

MSDS

Material Safety Data Sheet



PERMABOND[®] MM 115

READ MATERIAL SAFETY DATA SHEET BEFORE HANDLING PRODUCT!

Issue Date 02/18/05

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

PRODUCT NAME

Manufacturer

PERMABOND[®] MM 115

PERMABOND LLC

20 World's Fair Drive

Somerset, NJ 08873

EMERGENCY PHONES:

MEDICAL – 1-866-827-6282

TRANSPORT – (CHEMTREC) – 1-800-424-9300

MSDS REQUESTS: HELP LINE: 1-800-640-7599

SYNONYMS

None

2. COMPOSITION/INFORMATION ON INGREDIENTS

| CHEMICAL FAMILY | Component | CAS NUMBER | CONCENTRATION (%) |
|-----------------|--|------------|-------------------|
| | Tetraethylene glycol dimethacrylate, 85% | 109-17-1 | 30 - 60 |
| | POLYETHYLENE GLYCOL 400 DILAURATE | 9005-02-1 | 10 - 30 |
| | 2-Hydroxyethyl methacrylate | 868-77-9 | 10 - 30 |
| | Cumene hydroperoxide | 80-15-9 | 1 - 5 |
| | Saccharin | 81-07-2 | 1 - 5 |
| | Methacrylic acid | 79-41-4 | 0.1 - 1 |

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

EYE IRRITANT.
SKIN IRRITANT.
SKIN SENSITIZER.
Blue Liquid Mild, pleasant odor

EYE

Will cause eye irritation. May cause permanent damage if eye is not immediately irrigated.

SKIN CONTACT

Repeated and/or prolonged contact may cause irritation and skin sensitisation.

INHALATION

Irritating and/or toxic vapors may be released at elevated temperatures. Unlikely to be hazardous by inhalation because of the low vapor pressure of the material at ambient temperature.

INGESTION

May cause nausea, vomiting and diarrhea.

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4. FIRST-AID MEASURES

| | |
|--------------|--|
| EYE | Immediately irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 10 minutes. Obtain immediate medical attention. |
| SKIN CONTACT | Flush exposed areas thoroughly with soap and water until all chemical is removed. Remove contaminated clothing and launder before reuse. |
| INHALATION | Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing has stopped. Keep at rest. Call for proper medical attention. Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get medical attention. |
| INGESTION | DO NOT induce vomiting. If individual is conscious, give milk or water to dilute stomach contents. Keep warm and quiet. Get prompt medical attention. DO NOT attempt to give anything by mouth to an unconscious person. |

5. FIREFIGHTING MEASURES

| | |
|---------------------------------|---|
| AUTOIGNITION | None Established |
| FLASH POINT | 230 °F (Setaflash Closed Tester) |
| EXTINGUISHING MEDIA | CO ₂ ; Dry Chemical; Foam; Water Fog |
| SPECIAL FIREFIGHTING PROCEDURES | Fire fighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.; Cool exposed equipment with water spray. |
| FIRE & EXPLOSION HAZARDS | Polymerization may take place at elevated temperatures. |
| FLAMMABILITY HAZARD CLASS | 1 = Slight. |

6. ACCIDENTAL RELEASE MEASURES

| | |
|---------------------------|---|
| Spill and Leak Procedures | Wear protective clothing. Stop leak if you can do it without risk. For small spills take up with sand or other inert absorbent material and place in a container for later disposal. Note: in bulk quantities, product absorbed on inert material may polymerize generating significant heat and pressure. Vent disposal container to prevent buildup of pressure. Can carefully solidify with anaerobic surface conditioner and dispose of as solid waste. |
|---------------------------|---|

For safety and environmental precautions, please review entire Material Safety Data Sheet for necessary information.

7. HANDLING AND STORAGE

| | |
|---------------------|--|
| STORAGE TEMPERATURE | <= 27 °C 80 °F |
| HANDLING/STORAGE | Keep away from heat, sources of ignition and direct sunlight. Keep material refrigerated at the storage temperature referenced above. Do not freeze. |

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

| COMPONENT | EXPOSURE LIMITS |
|-----------------------------|--|
| 2-Hydroxyethyl methacrylate | Manufacturer: 3 ppm |
| Saccharin | ACGIH-TWA: 10 mg/m ³ ACGIH-TWA Respirable: 3 mg/m ³ OSHA-PEL: 15 mg/m ³ OSHA-PEL Respirable: 5 mg/m ³ |
| Methacrylic acid | ACGIH-TWA: 20 ppm (Skin) OSHA-PEL: 20 ppm |
| VENTILATION REQUIREMENTS | General. |
| EYE PROTECTION REQUIREMENTS | Safety glasses, goggles or face shield to protect against splashing. |
| GLOVE REQUIREMENTS | Employee must wear appropriate protective gloves to prevent contact with this substance. |
| CLOTHING REQUIREMENTS | No special clothing required for low volume activity. |
| WASH REQUIREMENTS | Wash before eating, drinking, or using toilet facilities. |
| RESPIRATOR REQUIREMENTS | None required under normal handling conditions. Use NIOSH approved respirator if vapor or mist levels are irritating. |

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|----------------------------------|
| PURE SUBSTANCE OR MIXTURE | Mixture |
| PHYSICAL FORM | Liquid |
| COLOR | Blue |
| ODOR | Mild, pleasant |
| ODOR THRESHOLD | None Established |
| MOLECULAR WEIGHT | Not applicable |
| PH AS IS | Not applicable |
| pH IN (1%) SOLUTION | Not applicable |
| OXIDIZING PROPERTIES | Not applicable |
| MELTING/FREEZING POINT | None Established |
| SOLUBILITY IN WATER | Insoluble |
| PARTITION COEFFICIENT (n-octanol/water) | None Established |
| VISCOSITY | 1000 cPs |
| SPECIFIC GRAVITY (WATER=1) | 1.07 |
| BULK DENSITY | 8.91 lb/gal |
| EVAPORATION RATE | None Established |
| VAPOR PRESSURE (mmHg) | 0.01 |
| VAPOR DENSITY (air = 1) | 1.01 |
| VOLATILES | < 1 % |
| VOLATILE ORGANIC COMPOUNDS | 0.09 lb/gal |
| AUTOIGNITION | None Established |
| FLASH POINT | 230 °F (Setaflash Closed Tester) |

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10. STABILITY AND REACTIVITY

| | |
|-------------------------------------|---|
| STABILITY | Stable |
| MATERIALS TO AVOID | Metals and their salts, Permabond anaerobic surface conditioners |
| REACTIVITY HAZARD CLASS | 2 = Reactive material. |
| HAZARDOUS DECOMPOSITION PRODUCTS | Thermal decomposition could produce carbon monoxide, carbon dioxide, and unidentified organic compounds. |
| HAZARDOUS POLYMERIZATION CONDITIONS | Note! PERMA-LOK(R) products are anaerobic and polymerize in the absence of air. Sunlight, excessive heat, and contamination by metals or anaerobic surface conditioner in large quantities, will also cause polymerization. |

11. TOXICOLOGICAL INFORMATION

ROUTE OF ENTRY Skin Contact; Eye Contact; Ingestion

CHRONIC (LONG TERM) EFFECTS OF EXPOSURE

TARGET ORGANS Skin; Eyes
CARCINOGEN No.

ORAL TOXICITY

| | | |
|--|--|---|
| Tetraethylene glycol dimethacrylate, 85% | | Low oral toxicity. |
| 2-Hydroxyethyl methacrylate | Oral LD50: Rat > 5 g/kg | Low oral toxicity. |
| Cumene hydroperoxide | Oral LD50: Rat 800 mg/kg Oral LD50: Rat 382 mg/kg | Corrosive to mouth, throat and stomach. |
| Saccharin | Oral LD50: Mouse 17 g/kg | No hazard in normal industrial use. |

DERMAL TOXICITY

| | | |
|--|------------------------------|---|
| Tetraethylene glycol dimethacrylate, 85% | | Irritating to the skin. Repeated and/or prolonged contact may cause skin sensitization. |
| 2-Hydroxyethyl methacrylate | Dermal LD50: Rabbit > 5 g/kg | |
| Cumene hydroperoxide | | Corrosive, causes permanent skin damage. |
| Saccharin | | Repeated and/or prolonged contact may cause skin sensitization. May cause photosensitization evidenced by repeated occurrence of dermatitic rash on exposure to sunlight. |

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11. TOXICOLOGICAL INFORMATION (CONTINUED)

INHALATION TOXICITY

Tetraethylene glycol
dimethacrylate, 85%

May cause irritation to eyes and respiratory system. Vapors and/or aerosols which may be formed at elevated temperatures may be irritating to eyes and respiratory tract.

2-Hydroxyethyl
methacrylate

Vapors and/or aerosols may cause irritation. Vapors and/or aerosols which may be formed at elevated temperatures may be irritating to eyes and respiratory tract. Avoid breathing vapors or mists.

Cumene hydroperoxide Inhalation LC50 (6.00hr):
Rat 700 ppm

Inhalation of dust or vapor may cause severe irritation to the nasal passages and/or the respiratory system. Exposure to high concentrations may produce lung damage. Avoid breathing vapors or mists.

Saccharin

Dust is irritant to the respiratory tract.

NOTES ON EYE IRRITATION

Tetraethylene glycol
dimethacrylate, 85%

Irritating, but does not injure eye tissue.

2-Hydroxyethyl
methacrylate

Severe/very severe irritant.

Cumene hydroperoxide

Extremely severe irritant/corrosive. May cause severe burns which could lead to permanent damage or total loss of vision.

Saccharin

Particulates may scratch eye surfaces and cause mechanical irritation.

12. ECOLOGICAL INFORMATION

POTENTIAL TO BIOACCUMULATE

Unknown.

AQUATIC TOXICITY

None Established

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS

Disposal should be in accordance with local, state or national legislation.

EMPTY CONTAINER WARNINGS

Empty containers may contain product residue; follow MSDS and label warnings even after they have been emptied.

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14. TRANSPORTATION INFORMATION

DOT CLASSIFICATION

PROPER SHIPPING NAME Not regulated
TECHNICAL NAME
HAZARD CLASS Not hazardous under D.O.T.
U.N. NUMBER
PACKING GROUP

ICAO/IATA CLASSIFICATION

PROPER SHIPPING NAME Not regulated
HAZARD CLASS Not hazardous under IATA
U.N. NUMBER
PACKING GROUP

IMO/IMDG CLASSIFICATION

PROPER SHIPPING NAME Not regulated
HAZARD CLASS Not hazardous
U.N. NUMBER
PACKING GROUP

TECHNICAL NAME

The information provided herein may not include the impact of additional regulatory requirements (eg, for materials meeting the definition of a hazardous waste under RCRA, hazardous substances under CERCLA, and/of marine pollutants under CWA or other similar federal, state or local laws) or any associated exceptions or exemptions under regulations applicable to the transport of this material.

15. REGULATORY INFORMATION

USA

TSCA All components are on the TSCA inventory.

| SARA/TITLE III | CAS NUMBER | CONCENTRATION (%) |
|---|------------|-------------------|
| Cumene hydroperoxide | 80-15-9 | 2.76 |
| Saccharin (Manufacturing, no supplier notification) | 81-07-2 | 2.00 |
| [1,2-Benzisothiazol-3(2H)-one,1,1-dioxide]. cumene | 98-82-8 | 0.24 |

CALIFORNIA PROPOSITION 65

WARNING: This product contains the following chemicals that are known to the State of California to cause cancer, birth defects or other reproductive harm:

| | CAS NUMBER |
|-----------|------------|
| SACCHARIN | 81-07-2 |

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16. OTHER INFORMATION

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This MSDS contains changes from the previous one in section 1; the medical emergency phone number was changed.

FOR INFORMATION CONTACT: Permabond LLC
HELP Line: 1-800-640-7599

ADDITIONAL INFORMATION: The information given and the recommendations made herein apply to our product(s) alone and are not combined with other product(s). Such are based on our research and on data from other reliable sources and are believed to be accurate. No guaranty of accuracy is made. It is the purchaser's responsibility before using any product to verify this data under their own operating conditions and to determine whether the product is suitable for their purposes.