

Permabond®

Engineering Adhesives



SAFETY DATA SHEET

Permabond HL138

1. Identification

Product identifier

Product name Permabond HL138

Recommended use of the chemical and restrictions on use

Application Adhesive. Sealant.

Details of the supplier of the safety data sheet

Supplier Permabond LLC
 14 Robinson Street
 Pottstown, PA 19464
 USA
 Telephone: 732-868-1372 or 800-640-7599
 Website: www.permabond.com

Emergency telephone number

Emergency telephone Medical: Poison Control Center 866-827-6282 (toll free) or 303-389-1109 Transport: CHEMTREC 800-424-9300

2. Hazard(s) identification

Classification of the substance or mixture

OSHA Regulatory Status Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Physical hazards Not Classified

Health hazards Skin Irrit. 2 - H315 Eye Irrit. 2A - H319 Skin Sens. 1 - H317

Label elements

Pictogram



Signal word Warning

Hazard statements H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H319 Causes serious eye irritation.

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Precautionary statements	<p>P260 Do not breathe vapor/ spray.</p> <p>P261 Avoid breathing vapor/ spray.</p> <p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P272 Contaminated work clothing must not be allowed out of the workplace.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P302+P352 If on skin: Wash with plenty of water.</p> <p>P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P314 Get medical advice/ attention if you feel unwell.</p> <p>P332+P313 If skin irritation occurs: Get medical advice/ attention.</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.</p> <p>P337+P313 If eye irritation persists: Get medical advice/ attention.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.</p>
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Contains 2-HYDROXYETHYL METHACRYLATE, ETHYLENE DIMETHACRYLATE

3. Composition/information on ingredients

Mixtures

2-HYDROXYETHYL METHACRYLATE	10-30%
CAS number: 868-77-9	
Classification	
Skin Irrit. 2 - H315	
Eye Irrit. 2A - H319	
Skin Sens. 1 - H317	
CUMENE HYDROPEROXIDE	<1%
CAS number: 80-15-9	
Classification	
Org. Perox. E - H242	
Acute Tox. 4 - H302	
Acute Tox. 4 - H312	
Acute Tox. 3 - H331	
Skin Corr. 1B - H314	
Eye Dam. 1 - H318	
STOT SE 3 - H335	
STOT RE 2 - H373	
Not relevant.	
ETHYLENE DIMETHACRYLATE	<1%
CAS number: 97-90-5	
Classification	
Skin Sens. 1 - H317	
STOT SE 3 - H335	

The full text for all hazard statements is displayed in Section 16.

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Composition comments Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. First-aid measures

Description of first aid measures

Inhalation	Move the exposed person to fresh air. Get medical attention if any discomfort continues.
Ingestion	Rinse mouth thoroughly with water. Give plenty of water to drink. DO NOT induce vomiting. Get medical attention immediately.
Skin Contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention promptly if symptoms occur after washing.
Eye contact	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

Most important symptoms and effects, both acute and delayed

Inhalation	May cause respiratory system irritation.
Ingestion	May cause irritation.
Skin contact	Skin irritation.
Eye contact	Irritating to eyes.

Indication of immediate medical attention and special treatment needed

Notes for the doctor No specific recommendations. Treat symptomatically.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	Foam, carbon dioxide or dry powder.
Unsuitable extinguishing media	Water.

Special hazards arising from the substance or mixture

Hazardous combustion products	Burning produces irritating, toxic and obnoxious fumes. Carbon monoxide, carbon dioxide, and unknown hydrocarbons.
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Advice for firefighters

Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.
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6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear protective clothing as described in Section 8 of this safety data sheet.
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Environmental precautions

Environmental precautions	Avoid discharge into drains.
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Methods and material for containment and cleaning up

Methods for cleaning up	Absorb spillage with sand or other inert absorbent. Collect and place in suitable waste disposal containers and seal securely.
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Reference to other sections	For personal protection, see Section 8. For waste disposal, see section 13.
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7. Handling and storage

Precautions for safe handling

Usage precautions Avoid contact with skin and eyes. Avoid inhalation of vapors and spray/mists. Wash hands thoroughly after handling. Keep container tightly sealed when not in use.

Conditions for safe storage, including any incompatibilities

Storage precautions Store in closed original container at temperatures between 44°F and 77°F. Never return unused material to storage receptacle.

Specific end uses(s)

Usage description Adhesive. Sealant.

8. Exposure Controls/personal protection

Ingredient comments WEL = Workplace Exposure Limits

Exposure controls

Appropriate engineering controls No specific ventilation requirements. Use positive down draft exhaust ventilation if general ventilation is insufficient to maintain vapor concentrations below established exposure limits.

Eye/face protection Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for slashing or spraying exists.

Hand protection Nitrile rubber or Viton™ gloves are recommended. Cotton or other absorbent gloves should not be worn.

Other skin and body protection Employee must wear appropriate protective clothing and equipment to prevent any possibility of skin contact with this substance.

Respiratory protection Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Liquid.
Color	Green.
Odor	Acrylic
Odor threshold	Not available.
pH	Not relevant.
Melting point	Not available.
Initial boiling point and range	Not applicable.
Flash point	>100°C
Evaporation rate	Not available.
Evaporation factor	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	Not available.
Vapor pressure	Not available.
Vapor density	Not available.

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Relative density	1.1
Bulk density	Not available.
Solubility(ies)	Slightly soluble in water. Miscible with the following materials: acetone
Partition coefficient	Not available.
Auto-ignition temperature	Not available.
Decomposition Temperature	Not available.
Viscosity	≈300 mPa s @ 23°C
Oxidizing properties	Not available.
Other information	Not relevant.
Volatile organic compound	<2 %, 20 grams/liter (Estimated)

10. Stability and reactivity

Reactivity	Not available
Stability	Stable at normal ambient temperatures.
Possibility of hazardous reactions	There are no known reactivity hazards associated with this product. Polymerization may occur at elevated temperature or in the presence of incompatible materials
Conditions to avoid	Avoid the absence of air, and metal contamination.
Materials to avoid	Metals and their salts. Free radical initiators. Strong oxidizing agents. Strong reducing agents. Alkalis.
Hazardous decomposition products	Thermal decomposition could produce carbon monoxide, carbon dioxide, and unidentified organic compounds.

11. Toxicological information

Information on toxicological effects

Toxicological effects	The toxicological properties of this product have not been fully evaluated. Use of good industrial hygiene practices is required. Avoid direct contact with skin or eyes. Do not ingest or inhale.
<u>Skin corrosion/irritation</u>	
Skin corrosion/irritation	Irritating to skin.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Causes serious eye irritation.
<u>Respiratory sensitization</u>	
Respiratory sensitization	Based on available data the classification criteria are not met.
<u>Skin sensitization</u>	
Skin sensitization	May cause sensitisation by skin contact.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Based on available data the classification criteria are not met.
<u>Carcinogenicity</u>	

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Carcinogenicity No component of this product present at levels great than or equal to 0.1% is identified as a known carcinogen.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Not anticipated to present an aspiration hazard, based on chemical structure.

Inhalation Vapors may irritate throat/respiratory system.

Ingestion May cause irritation.

Skin Contact Irritating.

Eye contact Irritating.

Route of exposure Skin and/or eye contact

Toxicological information on ingredients.

2-HYDROXYETHYL METHACRYLATE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 5,000.0

Species Rat

ATE oral (mg/kg) 5,000.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 5,000.0

Species Rabbit

ATE dermal (mg/kg) 5,000.0

Acute toxicity - inhalation

Notes (inhalation LC₅₀) No information available.

Skin corrosion/irritation

Animal data Erythema/eschar score: Very slight erythema - barely perceptible (1). Not irritating.

Serious eye damage/irritation

Serious eye damage/irritation Moderately irritating.

Respiratory sensitization

Respiratory sensitization No information available.

Skin sensitization

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Skin sensitization	Guinea pig maximization test (GPMT) - Guinea pig: Sensitizing.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Conclusive data but not sufficient for classification.
Genotoxicity - in vivo	Chromosome aberration: Negative.
<u>Carcinogenicity</u>	
Carcinogenicity	No specific test data are available.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Screening - NOAEL \geq 1000 mg/kg/day, Oral, Rat F1
Reproductive toxicity - development	Developmental toxicity: - NOAEL: \geq 1000 mg/kg/day, Oral, Rat
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	No specific test data are available.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	No specific test data are available.
<u>Aspiration hazard</u>	
Aspiration hazard	Not applicable.

CUMENE HYDROPEROXIDE

<u>Acute toxicity - oral</u>	
Acute toxicity oral (LD₅₀ mg/kg)	328.0
Species	Rat
ATE oral (mg/kg)	328.0
<u>Acute toxicity - dermal</u>	
Acute toxicity dermal (LD₅₀ mg/kg)	1,200.0
Species	Rat
ATE dermal (mg/kg)	1,200.0
<u>Acute toxicity - inhalation</u>	
Acute toxicity inhalation (LC₅₀ dust/mist mg/l)	1.37
Species	Rat
ATE inhalation (dusts/mists mg/l)	0.5
<u>Skin corrosion/irritation</u>	
Animal data	Highly irritating.
<u>Serious eye damage/irritation</u>	

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Serious eye damage/irritation	Irritating to eyes.
<u>Skin sensitization</u>	
Skin sensitization	Not sensitizing.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Positive.
Genotoxicity - in vivo	This substance has no evidence of mutagenic properties.
<u>Carcinogenicity</u>	
Carcinogenicity	CMR: No
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	No specific test data are available.
Reproductive toxicity - development	Developmental toxicity: - NOAEL: ≥ 100 mg/kg/day, Oral, Rat
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	No specific test data are available.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Toxic: danger of serious damage to health by prolonged exposure through inhalation.
<u>Aspiration hazard</u>	
Aspiration hazard	No specific test data are available.
<u>ETHYLENE DIMETHACRYLATE</u>	
<u>Acute toxicity - oral</u>	
Acute toxicity oral (LD₅₀ mg/kg)	8,300.0
Species	Rat
ATE oral (mg/kg)	8,300.0
<u>Acute toxicity - dermal</u>	
Acute toxicity dermal (LD₅₀ mg/kg)	2,000.1
Species	Rat
ATE dermal (mg/kg)	2,000.1
<u>Acute toxicity - inhalation</u>	
Notes (inhalation LC₅₀)	No information available.
<u>Skin corrosion/irritation</u>	
Animal data	Method: OECD 405, Rabbit Not irritating.
<u>Serious eye damage/irritation</u>	

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Serious eye damage/irritation	Not irritating.
<u>Skin sensitization</u>	
Skin sensitization	Local Lymph Node Assay (LLNA) - Mouse: Sensitizing.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Chromosome aberration: Positive.
Genotoxicity - in vivo	Chromosome aberration: Negative.
<u>Carcinogenicity</u>	
Carcinogenicity	NOAEC \geq 2.05 mg/l, Inhalation, Rat
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Screening - NOAEL \geq 1000 mg/kg/day, Oral, Rat F1
Reproductive toxicity - development	Developmental toxicity: - NOAEL: 500 mg/kg/day, Oral, Rat
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	No information available.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	No information available.
<u>Aspiration hazard</u>	
Aspiration hazard	Not available.

12. Ecological Information

Toxicity No data available.

Bioaccumulative potential

Partition coefficient Not available.

13. Disposal considerations

Waste treatment methods

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

Disposal methods Dispose of according to Federal, State and local governmental regulations.

14. Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT).

UN Number

Not applicable.

UN No. (DOT) Not applicable.

UN proper shipping name

Not applicable.

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Proper shipping name (DOT) Not applicable.

Transport hazard class(es)

No transport warning sign required.

DOT transport labels

No transport warning sign required.

Packing group

Not applicable.

DOT packing group Not applicable.

Environmental hazards

Environmentally Hazardous Substance

No.

Special precautions for user

Not applicable.

DOT reportable quantity Not applicable.

DOT TIH Zone Not applicable.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities

None above reporting levels

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

None above reporting limits

1,2-BENZISOTHIAZOL-3(2H)-ONE 1,1-DIOXIDE

CUMENE HYDROPEROXIDE

SARA Extremely Hazardous Substances EPCRA Reportable Quantities

None above reporting limits

SARA 313 Emission Reporting

1,2-BENZISOTHIAZOL-3(2H)-ONE 1,1-DIOXIDE

CUMENE HYDROPEROXIDE

SARA (311/312) Hazard Categories

Acute
Chronic

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins

This product contains a chemical known to the state of California to cause cancer.

Inventories

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Canada - DSL/NDSL

All the ingredients are listed or exempt.

US - TSCA

All the ingredients are listed or exempt.

US - TSCA 12(b) Export Notification

None above reporting limits

16. Other information

Classification abbreviations and acronyms	<p>Eye Irrit. = Eye irritation Skin Irrit. = Skin irritation Skin Sens. = Skin sensitisation STOT RE = Specific target organ toxicity-repeated exposure</p>
Revision date	1/29/2018
Revision	5
Supersedes date	5/5/2015
Hazard statements in full	<p>H242 Heating may cause a fire. H302 Harmful if swallowed. H312 Harmful in contact with skin. H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H319 Causes serious eye irritation. H331 Toxic if inhaled. H335 May cause respiratory irritation. H373 May cause damage to organs through prolonged or repeated exposure.</p>

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.