

# MSDS

## Material Safety Data Sheet



### PERMABOND® UV670

**READ MATERIAL SAFETY DATA SHEET BEFORE HANDLING PRODUCT!**

Issue Date 03/10/05

#### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

PRODUCT NAME

Manufacturer

PERMABOND® UV670

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	UV Curable Adhesive		
COMPONENT		CAS NUMBER	CONCENTRATION (%)
2-Hydroxyethyl methacrylate		868-77-9	10-30
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

#### 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

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INHALATION	symptoms occur 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 <sub>2</sub> ; 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	Polymerization may take place at elevated temperatures.
HAZARDS/COMBUSTION PRODUCTS	Thermal decomposition could produce carbon monoxide, carbon dioxide and unidentified organic compounds
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
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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 MEHCNICAL IMPACT	No

#### 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 <sup>3</sup>	1 ppm TWA (skin); 3 ppm STEL (skin)
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	

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CLOTHING REQUIREMENTS	with this substance.
CHANGE/REMOVAL OF CLOTHING	No special clothing required for low volume activity.
WASH REQUIREMENTS	Remove contaminated clothing and launder before reuse.
RESPIRATOR REQUIREMENTS	Wash before eating, drinking, or using toilet facilities.
	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	2500 cPs
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)

#### 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
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#### 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
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TARGET ORGANS

CARCINOGEN No.

### 11. TOXICOLOGICAL INFORMATION – CONT'D

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

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.
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		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.

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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

### **12. ECOLOGICAL INFORMATION**

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POTENTIAL TO BIOACCUMULATE	Unknown.
AQUATIC TOXICITY	None Established

### **13. DISPOSAL CONSIDERATIONS**

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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

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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

MSDS DATE	03/10/05
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.