



**SAFETY DATA SHEET**  
**Permabond TA4605B**

**1. Identification**

**Product identifier**

**Product name** Permabond TA4605B

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

**Application** Adhesive. Sealant.

**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 Irrit. 2 - H315 Eye Irrit. 2A - H319 Skin Sens. 1 - H317 STOT SE 3 - H335

**Label elements**

**Hazard symbols**



**Signal word** Warning

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

## Permabond TA4605B

### Precautionary statements

P261 Avoid breathing vapor/ spray.  
 P264 Wash contaminated skin thoroughly after handling.  
 P271 Use only outdoors or in a well-ventilated area.  
 P272 Contaminated work clothing must not be allowed out of the workplace.  
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
 P302+P352 If on skin: Wash with plenty of water.  
 P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.  
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P312 Call a poison center/ doctor if you feel unwell.  
 P321 Specific treatment (see medical advice on this label).  
 P332+P313 If skin irritation occurs: Get medical advice/ attention.  
 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.  
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
 P405 Store locked up.  
 P501 Dispose of contents/ container in accordance with national regulations.

### Contains

BENZYL METHACRYLATE, 2-ETHYLHEXYL METHACRYLATE, TRIETHYLBORANE-1,3-DIAMINOPROPANE COMPLEX

### Other hazards

None under normal conditions.

### 3. Composition/information on ingredients

#### Mixtures

<b>BENZYL METHACRYLATE</b> <span style="float: right;"><b>30-60%</b></span> CAS number: 2495-37-6
<b>Classification</b> Skin Irrit. 2 - H315 Eye Irrit. 2A - H319 Skin Sens. 1 - H317 STOT SE 3 - H335
<b>2-ETHYLHEXYL METHACRYLATE</b> <span style="float: right;"><b>5-10%</b></span> CAS number: 688-84-6
<b>Classification</b> Skin Irrit. 2 - H315 Eye Irrit. 2A - H319 Skin Sens. 1 - H317 STOT SE 3 - H335 Not relevant.

## PermaBond TA4605B

<b>TRIETHYLBORANE-1,3-DIAMINOPROPANE COMPLEX</b>	<b>1-5%</b>
CAS number: 148861-07-8	
REACH registration exemption – < 1 tonne	
<b>Classification</b> Acute Tox. 4 - H312 Skin Corr. 1A - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317	

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.

### 4. First-aid measures

#### Description of first aid measures

<b>Inhalation</b>	Move the exposed person to fresh air. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. If breathing stops, provide artificial respiration. Get medical attention.
<b>Ingestion</b>	Do not induce vomiting unless under the direction of medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.
<b>Skin Contact</b>	Wash skin thoroughly with soap and water. Take off contaminated clothing and wash it before reuse. Get medical attention.
<b>Eye contact</b>	Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes. Get medical attention.

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

<b>Inhalation</b>	May cause respiratory irritation.
<b>Ingestion</b>	May cause irritation.
<b>Skin contact</b>	Causes skin irritation. May cause an allergic skin reaction.
<b>Eye contact</b>	Causes serious eye irritation.

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

**Notes for the doctor**      No specific recommendations. Treat symptomatically.

### 5. Fire-fighting measures

#### Extinguishing media

**Suitable extinguishing media**    Water spray, foam, dry powder or carbon dioxide.

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

**Hazardous combustion products**      Burning produces irritating, toxic and obnoxious fumes. Carbon monoxide, carbon dioxide, and unknown hydrocarbons.

#### Advice for firefighters

**Special protective equipment for firefighters**    Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

### 6. Accidental release measures

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

## Permabond TA4605B

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

### Environmental precautions

**Environmental precautions** Avoid discharge into drains.

### Methods and material for containment and cleaning up

**Methods for cleaning up** Absorb spillage with sand or other inert absorbent. Collect and place in suitable waste disposal containers and seal securely.

**Reference to other sections** For personal protection, see Section 8. For waste disposal, see section 13.

## 7. Handling and storage

### Precautions for safe handling

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

### Conditions for safe storage, including any incompatibilities

**Storage precautions** Store in closed original container at temperatures between 44°F and 77°F. Never return unused material to storage receptacle.

### Specific end uses(s)

**Usage description** Adhesive. Sealant.

## 8. Exposure controls/Personal protection

### Exposure controls

**Appropriate engineering controls** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Observe any occupational exposure limits for the product or ingredients.

**Eye/face protection** Use safety goggles and face shield in case of splash risk.

**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.

**Respiratory protection** No specific recommendations. Respiratory protection may be required if excessive airborne contamination occurs. Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

**Appearance** Liquid.

**Color** Colorless to pale yellow.

**Odor** Acrylic

**Odor threshold** Not available.

**pH** Not relevant.

**Melting point** Not available.

## Permabond TA4605B

<b>Initial boiling point and range</b>	Not applicable.
<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 available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	1.0 @ 23°C
<b>Solubility(ies)</b>	Slightly soluble in water. Miscible with the following materials: acetone
<b>Partition coefficient</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition Temperature</b>	Not available.
<b>Viscosity</b>	~25,000 cP @ 23°C
<b>Oxidizing properties</b>	Not available.
<b>Other information</b>	Not relevant.
<b>Volatile organic compound</b>	<2 %, 20 grams/liter (Estimated)

### 10. Stability and reactivity

<b>Reactivity</b>	The following materials may react with the product: Strong oxidizing agents.
<b>Stability</b>	Stable at normal ambient temperatures and when used as recommended.
<b>Possibility of hazardous reactions</b>	There are no known reactivity hazards associated with this product. Polymerization may occur at elevated temperature or in the presence of incompatible materials
<b>Conditions to avoid</b>	Avoid the absence of air, and metal contamination.
<b>Materials to avoid</b>	Metals and their salts. Free radical initiators. Strong alkalis. Strong reducing 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>	Irritating to skin.
<b><u>Serious eye damage/irritation</u></b>	
<b>Serious eye damage/irritation</b>	Causes serious eye irritation.

## PermaBond TA4605B

### Respiratory sensitization

**Respiratory sensitization** Based on available data the classification criteria are not met.

### Skin sensitization

**Skin sensitization** May cause sensitisation by skin contact.

### Germ cell mutagenicity

**Genotoxicity - in vitro** Based on available data the classification criteria are not met.

**Genotoxicity - in vivo** Based on available data the classification criteria are not met.

### Carcinogenicity

**Carcinogenicity** No component of this product present at levels great than or equal to 0.1% is identified as a known carcinogen.

### Reproductive toxicity

**Reproductive toxicity - fertility** Based on available data the classification criteria are not met.

### Specific target organ toxicity - single exposure

**STOT - single exposure** May cause respiratory irritation.

**Target organs** Respiratory tract

### 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** May cause respiratory system irritation.

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

**Skin Contact** Causes skin irritation.

**Eye contact** Irritating to eyes.

**Acute and chronic health hazards** May cause respiratory system irritation. This product may cause skin and eye irritation.

**Route of exposure** Inhalation Skin and/or eye contact

### Toxicological information on ingredients.

#### BENZYL METHACRYLATE

##### Acute toxicity - oral

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 3,980.0

**Species** Rat

##### Acute toxicity - dermal

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

**Species** Rat

##### Acute toxicity - inhalation

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

## PermaBond TA4605B

### Skin corrosion/irritation

**Animal data** Erythema/eschar score: Very slight erythema - barely perceptible (1). Fully reversible within 72 hours. Slightly irritating.

### Serious eye damage/irritation

**Serious eye damage/irritation** Not irritating.

### Skin sensitization

**Skin sensitization** Local Lymph Node Assay (LLNA) - Mouse: Sensitizing.

### Germ cell mutagenicity

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

### Carcinogenicity

**Carcinogenicity** No information available.

### Reproductive toxicity

**Reproductive toxicity - fertility** No evidence of reproductive toxicity in animal studies.

### Specific target organ toxicity - single exposure

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

### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** NOAEL 500 mg/kg, Oral, Rat

### Aspiration hazard

**Aspiration hazard** Not available.

## 2-ETHYLHEXYL METHACRYLATE

### Acute toxicity - oral

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

**Species** Rat

### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)** No information available.

### Acute toxicity - inhalation

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

### Skin corrosion/irritation

**Human skin model test** Not irritating.

### Serious eye damage/irritation

**Serious eye damage/irritation** Not irritating.

### Skin sensitization

**Skin sensitization** Local Lymph Node Assay (LLNA) - Mouse: Not sensitizing.

### Germ cell mutagenicity

## PermaBond TA4605B

<b>Genotoxicity - in vitro</b>	Chromosome aberration: Negative.
<b><u>Carcinogenicity</u></b>	
<b>Carcinogenicity</b>	NOAEC $\geq$ 2.05 mg/l, Inhalation, Rat
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	Screening - NOAEL 300 mg/kg/day, Oral, Rat F1
<b>Reproductive toxicity - development</b>	Developmental toxicity: - LOAEL: 1000 mg/kg/day, Oral, Rat
<b><u>Specific target organ toxicity - single exposure</u></b>	
<b>STOT - single exposure</b>	Not available.
<b><u>Specific target organ toxicity - repeated exposure</u></b>	
<b>STOT - repeated exposure</b>	Not available.
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	Not available.

### TRIMETHYLENEDIAMINE

<b><u>Acute toxicity - oral</u></b>	
<b>Acute toxicity oral (LD<sub>50</sub> mg/kg)</b>	311.0
<b>Species</b>	Rat
<b><u>Acute toxicity - dermal</u></b>	
<b>Acute toxicity dermal (LD<sub>50</sub> mg/kg)</b>	178.0
<b>Species</b>	Rabbit
<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>	Corrosive to skin.
<b><u>Serious eye damage/irritation</u></b>	
<b>Serious eye damage/irritation</b>	Method: OECD 405, Rabbit Irreversible effect.
<b><u>Respiratory sensitization</u></b>	
<b>Respiratory sensitization</b>	Human: Sensitizing.
<b><u>Skin sensitization</u></b>	
<b>Skin sensitization</b>	Guinea pig maximization test (GPMT) - Guinea pig: Sensitizing.
<b><u>Germ cell mutagenicity</u></b>	
<b>Genotoxicity - in vitro</b>	Gene mutation: Negative.
<b><u>Carcinogenicity</u></b>	
<b>Carcinogenicity</b>	No information available.



## PermaBond TA4605B

### Reproductive toxicity

**Reproductive toxicity - fertility** Two-generation study - NOAEL 50 mg/kg/day, Oral, Rat P Two-generation study - NOAEL 500 mg/kg/day, Oral, Rat F1

**Reproductive toxicity - development** Developmental toxicity: - LOAEL: 250 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** Not available.

## 12. Ecological information

**Toxicity** No data available.

### Bioaccumulative potential

**Partition coefficient** Not available.

## 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

**General** The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT).

### UN Number

**UN No. (International)** Not applicable.

**UN No. (DOT)** Not applicable.

### UN proper shipping name

**Proper shipping name (International)** Not applicable.

**Proper shipping name (DOT)** Not applicable.

### Transport hazard class(es)

**Transport Labels (International)** No transport warning sign required.

### DOT transport labels

No transport warning sign required.

### Packing group

**Packing group (International)** Not applicable.

**DOT packing group** Not applicable.

**PermaBond TA4605B****Environmental hazards****Environmentally Hazardous Substance**

No.

**Special precautions for user**

Not applicable.

**DOT reportable quantity** Not applicable.**DOT TIH Zone** Not applicable.**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.**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****Classification abbreviations and acronyms**Eye Irrit. = Eye irritation  
Skin Irrit. = Skin irritation  
Skin Sens. = Skin sensitisation  
STOT SE = Specific target organ toxicity-single exposure**Revision date**

4/13/2020

## Permabond TA4605B

**Revision**

1

**Hazard statements in full**

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.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.

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.