

MSDS

Material Safety Data Sheet



PERMABOND® UV610

READ MATERIAL SAFETY DATA SHEET BEFORE HANDLING PRODUCT!

Issue Date 12/06/13

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

PRODUCT NAME

PERMABOND® UV610

MANUFACTURER

PERMABOND LLC

14 Robinson Street

Pottstown, PA 19464

EMERGENCY PHONES:

Medical: Poison Control Center 866-827-6282

Transport: CHEMTREC 800-424-9300

MSDS REQUESTS: HELP LINE: 732-868-1372 or 800-640-7599

SYNONYMS

None

2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL FAMILY

UV Curable Adhesive

COMPONENT

CAS NUMBER

CONCENTRATION (%)

2-Hydroxyethyl methacrylate

868-77-9

10-35

Methacrylic ester

142-90-5

1-8

Isobornyl acrylate

5888-33-5

10 - 25

Acrylic acid

79 -10 -7

1-4

Phosphine oxide derivate

75980-60-8

0.1-1

Maleic acid

110-16-7

0.1-1.5

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING:

EYE IRRITANT

SKIN IRRITANT

HARMFUL IF SWALLOWED

MAY CAUSE ALERGIC SKIN REACTION

MAY CAUSE RESPIRATORY TRACT IRRITATION

Clear Liquid, Acrylic odor

EYE

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

SKIN CONTACT

Irritating to skin. Repeated and/or prolonged contact may cause skin sensitization.

INHALATION

May cause irritation to the respiratory system.

INGESTION

May cause irritation to the gastrointestinal tract

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4. FIRST-AID MEASURES

| | |
|--------------|--|
| EYE | Immediately irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 15 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. Get medical attention if symptoms occur |
| INHALATION | Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. If symptoms develop or persist, get medical attention. |
| INGESTION | DO NOT induce vomiting. Keep warm and calm. Get prompt medical attention. |

5. FIREFIGHTING MEASURES

| | |
|---------------------------------|--|
| AUTOIGNITION | Not available |
| 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. Polymerization may take place at elevated temperatures. |
| FIRE & EXPLOSION | Thermal decomposition could produce carbon monoxide, carbon dioxide and unidentified organic compounds |
| HAZARDS/COMBUSTION PRODUCTS | |
| HAZARDOUS | |
| LOWER EXPLOSION LIMIT (%) | Not available |
| UPPER EXPLOSION LIMIT (%) | Not available |
| FLAMMABILITY HAZARD CLASS | 1 = Slight. |

6. ACCIDENTAL RELEASE MEASURES

| | |
|---------------------------|--|
| Spill and Leak Procedures | Ensure adequate ventilation and soak up inert absorbent material. Place in containers until disposal |
|---------------------------|--|

Prevent material from entering into drains.

7. HANDLING AND STORAGE

| | |
|-----------------------------------|---|
| HANDLING/STORAGE | Keep in a cool dry place. Store in a well ventilated area away from direct sun light. Keep away from sparks and open flames. Maximum storage temperature is 100°F |
| SENSITIVITY TO STATIC ELECTRICITY | No. |
| SENSITIVITY TO MECHANICAL IMPACT | No |

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

| COMPONENT | EXPOSURE LIMITS |
|-----------------------------|---|
| 2-Hydroxyethyl methacrylate | Manufacturer: 3 ppm |
| Acrylic Acid | ACGIH TLV: 2 ppm TWA (skin) OSHA PEL: 10 ppm TWA; 30 mg/m ³ |
| VENTILATION REQUIREMENTS | Local mechanical ventilation is recommended to keep employees exposures as low as possible. |
| 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. |
| CHANGE/REMOVAL OF CLOTHING | Remove contaminated clothing and launder before reuse. |
| 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 | Clear |
| ODOR | Acrylic odor |
| ODOR THRESHOLD | Not available |
| PH AS IS | Not applicable |
| pH IN (1%) SOLUTION | Not applicable |
| OXIDIZING PROPERTIES | Not applicable |
| BOILING POINT | >149°C |
| MELTING/FREEZING POINT | Not available |
| SOLUBILITY IN WATER | Slight |
| VISCOSITY | 900cPs |
| SPECIFIC GRAVITY (WATER=1) | 1.07 |
| BULK DENSITY | 8.91 lb/gal |
| EVAPORATION RATE | Not available |
| VAPOR PRESSURE (mmHg) | <10 |
| VAPOR DENSITY (air = 1) | Not available |
| VOLATILE ORGANIC COMPOUNDS | 0.09 lb/gal |
| AUTOIGNITION | Not available |
| FLASH POINT | 230 °F (Setaflash Closed Tester) |

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10. STABILITY AND REACTIVITY

| | |
|-------------------------------------|--|
| STABILITY | Stable |
| MATERIALS TO AVOID | Acids, bases, amines, organic peroxides, free radical polymerizing catalysts |
| REACTIVITY HAZARD CLASS | 2 = Reactive material. |
| HAZARDOUS DECOMPOSITION PRODUCTS | Thermal decomposition could produce carbon monoxide, carbon dioxide, and unidentified organic compounds. |
| HAZARDOUS POLYMERIZATION CONDITIONS | Excessive heat, light and absence of inhibitor may cause hazardous polymerization. |

11. TOXICOLOGICAL INFORMATION

ROUTE OF ENTRY Skin Contact; Eye Contact; Ingestion

CHRONIC (LONG TERM) EFFECTS OF EXPOSURE

EFFECTS OF CHRONIC EXPOSURE The toxicological effects of this material have not been fully evaluated. The use of good industrial hygiene is required. Avoid contact with skin and eyes. Do not ingest or inhale
Skin; Eyes

TARGET ORGANS

CARCINOGEN No.

| COMPONENT | ORAL TOXICITY | NOTES ON ORAL TOXICITY |
|-----------------------------|----------------------------|--|
| Methacrylate ester | | Low oral toxicity |
| 2-Hydroxyethyl methacrylate | Oral LD50: Rat > 5 g/kg | Low oral toxicity. |
| Isobornyl Acrylate | Oral LD50: Rat > 2.3 g/Kg | Ingestion may cause irritation of the gastrointestinal tract |
| Maleic Acid | Oral LD50: Rat > 708 mg/Kg | Harmful if swallowed |
| Acrylic Acid | Oral LD50: Rat 33.5 mg/Kg | Highly toxic |
| Phosphine oxide derivate | Oral LD50: Rat > 5000mg/Kg | Ingestion may cause irritation |

11. TOXICOLOGICAL INFORMATION – CONT'D

| COMPONENT | DERMAL TOXICITY | NOTES ON DERMAL TOXICITY |
|-----------------------------|------------------------------|---|
| Methacrylate ester | | Irritating to skin. May cause skin sensitization. |
| 2-Hydroxyethyl methacrylate | Dermal LD50: Rabbit > 5 g/kg | Repeated or prolonged skin contact may result in moderate irritation. Repeated and/or prolonged contact may cause skin sensitization. Can be rapidly absorbed through skin. |

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| | | |
|---|--|--|
| Isobornyl Acrylate | Dermal LD50: Rabbit > 5 g/kg | Slight/mild irritant. Repeated and/or prolonged contact may cause skin sensitization. Maybe absorbed through the skin. |
| Maleic acid | Dermal LD50: Rabbit > 1560 mg/kg | Causes skin irritation. Maybe absorbed through the skin. |
| Acrylic Acid | Dermal LD50: Rabbit > 280 mg/kg | Toxic. Corrosive. May cause skin irritation. Maybe absorbed through the skin |
| Phosphine oxide derivate | | May irritate skin |
| COMPONENT | INHALATION TOXICITY | NOTES ON INHALATION TOXICITY |
| Methacrylate Ester 2-Hydroxyethyl methacrylate | | Irritating to eyes and respiratory tract. 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. |
| Isobornyl Acrylate | | Unlikely to be hazardous by inhalation because of low vapor pressure at room temperature. Aerosols and mist maybe irritating to the eyes, nose and respiratory tract. |
| Acrylic Acid | Inhalation LC50 (4.00hr): Rat 1200ppm | Inhalation of dust may irritate the mucous membrane and upper respiratory tract |
| Maleic Acid | | Inhalation of dust or vapor may cause severe irritation to the nasal passages and/or the respiratory system. Avoid breathing vapors or mists |
| Phosphine oxide derivate | | Inhalation of dust may irritate the mucous membranes |
| COMPONENT | | NOTES ON EYE IRRITATION |
| Methacrylate ester 2-Hydroxyethyl methacrylate | | May cause eye irritation Severe irritant. |
| Isobornyl Acrylate | | May cause eye irritation |
| Maleic Acid | | Causes severe eye irritation |
| Acrylic Acid | | Severe irritant. Vapors may cause irritation |
| Phosphine oxide derivate | | May cause eye irritation |

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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. |

14. TRANSPORTATION INFORMATION

This section provided for general information only.
FOR NON-BULK SHIPMENTS.

FOR MORE COMPLETE TRANSPORTATION REGULATORY INFORMATION PLEASE REFER TO THE SHIPPING DOCUMENTS ACCOMPANYING THE SHIPMENT OF THIS PRODUCT.

DOT CLASSIFICATION

| | |
|----------------------|--------------|
| PROPER SHIPPING NAME | Unrestricted |
|----------------------|--------------|

The information provided herein may not include the impact of additional regulatory requirements (e.g., 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

| | |
|-------------|--|
| TSCA | All components are listed or exempt from listing on the Toxic Substances Control Act Inventory. |
| CERCLA/SARA | This product contains the following toxic chemical subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Acrylic acid (CAS# 79-10-7). |

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 section I: 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.