Respiratory or skin sensitisation:

May cause sensitisation by skin contact.

Aspiration hazard:

None under normal conditions.

Inhalation

Unlikely to be hazardous by inhalation because of the low vapour pressure of the substance at ambient temperature. In high concentrations, vapours may irritate throat and respiratory system and cause coughing.

Ingestion

Causes burns. May cause chemical burns in mouth and throat. May cause stomach pain or vomiting.

Skin contact

Strongly irritating. Prolonged contact may cause burns.

Eye contact

May cause severe irritation to eyes.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

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

12.1. Toxicity

There are no data on the ecotoxicity of this product.

12.2. Persistence and degradability

There are no data on the degradability of this product.

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

Not Classified as PBT/vPvB by current EU criteria.

12.6. Other adverse effects

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

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.

13.1. Waste treatment 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

14.1. UN number

2735

14.2. UN proper shipping name

Polyamines, liquid, corrosive, n.o.s. (contains Polyoxypropylenediamine and 2-Piperazin-1-ylethylamine)

14.3. Transport hazard class(es)

8

Transport Labels



14.4. Packing group

III

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant

No.

14.6. Special precautions for user

EMS F-A, S-B

Tunnel Restriction Code (E)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

SECTION 15: REGULATORY INFORMATION

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

Statutory Instruments

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716). Control of Substances Hazardous to Health.

Approved Code Of Practice

Classification and Labelling of Substances and Preparations Dangerous for Supply.

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Guidance Notes

Workplace Exposure Limits EH40. Introduction to Local Exhaust Ventilation HS(G)37. CHIP for everyone HSG(108).

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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

Revision Date 09/10/2012

Revision 1

Risk Phrases In Full

R34 Causes burns.
R22 Harmful if swallowed.
R21/22 Harmful in contact with skin and if swallowed.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R36/38 Irritating to eyes and skin.
R43 May cause sensitisation by skin contact.

Hazard Statements In Full

H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects.