

# Permabond®

Engineering Adhesives

## SAFETY DATA SHEET

### Permabond MH199

#### 1. Identification

##### Product identifier

Product name Permabond MH199

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

Restriction on use 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



chemical-concepts.com  
**800.220.1966**  
410 Pike Road • Huntingdon Valley, PA 19006

##### 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 identification

##### Classification of the substance or mixture

Physical hazards Not Classified

Health hazards Eye Dam. 1 - H318 Skin Sens. 1 - H317

##### Label elements

##### Pictogram



Signal word Danger

Hazard statements H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.

## Permabond MH199

<b>Precautionary statements</b>	P260 Do not breathe vapour/ spray.
	P261 Avoid breathing vapour/ spray.
	P264 Wash contaminated skin thoroughly after handling.
	P272 Contaminated work clothing should 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.
	P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P310 Immediately call a POISON CENTER/ doctor.
	P314 Get medical advice/ attention if you feel unwell.
	P332+P313 If skin irritation occurs: Get medical advice/ attention.
	P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.
	P362+P364 Take off contaminated clothing and wash it before reuse.
	Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

**Contains** N,N-m-PHENYLENEDIMALEIMIDE

### Other hazards

This product contains N,N-(m-phenylene)dimalleimide which, in powder form, is classified as very toxic by inhalation. When present in solution, as in this case, such exposure can be excluded under normal working conditions and so this product is not labelled as such. However, if during use, there is a possibility that an aerosol mist may be formed then appropriate measures must be taken to exclude exposure by inhalation.

### 3. Composition/information on ingredients

#### Mixtures

<b>N,N-(m-PHENYLENE)DIMALEIMIDE</b>	<b>5-10%</b>
CAS number: 3006-93-7	
<b>Classification</b>	
Acute Tox. 4 - H302	
Acute Tox. 2 - H330	
Skin Sens. 1 - H317	
Not relevant.	
<b>CUMENE HYDROPEROXIDE</b>	<b>&lt;1%</b>
CAS number: 80-15-9	
<b>Classification</b>	
Org. Perox. E - H242	
Acute Tox. 4 - H302	
Acute Tox. 4 - H312	
Acute Tox. 3 - H331	
Skin Corr. 1B - H314	
Eye Dam. 1 - H318	
STOT SE 3 - H335	
STOT RE 2 - H373	
Not relevant.	

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

### 4. First-aid measures

## Permabond MH199

### 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 damage.

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

<b>Notes for the doctor</b>	No specific recommendations. Treat symptomatically.
-----------------------------	---

## 5. Fire-fighting measures

### Extinguishing media

<b>Suitable extinguishing media</b>	Water spray, foam, dry powder or carbon dioxide.
-------------------------------------	--

### Specific hazards arising from the hazardous product

<b>Hazardous combustion products</b>	Burning produces irritating, toxic and obnoxious fumes. 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.
--	---

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

### Environmental precautions

<b>Environmental precautions</b>	Avoid discharge into drains.
----------------------------------	------------------------------

### Methods and material for containment and cleaning up

<b>Methods for cleaning up</b>	Absorb spillage with sand or other inert absorbent. Collect and place in suitable waste disposal containers and seal securely.
--------------------------------	--

### Reference to other sections

<b>Reference to other sections</b>	For personal protection, see Section 8. For waste disposal, see section 13.
------------------------------------	---

## 7. Handling and storage

### Precautions for safe handling

## Permabond MH199

**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 tightly-closed, original container in a dry and cool place.

### Specific end use(s)

**Usage description** Adhesive. Sealant.

## 8. Exposure controls/Personal protection

### Exposure controls

**Appropriate engineering controls** Provide adequate general and local exhaust ventilation. 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

<b>Appearance</b>	Coloured paste.
<b>Colour</b>	Red.
<b>Odour</b>	Acrylic
<b>Odour threshold</b>	Not available.
<b>pH</b>	Not relevant.
<b>Melting point</b>	Not available.
<b>Initial boiling point and range</b>	Not applicable.
<b>Flash point</b>	>93°C (199.94°F)
<b>Evaporation rate</b>	Not available.
<b>Evaporation factor</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	Not available.
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Relative density</b>	1.1
<b>Bulk density</b>	Not available.

## Permabond MH199

<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>	≈225000 mPa s @ 23°C Thixotropic
<b>Oxidising 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 oxidizing agents. Strong reducing agents. Alkalis.
<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. Avoid direct contact with skin or eyes. Do not ingest or inhale.
<b><u>Skin corrosion/irritation</u></b>	
<b>Skin corrosion/irritation</b>	Based on available data the classification criteria are not met.
<b><u>Serious eye damage/irritation</u></b>	
<b>Serious eye damage/irritation</b>	Risk of serious damage to eyes.
<b><u>Respiratory sensitization</u></b>	
<b>Respiratory sensitization</b>	Based on available data the classification criteria are not met.
<b><u>Skin sensitization</u></b>	
<b>Skin sensitization</b>	May cause sensitization 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>Genotoxicity - in vivo</b>	Based on available data the classification criteria are not met.
<b><u>Carcinogenicity</u></b>	
<b>Carcinogenicity</b>	No component of this product present at levels great than or equal to 0.1% is identified as a known carcinogen.

## Permabond MH199

### Reproductive toxicity

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

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

### 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** In high concentrations, vapours may irritate throat and respiratory system and cause coughing.

**Ingestion** May cause irritation.

**Skin contact** May cause skin sensitization or allergic reactions in sensitive individuals.

**Eye contact** Risk of serious damage to eyes.

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

### Toxicological information on ingredients

#### N,N-(m-PHENYLENE)DIMALEIMIDE

##### Acute toxicity - oral

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 500.0

**Species** Rat

##### Acute toxicity - inhalation

**Acute toxicity inhalation (LC<sub>50</sub> dust/mist mg/l)** 0.055

**Species** Rat

##### Skin corrosion/irritation

**Human skin model test** Cell Viability 3.3 60 minutes Not irritating.

##### Serious eye damage/irritation

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

##### Skin sensitization

**Skin sensitization** Local lymph node assay (LLNA) - Mouse: Sensitising.

##### Germ cell mutagenicity

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

##### Carcinogenicity

**Carcinogenicity** No information available.

##### Reproductive toxicity

## Permabond MH199

**Reproductive toxicity - fertility** Screening - NOAEL 240 mg/kg/day, Oral, Rat P

### 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** No information available.

## CUMENE HYDROPEROXIDE

### Acute toxicity - oral

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 328.0

**Species** Rat

### Acute toxicity - dermal

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

**Species** Rat

### Acute toxicity - inhalation

**Acute toxicity inhalation (LC<sub>50</sub> dust/mist mg/l)** 1.37

**Species** Rat

### Skin corrosion/irritation

**Animal data** Highly irritating.

### Serious eye damage/irritation

**Serious eye damage/irritation** Irritating to eyes.

### Skin sensitization

**Skin sensitization** Not sensitising.

### Germ cell mutagenicity

**Genotoxicity - in vitro** Positive.

**Genotoxicity - in vivo** This substance has no evidence of mutagenic properties.

### Carcinogenicity

**Carcinogenicity** CMR: No

### Reproductive toxicity

**Reproductive toxicity - fertility** No specific test data are available.

**Reproductive toxicity - development** Developmental toxicity: - NOAEL: ≥100 mg/kg/day, Oral, Rat

### Specific target organ toxicity - single exposure

## Permabond MH199

**STOT - single exposure** No specific test data are available.

**Specific target organ toxicity - repeated exposure**

**STOT - repeated exposure** Toxic: danger of serious damage to health by prolonged exposure through inhalation.

**Aspiration hazard**

**Aspiration hazard** No specific test data are 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, TDG).

**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 label**

**Packing group**

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

**DOT packing group** Not applicable.

**Environmental hazards**

**Environmentally hazardous substance/marine pollutant**  
No.

**Special precautions for user**

Not applicable.



## Permabond MH199

**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

### 16. Other information

**Classification abbreviations and acronyms** Eye Dam. = Serious eye damage  
Skin Sens. = Skin sensitisation

**Revision date** 2018-10-01

**Revision** 3

**Supersedes date** 2018-01-31

**Hazard statements in full** H242 Heating may cause a fire.  
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.  
H318 Causes serious eye damage.  
H330 Fatal if inhaled.  
H331 Toxic if inhaled.  
H335 May cause respiratory irritation.  
H373 May cause damage to organs through prolonged or repeated exposure.



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.