

# Permabond®

## Engineering Adhesives

### SAFETY DATA SHEET

#### Permabond ET500B

#### 1. Identification

##### Product identifier

**Product name** Permabond ET500B

##### Recommended use of the chemical and restrictions on use

**Application** Two-component, epoxy-based adhesive.

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

**Supplier** Permabond LLC  
14 Robinson Street  
Pottstown, PA 19464  
USA  
Telephone: 732-868-1372 or 800-640-7599  
Website: www.permabond.com

##### Emergency telephone number

**Emergency telephone** Medical: Poison Control Center 866-827-6282 (toll free) or 303-389-1109 Transport: CHEMTREC 800-424-9300

#### 2. Hazard(s) identification

##### Classification of the substance or mixture

**OSHA Regulatory Status** Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**Physical hazards** Not Classified

**Health hazards** Skin Corr. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317

##### Label elements

##### Pictogram



**Signal word** Danger

**Hazard statements** H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.

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<b>Precautionary statements</b>	<p>P260 Do not breathe vapor/ spray.</p> <p>P261 Avoid breathing vapor/ spray.</p> <p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P272 Contaminated work clothing must not be allowed out of the workplace.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.</p> <p>P302+P352 If on skin: Wash with plenty of water.</p> <p>P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.</p> <p>P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.</p> <p>P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P310 Immediately call a poison center/ doctor.</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P405 Store locked up.</p> <p>Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.</p>
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**Contains** TRIETHYLENETETRAMINE PROPOXYLATED, TRIETHYLENETETRAMINE

### Other hazards

Does not decompose when used and stored as recommended.

### 3. Composition/information on ingredients

#### Mixtures

<b>TRIETHYLENETETRAMINE PROPOXYLATED</b>	<b>5-10%</b>
CAS number: 26950-63-0	
<b>Classification</b> Acute Tox. 4 - H312 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Not relevant.	
<b>3,6-DIAZAOCTANEETHYLENEDIAMINE</b>	<b>1-5%</b>
CAS number: 112-24-3	
<b>Classification</b> Acute Tox. 4 - H302 Acute Tox. 4 - H312 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Not relevant.	

The full text for all hazard statements is displayed in Section 16.

**Composition comments** Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

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### 4. First-aid measures

#### 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>	Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.
<b>Skin Contact</b>	Remove contaminated clothing. Wash skin thoroughly 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.

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

<b>Inhalation</b>	Vapors irritate the respiratory system.
<b>Ingestion</b>	May cause chemical burns in mouth and throat.
<b>Skin contact</b>	Chemical burns. Mild dermatitis, allergic skin rash.
<b>Eye contact</b>	May cause serious eye damage.

#### Indication of immediate medical attention and special treatment needed

<b>Notes for the doctor</b>	No specific recommendations. Treat symptomatically.
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### 5. Fire-fighting measures

#### 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.

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

<b>Specific hazards</b>	In case of fire, keep containers cool with water spray. Closed containers may rupture (due to buildup of pressure) when exposed to extreme heat.
<b>Hazardous combustion products</b>	Burning produces irritating, toxic and obnoxious fumes. Nitrous gases (NOx). Carbon monoxide, carbon dioxide, and unknown hydrocarbons.

#### 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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### 6. Accidental release measures

#### 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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#### Environmental precautions

<b>Environmental precautions</b>	Do not discharge into drains or watercourses or onto the ground.
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#### 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.
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<b>Reference to other sections</b>	For personal protection, see Section 8. For waste disposal, see section 13.
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### 7. Handling and storage

#### Precautions for safe handling

**Usage precautions** Avoid contact with skin, eyes and clothing. Do not breathe gas, fume, vapours or spray. Wash hands thoroughly after handling. Use only in well-ventilated areas. Keep container tightly sealed when not in use.

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

**Storage precautions** Store in tightly-closed, original container in a dry, cool and well-ventilated place.

#### Specific end uses(s)

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

### 8. Exposure Controls/personal protection

#### Exposure controls

**Appropriate engineering controls** Provide adequate general and local exhaust ventilation. Use positive down draft exhaust ventilation if general ventilation is insufficient to maintain vapor concentrations below established exposure limits.

**Eye/face protection** The following protection should be worn: Chemical splash goggles or face shield.

**Hand protection** Nitrile rubber or Viton™ gloves are recommended. Cotton or other absorbent gloves should not be worn.

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

### 9. Physical and Chemical Properties

#### Information on basic physical and chemical properties

<b>Appearance</b>	Liquid.
<b>Color</b>	Colorless.
<b>Odor</b>	Amine.
<b>Odor threshold</b>	Not determined.
<b>pH</b>	Not determined.
<b>Melting point</b>	Not determined.
<b>Initial boiling point and range</b>	Not determined.
<b>Flash point</b>	>100°C
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	Not available.
<b>Vapor pressure</b>	Not determined.

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<b>Vapor density</b>	Not determined.
<b>Relative density</b>	1.13
<b>Solubility(ies)</b>	Slightly soluble in water. Soluble in the following materials: Organic solvents.
<b>Auto-ignition temperature</b>	Not determined.
<b>Decomposition Temperature</b>	Not determined.
<b>Viscosity</b>	~22500 mPa s @ 23°C
<b>Explosive properties</b>	Not determined.
<b>Oxidizing properties</b>	Not applicable.
<b>Other information</b>	Not relevant.
<b>Volatile organic compound</b>	<2 %, 20 grams/liter (Estimated)

### 10. Stability and reactivity

<b>Reactivity</b>	There are no known reactivity hazards associated with this product.
<b>Stability</b>	Stable at normal ambient temperatures.
<b>Possibility of hazardous reactions</b>	Reactions with the following materials may generate heat: Epoxy Resin
<b>Conditions to avoid</b>	Avoid excessive heat for prolonged periods of time.
<b>Materials to avoid</b>	Avoid contact with the following materials: Acids. Oxidizing agents.
<b>Hazardous decomposition products</b>	Thermal decomposition could produce carbon monoxide, carbon dioxide, and unidentified organic compounds.

### 11. Toxicological information

#### Information on toxicological effects

<b>Toxicological effects</b>	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.
<b><u>Skin corrosion/irritation</u></b>	
<b>Skin corrosion/irritation</b>	Corrosive to skin.
<b><u>Serious eye damage/irritation</u></b>	
<b>Serious eye damage/irritation</b>	Causes serious eye damage.
<b><u>Skin sensitization</u></b>	
<b>Skin sensitization</b>	May cause sensitisation by skin contact.
<b><u>Germ cell mutagenicity</u></b>	
<b>Genotoxicity - in vitro</b>	Based on available data the classification criteria are not met.
<b><u>Carcinogenicity</u></b>	
<b>Carcinogenicity</b>	Does not contain any substances known to be carcinogenic.
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	Based on available data the classification criteria are not met.

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### Specific target organ toxicity - single exposure

**STOT - single exposure** Based on available data the classification criteria are not met.

### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** Based on available data the classification criteria are not met.

### Aspiration hazard

**Aspiration hazard** Based on available data the classification criteria are not met.

### **Inhalation**

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

### **Ingestion**

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

### **Skin Contact**

This product is strongly irritating. Prolonged contact may cause burns.

### **Eye contact**

Causes serious eye damage.

### **Route of exposure**

Ingestion Skin and/or eye contact

### Toxicological information on ingredients.

#### 3,6-DIAZAOCTANEETHYLENEDIAMINE

##### Acute toxicity - oral

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 1,716.2

**Species** Rat

**ATE oral (mg/kg)** 1,716.2

##### Acute toxicity - dermal

**Acute toxicity dermal (LD<sub>50</sub> mg/kg)** 1,465.4

**Species** Rabbit

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

##### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)** No information available.

##### Skin corrosion/irritation

**Animal data** Corrosive.

##### Serious eye damage/irritation

**Serious eye damage/irritation** Corrosive

##### Skin sensitization

**Skin sensitization** Guinea pig maximization test (GPMT) - Guinea pig: Sensitizing.

##### Germ cell mutagenicity

**Genotoxicity - in vitro** Bacterial reverse mutation test: Positive. DNA damage and/or repair: Negative.

**Genotoxicity - in vivo** Chromosome aberration: Negative.

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### Carcinogenicity

**Carcinogenicity** Negative.

### Reproductive toxicity

**Reproductive toxicity - development** Developmental toxicity: - NOAEL: 750 mg/kg, , Rat Developmental toxicity: - NOAEL: 125 mg/kg, , Rabbit

### Specific target organ toxicity - single exposure

**STOT - single exposure** NOAEL 50 mg/kg/day, Oral,

**Target organs** Respiratory system, lungs

### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** No information available.

### Aspiration hazard

**Aspiration hazard** No information available.

## 12. Ecological Information

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

## 13. Disposal considerations

### Waste treatment methods

**General information** Empty containers may contain product residue; follow SDS and label warnings even after they have been emptied.

**Disposal methods** Dispose of according to Federal, State and local governmental regulations.

## 14. Transport information

### UN Number

**UN No. (IMDG)** 2735

**UN No. (ICAO)** 2735

**UN No. (DOT)** UN2735

### UN proper shipping name

Polyamines, Liquid, Corrosive, n.o.s. (contains Triethylenetetramine)

**Proper shipping name (IMDG)** POLYAMINES, LIQUID, CORROSIVE, N.O.S (contains 2,4,6-Tris(dimethylaminomethyl)phenol

**Proper shipping name (ICAO)** POLYAMINES, LIQUID, CORROSIVE, N.O.S (contains 2,4,6-Tris(dimethylaminomethyl)phenol

**Proper shipping name (DOT)** POLYAMINES, LIQUID, CORROSIVE, N.O.S. (contains 2,4,6-Tris(dimethylaminomethyl)phenol

### Transport hazard class(es)

**DOT hazard class** 8

**DOT hazard label** 8

**IMDG Class** 8

**ICAO class/division** 8

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### DOT transport labels



### Transport labels



### Packing group

IMDG packing group III

ICAO packing group III

DOT packing group III

### Environmental hazards

**Environmentally Hazardous Substance**

No.

## 15. Regulatory information

### US Federal Regulations

#### **SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities**

None above reporting levels

#### **CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)**

None above reporting limits

#### **SARA Extremely Hazardous Substances EPCRA Reportable Quantities**

None above reporting limits

#### **SARA 313 Emission Reporting**

None above reporting limits

#### **SARA (311/312) Hazard Categories**

Acute  
Chronic

### US State Regulations

#### **California Proposition 65 Carcinogens and Reproductive Toxins**

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm

### Inventories

#### **Canada - DSL/NDSL**

All the ingredients are listed or exempt.

#### **US - TSCA**

All the ingredients are listed or exempt.

#### **US - TSCA 12(b) Export Notification**

None above reporting limits

## 16. Other information

## Permabond ET500B

<b>Classification abbreviations and acronyms</b>	Eye Dam. = Serious eye damage Skin Corr. = Skin corrosion Skin Sens. = Skin sensitisation
<b>Revision date</b>	1/26/2018
<b>Revision</b>	2
<b>Supersedes date</b>	5/5/2015
<b>Hazard statements in full</b>	H302 Harmful if swallowed. H312 Harmful in contact with skin. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H318 Causes serious eye damage.

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.