

Material Safety Data Sheet

PERMABOND LH051

Revision Number: 1

Issue date: 12/06/13

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: PERMABOND LH051
Product Type: Anaerobic Adhesive/Sealant

Company: PERMABOND LLC
14 Robinson Street
Pottstown, PA 19464
USA

Telephone: 732-868-1372 or 800-640-7599
Website: www.permabond.com

Emergency Telephone:
Medical: Poison Control Center 866-827-6282
Transport: CHEMTREC 800-424-9300

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS:

| | | | |
|------------------------|-----------|-----------------------------|---------------|
| Physical state: | Paste | HEALTH: | *2 |
| Color: | White | FLAMMABILITY: | 1 |
| Odor: | Mild odor | PHYSICAL HAZARD: | 1 |
| | | Personal Protection: | See Section 8 |

WARNING: CAUSES EYE IRRITATION
CAUSES SKIN IRRITATION
MAY CAUSE ALLERGIC SKIN REACTION
MAY CAUSE RESPIRATORY TRACT IRRITATION
MAY BE HARMFUL IF SWALLOWED

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation: May cause respiratory tract irritation.
Skin contact: May cause allergic skin reaction. May cause skin irritation.
Eye contact: Contact with eyes will cause irritation.
Ingestion: May be harmful if swallowed. May cause gastrointestinal tract irritation if swallowed.
Existing conditions aggravated by exposure: Skin, eye and respiratory disorders.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

| Hazardous components | CAS NUMBER | CONCENTRATION (%) |
|---------------------------------------|-------------|-------------------|
| Polyglycol Dimethacrylate | 25852-47-5 | 60 – 100 |
| Silica, amorphous, fumed crystal free | 112945-52-5 | 1 – 5 |

4. FIRST AID MEASURES

| | |
|----------------------|---|
| Inhalation: | Move to fresh air. If symptoms develop and persist, get medical attention. |
| Skin contact: | Wash with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if symptoms occur. |
| Eye contact: | Flush with plenty of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time. Get medical attention. |
| Ingestion: | Do not induce vomiting. Keep individual calm and get medical attention. Never give anything by mouth to an unconscious person. |

5. FIRE-FIGHTING MEASURES

| | |
|--|--|
| Flash point: | 110°C (230°F) Sataflash closed cup |
| Auto ignition temperature: | Not available |
| Flammable/Explosive limits-lower %: | Not available |
| Flammable/Explosive limits-upper %: | Not available |
| Extinguishing media: | Foam, dry chemical or carbon dioxide. |
| Special fire fighting procedures: | Wear self-contained breathing apparatus and full protective clothing |
| Unusual fire or explosion hazards: | Not expected. Uncontrolled polymerization may occur at high temperatures |
| Hazardous combustion products: | Oxides of carbon. Oxides of nitrogen. Oxides of sulfur. Irritating organic vapors. |

6. ACCIDENTAL RELEASE MEASURES

Use personal protection equipment recommended in section 8, isolate the hazard area and deny entry to unnecessary unprotected individuals.

| | |
|-----------------------------------|---|
| Environmental precautions: | Prevent product from entering drains or open waters. |
| Clean-up methods: | Remove all ignition sources. Ensure adequate ventilation. Soak up with inert absorbent material. Store in a partly filled, closed container until disposal. |

7. HANDLING AND STORAGE

| | |
|-------------------------------|--|
| Handling: | Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Keep away from heat, spark and flame. Use only with adequate ventilation. |
| Storage: | Store away from heat, sparks, flames, or other sources of ignition. For safe storage, store between 5°C and 25°C (41°F and 77°F) in unopened container. |
| Incompatible products: | Refer to Section 10. |

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employees should complete an assessment of all workplaces to determine the need for and selection of proper exposure controls and protective equipment before each task is started.

| Hazardous components | ACGIH TLV | OSHA PEL | AIHA WEEL | OTHER |
|---------------------------------------|---|----------------------------------|-----------|-------|
| Polyglycol dimethacrylate | None 10 mg/m ³ TWA | None 29 MPPCF | None | None |
| Silica, amorphous, fumed crystal free | Inhalable dust. 3mg/m ³ TWA Respirable fraction. | TWA 0.8 mg/m ³ TWA | None | None |

| | |
|--------------------------------|---|
| Engineering controls: | No specific ventilation requirements noted, but forced ventilation may still be necessary if concentrations exceed established exposure limits. |
| Respiratory protection: | Use NIOSH approved respirator if there is potential to exceed exposure limit(s). |
| Skin protection: | Use impermeable gloves and protective clothing as necessary to prevent skin contact. Neoprene gloves. Butyl rubber gloves. Natural rubber gloves. |
| Eye/face protection: | Safety goggles or safety glasses with side shields. |

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|-----------------------------|----------------------------------|
| Physical state: | Paste |
| Color: | White |
| Odor: | Mild odor |
| Odor Threshold: | Not available |
| Vapor pressure: | Less than 5 mm Hg at 24°C (75°F) |
| pH: | Not applicable |
| Boiling point/range: | Greater than 149°C (300°F) |
| Melting point/range: | Not available |
| Specific gravity: | 1.1 |

Vapor density: Not available
 Flash Point: 110 °C (230°F)
 Flammable/Explosive Limits (lower): Not available
 Flammable/Explosive Limits (upper): Not Available
 Evaporation rate: Not available
 Solubility in water: Slight
 Partition coefficient (n-octanol/water): Not available
 VOC content: <2 %, 21 grams/liter

10. STABILITY AND REACTIVITY

Stability: Stable.
Hazardous polymerization: Will not occur.
Hazardous decomposition products: Oxides of carbon. Oxides of nitrogen. Oxides of sulfur. Irritating organic vapors.
Incompatibility: Strong oxidizing agents, reducing agents. Acids. Bases. Peroxides. Amines. Free radical polymerizing catalysts.
Conditions to avoid: Heat, flames, sparks and other sources of ignition. Keep away from incompatible materials

11. TOXICOLOGICAL INFORMATION

Carcinogen Status

| Hazardous components | NTP Carcinogen | IARC Carcinogen | OSHA Carcinogen |
|---------------------------------------|----------------|-----------------|-----------------|
| Polyglycol dimethacrylate | No | No | No |
| Silica, amorphous, fumed crystal free | No | No | No |

| Hazardous components | Health Effects/Target Organs |
|---------------------------------------|------------------------------|
| Polyglycol dimethacrylate | Allergen, irritant |
| Silica, amorphous, fumed crystal free | Nuisance dust |

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.
EPA hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

The shipment information in this section is for non-bulk packaging. Shipping classification might be different for bulk packaging.

U.S. Department of Transportation Ground (49 CFR):

| | |
|---------------------------|--------------|
| Proper shipping name: | Unrestricted |
| Hazard class or division: | None |
| Identification number: | None |
| Packing group: | None |

International Air Transportation (ICAO/IATA):

| | |
|---------------------------|--------------|
| Proper shipping name: | Unrestricted |
| Hazard class or division: | None |
| Identification number: | None |
| Packing group: | None |

Water Transportation (IMO/IMDG):

| | |
|---------------------------|--------------|
| Proper shipping name: | Unrestricted |
| Hazard class or division: | None |
| Identification number: | None |
| Packing group: | None |
| Marine pollutant: | None |

15. REGULATORY INFORMATION

United States Regulatory Information

| | |
|---|--|
| TSCA 8 (b) Inventory Status: | All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory. |
| TSCA 12 (b) Export Notification: | None above the reporting limits. |
| CERCLA/SARA Section 302 EHS: | None above the reporting limits. |
| CERCLA/SARA Section 311/312: | Immediate Health Hazard, Delayed Health Hazard |
| CERCLA/SARA 313: | This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). None. |
| California Proposition 65: | This product does not contain a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. |

Canada Regulatory Information

CEPA DSL/NDL Status: All components are listed on or are exempt from listing on the Domestic Substances List.

WHMIS hazard class: D.2. B

16. OTHER INFORMATION

This MSDS was reviewed and released with new date 12/06/13

This material safety data sheets contains changes from the previous one in section1: Transport Emergency Number was changed.

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.