

MSDS

Material Safety Data Sheet

Permabond
Engineering Adhesives

PERMA-LOK[®] HM 128

READ MATERIAL SAFETY DATA SHEET BEFORE HANDLING PRODUCT!

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

PRODUCT NAME

Manufacturer

PERMA-LOK[®] HM 128

PERMABOND LLC

20 World's Fair Drive

Somerset, NJ 08873

EMERGENCY PHONES:

HELP LINE - 1-800-640-7599

CHEMTREC - 1-800-424-9300

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

SYNONYMS

None

2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL FAMILY COMPONENT	Anaerobic Adhesive/Sealant	CAS NUMBER	CONCENTRATION (%)
Tetraethylene glycol dimethacrylate, 85%		109-17-1	30 - 60
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.

Red 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.

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 laundry 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.

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5. FIREFIGHTING MEASURES

AUTOIGNITION	None Established
FLASH POINT	230 °F (Sctafash 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 HAZARDS	1 = Slight.
FLAMMABILITY HAZARD CLASS	

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.
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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.

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.	

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9. PHYSICAL AND CHEMICAL PROPERTIES

PURE SUBSTANCE OR MIXTURE	Mixture
PHYSICAL FORM	Liquid
COLOR	Red
ODOR	Mild, pleasant
ODOR THRESHOLD	None Established
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	500 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)

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
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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.

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11. TOXICOLOGICAL INFORMATION – CONT'D

DERMAL TOXICITY

Tetraethylene glycol
dimethacrylate, 85%

2-Hydroxyethyl
methacrylate

Dermal LD50: Rabbit > 5
g/kg

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

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.

Cumene hydroperoxide
Saccharin

Corrosive, causes permanent skin damage.

Repeated and/or prolonged contact may cause skin sensitization. May cause photosensitization evidenced by repeated occurrence of dermatitic rash on exposure to sunlight.

INHALATION TOXICITY

Tetraethylene glycol
dimethacrylate, 85%

2-Hydroxyethyl
methacrylate

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.

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%

2-Hydroxyethyl
methacrylate

Cumene hydroperoxide

Irritating, but does not injure eye tissue.

Severe/very severe irritant.

Saccharin

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

Particulates may scratch eye surfaces and cause mechanical irritation.

12. ECOLOGICAL INFORMATION

POTENTIAL TO BIOACCUMULATE

Unknown.

AQUATIC TOXICITY

None Established

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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

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
U.N. NUMBER
PACKING GROUP

IMO/IMDG CLASSIFICATION

PROPER SHIPPING NAME Not Regulated
HAZARD CLASS
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	2.85
Saccharin (Manufacturing, no supplier notification) [1,2-Benzisothiazol-3(2H)-one,1,1-dioxide].	81-07-2	2.1
cumene	98-82-8	0.25

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:

SACCHARIN	CAS NUMBER
	81-07-2

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16. OTHER INFORMATION

MSDS DATE

January 1, 2004

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.