SAFETY DATA SHEET
Permabond HH040 Pure

1. Identification

Product identifier

Product name Permabond HH040 Pure

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

Environmental hazards Not Classified

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

P261 Avoid breathing vapor/ spray.
P264 Wash contaminated skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302+P352a IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337+P313 If eye irritation persists: Get medical advice/ attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Contains 2-HYDROXYETHYL METHACRYLATE

Other hazards

None under normal conditions.

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
Aquatic Chronic 2 - H411

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

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. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. If breathing stops, provide artificial respiration. Get medical attention.

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Ingestion Do not induce vomiting unless under the direction of medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

Skin Contact Wash skin thoroughly with soap and water. If symptoms develop, obtain medical attention

Eye contact Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing.

Most important symptoms and effects, both acute and delayed

Inhalation May cause respiratory irritation.

Ingestion May cause irritation.

Skin contact Causes skin irritation. May cause an allergic skin reaction.

Eye contact Causes eye irritation.

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 Water spray, foam, dry powder or carbon dioxide.

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.

Advice for firefighters

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

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.

Environmental precautions

Environmental precautions Avoid discharge into drains.

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.

Reference to other sections For personal protection, see Section 8. For waste disposal, see section 13.

7. Handling and storage

Precautions for safe handling

Usage precautions Avoid contact with skin, eyes and clothing. Use only in well-ventilated areas. Keep container tightly sealed when not in use. Wash hands thoroughly after handling.

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.

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Specific end uses(s)

Usage description	Adhesive. Sealant.

8. Exposure Controls/personal protection

Exposure controls

Appropriate engineering controls	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
Eye/face protection	Use safety goggles and face shield in case of splash risk.
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.
Hygiene measures	Wash at the end of each work shift and before eating, smoking and using the toilet.
Respiratory protection	Respiratory protection may be required if excessive airborne contamination occurs. 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	Colorless.
Odor	Acrylic
Odor threshold	Not available.
pH	Not relevant.
Melting point	Not available.
Initial boiling point and range	Not applicable.
Flash point	>93°C (199.94°F)
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.
Relative density	1.0
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.

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Viscosity	≈5000 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 and when used as recommended.
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 alkalis. 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.

Skin corrosion/irritation

Skin corrosion/irritation	Irritating to skin.

Serious eye damage/irritation

Serious eye damage/irritation	Causes eye irritation.

Skin sensitization

Skin sensitization	May cause sensitisation by skin contact.

Germ cell mutagenicity

Genotoxicity - in vitro	Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity	Does not contain any substances known to be carcinogenic.

Reproductive toxicity

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

Specific target organ toxicity - single exposure

STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

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

Inhalation	In high concentrations, vapors may irritate throat and respiratory system and cause coughing.

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Ingestion	May cause irritation.
Skin Contact	Causes skin irritation. May cause allergic skin reaction.
Eye contact	Causes eye irritation.
Acute and chronic health hazards	May cause skin sensitization or allergic reactions in sensitive individuals. Irritating to eyes. Irritating to skin.
Route of exposure	Ingestion Skin and/or eye contact Inhalation

Toxicological information on ingredients.

2-HYDROXYETHYL METHACRYLATE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	5,000.0
Species	Rat
ATE oral (mg/kg)	5,000.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	5,000.0
Species	Rabbit
ATE dermal (mg/kg)	5,000.0

Acute toxicity - inhalation

Notes (inhalation LC_{50})	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

Skin sensitization	Guinea pig maximization test (GPMT) - Guinea pig: Sensitizing.

Germ cell mutagenicity

Genotoxicity - in vitro	Conclusive data but not sufficient for classification.
Genotoxicity - in vivo	Chromosome aberration: Negative.

Carcinogenicity

Carcinogenicity	No specific test data are available.

Reproductive toxicity

Reproductive toxicity - fertility	Screening - NOAEL >=1000 mg/kg/day, Oral, Rat F1

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Reproductive toxicity - development	Developmental toxicity: - NOAEL: >=1000 mg/kg/day, Oral, Rat

Specific target organ toxicity - single exposure

STOT - single exposure	No specific test data are available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	No specific test data are available.

Aspiration hazard

Aspiration hazard	Not applicable.

CUMENE HYDROPEROXIDE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	328.0
Species	Rat
ATE oral (mg/kg)	328.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	1,200.0
Species	Rat
ATE dermal (mg/kg)	1,200.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} dust/mist mg/l)	1.37
Species	Rat
ATE inhalation (dusts/mists mg/l)	0.5

Skin corrosion/irritation

Animal data	Highly irritating.

Serious eye damage/irritation

Serious eye damage/irritation	Irritating to eyes.

Skin sensitization

Skin sensitization	Not sensitizing.

Germ cell mutagenicity

Genotoxicity - in vitro	Positive.
Genotoxicity - in vivo	This substance has no evidence of mutagenic properties.

Carcinogenicity

Carcinogenicity	CMR: No

Reproductive toxicity

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Reproductive toxicity - fertility No specific test data are available.

Reproductive toxicity - development Developmental toxicity: - NOAEL: ≥100 mg/kg/day, Oral, Rat

Specific target organ toxicity - single exposure

STOT - single exposure No specific test data are available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Toxic: danger of serious damage to health by prolonged exposure through inhalation.

Aspiration hazard

Aspiration hazard No specific test data are available.

12. Ecological Information

Toxicity No data available.

Ecological information on ingredients.

2-HYDROXYETHYL METHACRYLATE

Acute aquatic toxicity

Acute toxicity - fish LC_{50}, 96 hours: > 100 mg/l, Oryzias latipes (Red killifish)

Acute toxicity - aquatic invertebrates EC_{50}, 48 hours: 380 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC_{50}, 72 hours: 836 mg/l, Selenastrum capricornutum
NOEC, 72 hours: 400 mg/l, Selenastrum capricornutum

Acute toxicity - microorganisms EC_{50}, 16 hours: > 3000 mg/l, Pseudomonas fluorescens

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates NOEC, 21 days: 24.1 mg/l, Daphnia magna

CUMENE HYDROPEROXIDE

Acute aquatic toxicity

Acute toxicity - fish LC_{50}, 96 hour: 3.9 mg/l, Oncorhynchus mykiss (Rainbow trout)

Persistence and degradability

Ecological information on ingredients.

2-HYDROXYETHYL METHACRYLATE

Biodegradation Water - Degradation 84%: 28 days

CUMENE HYDROPEROXIDE

Biodegradation The substance is readily biodegradable.

Bioaccumulative potential

Partition coefficient Not available.

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Ecological information on ingredients.

2-HYDROXYETHYL METHACRYLATE

Bio-Accumulative Potential BCF: 1.34 - 1.54,

Mobility in soil

Ecological information on ingredients.

2-HYDROXYETHYL METHACRYLATE

Adsorption/desorption coefficient Water - Koc: 42.7 @ 20°C

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.

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.

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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 de minimis.

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

The following ingredients are listed or exempt:

CUMENE HYDROPEROXIDE

Final CERCLA RQ: 10(4.54) pounds (Kilograms)

SARA 313 Emission Reporting

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)

CUMENE HYDROPEROXIDE

1.0 %

SARA (311/312) Hazard Categories

Immediate Health, Delayed Health

OSHA Highly Hazardous Chemicals

CUMENE HYDROPEROXIDE

Threshold Quantity: 5000 lbs

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins

This product contains a chemical known to the state of California to cause cancer.
This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

California Air Toxics "Hot Spots" (A-I)

CUMENE HYDROPEROXIDE

Present.

CUMENE

Present.

ACETOPHENONE

Present.

California Directors List of Hazardous Substances

CUMENE

Present.

Massachusetts "Right To Know" List

CUMENE HYDROPEROXIDE

Present.

CUMENE

Present.

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ACETOPHENONE
Present.

Rhode Island "Right To Know" List

CUMENE HYDROPEROXIDE
Present.

CUMENE
Present.

ACETOPHENONE
Present.

Minnesota "Right To Know" List

CUMENE HYDROPEROXIDE
Not listed.

CUMENE
Present.

ACETOPHENONE
Present.

New Jersey "Right To Know" List

CUMENE HYDROPEROXIDE
Present.

CUMENE
Present.

ACETOPHENONE
Present.

Pennsylvania "Right To Know" List

CUMENE HYDROPEROXIDE
Present.

CUMENE
Present.

ACETOPHENONE
Present.

Inventories

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 de minimis.

16. Other information

Classification abbreviations and acronyms	Eye Irrit. = Eye irritation Skin Irrit. = Skin irritation Skin Sens. = Skin sensitisation

Permabond HH040 Pure

Revision date	1/29/2018
Revision	3
Supersedes date	5/5/2015
Hazard statements in full	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. H411 Toxic to aquatic life with long lasting effects.