SAFETY DATA SHEET
Permabond MM115 Pure

1. Identification

Product identifier

Product name Permabond MM115 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

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.
P501 Dispose of contents/container in accordance with existing Community, National and local 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
Not relevant.

METHACRYLIC ACID **<1%**

CAS number: 79-41-4

Classification
Acute Tox. 4 - H302
Acute Tox. 3 - H311
Acute Tox. 4 - H332
Skin Corr. 1A - H314
Eye Dam. 1 - H318
STOT SE 3 - H335

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N,N-DIMETHYL-PARA-TOLUIDINE	<1%
CAS number: 99-97-8	

Classification
Acute Tox. 3 - H301
Acute Tox. 3 - H311
Acute Tox. 3 - H331
STOT RE 2 - H373
Not relevant.

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.

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

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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.

Specific end uses(s)

Usage description Adhesive. Sealant.

8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits

METHACRYLIC ACID

Long-term exposure limit (8-hour TWA): ACGIH 20 ppm 70 mg/m³
ACGIH = American Conference of Governmental Industrial Hygienists.

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.

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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.
Viscosity	≈1500 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

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

Carcinogenicity

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.
Reproductive toxicity - development	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.

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

Toxicological information on ingredients.

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

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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

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.

METHACRYLIC ACID

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	1,320.0
Species	Rat

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ATE oral (mg/kg)	500.0
Acute toxicity - dermal	
Acute toxicity dermal (LD_{50} mg/kg)	1,000.0
Species	Rabbit
ATE dermal (mg/kg)	1,000.0
Acute toxicity - inhalation	
Acute toxicity inhalation (LC_{50} vapours mg/l)	7.1
Species	Rat
ATE inhalation (vapours mg/l)	11.0
Skin corrosion/irritation	
Animal data	Dose: Method: OECD 404, 3 minutes, Rabbit Corrosive.
Serious eye damage/irritation	
Serious eye damage/irritation	Method: OECD 405, Rabbit Corrosive.
Respiratory sensitization	
Respiratory sensitization	Guinea pig: Not sensitizing. Method: various test systems
Skin sensitization	
Skin sensitization	Guinea pig maximization test (GPMT) - Guinea pig: Not sensitizing.
Germ cell mutagenicity	
Genotoxicity - in vitro	Based on available data the classification criteria are not met.
Carcinogenicity	
Carcinogenicity	CMR: no
Reproductive toxicity	
Reproductive toxicity - fertility	No evidence of reproductive toxicity in animal studies.
Reproductive toxicity - development	Non-teratogenic, not embryotoxic
Specific target organ toxicity - single exposure	
Target organs	Respiratory tract Irritating.
Specific target organ toxicity - repeated exposure	
Target organs	No specific target organs known.
Aspiration hazard	
Aspiration hazard	Based on available data the classification criteria are not met.

N,N-DIMETHYL-PARA-TOLUIDINE

Acute toxicity - oral

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Acute toxicity oral (LD_{50} mg/kg)	139.0
Species	Rat
ATE oral (mg/kg)	139.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	2,000.0
Species	Rabbit
ATE dermal (mg/kg)	300.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} vapours mg/l)	3.19
ATE inhalation (vapours mg/l)	3.19

Skin corrosion/irritation

Animal data	Method: OECD 404, Rabbit Moderately irritating.

Serious eye damage/irritation

Serious eye damage/irritation	Method: OECD 405, Rabbit Moderately irritating.

Skin sensitization

Skin sensitization	Not sensitizing.

Germ cell mutagenicity

Genotoxicity - in vitro	Ames test This substance has no evidence of mutagenic properties.

Carcinogenicity

Carcinogenicity	No information available.

Reproductive toxicity

Reproductive toxicity - fertility	Two-generation study - LOEL 72.977 mg/kg/day, , Rat F2

Specific target organ toxicity - single exposure

STOT - single exposure	No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

Aspiration hazard	Not available.

12. Ecological Information

Toxicity No data available.

Ecological information on ingredients.

2-HYDROXYETHYL METHACRYLATE

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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)

METHACRYLIC ACID

Acute aquatic toxicity	
Acute toxicity - fish	LC_{50}, 96 hours: 85 mg/l, Oncorhynchus mykiss (Rainbow trout)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: > 130 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, 72 hours: 45 mg/l, Selenastrum capricornutum LOEC, 72 hours: 45 mg/l, Selenastrum capricornutum
Acute toxicity - microorganisms	EC_{50}, 17 hours: 270 mg/l, Pseudomonas putida
Chronic aquatic toxicity	
Chronic toxicity - fish early life stage	NOEC, 35 days: 10 mg/l, Danio rerio (Zebrafish)
Chronic toxicity - aquatic invertebrates	NOEC, 21 days: 53 mg/l, Daphnia magna

N,N-DIMETHYL-PARA-TOLUIDINE

Acute aquatic toxicity	
Acute toxicity - fish	LC_{50}, 96 hours: 46 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	LC_{50}, 48 hours: 15.259 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, 72 hours: 24.37 mg/l, Pseudokirchneriella subcapitata
Acute toxicity - microorganisms	EC_{50}, 24 hours: 161.206 mg/l, Tetrahymena pyriformis
Chronic aquatic toxicity	

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Chronic toxicity - fish early life stage LC_{50}, 14 days: 24.892 mg/l, Fish

Persistence and degradability

Ecological information on ingredients.

2-HYDROXYETHYL METHACRYLATE

Biodegradation Water - Degradation 84%: 28 days

CUMENE HYDROPEROXIDE

Biodegradation The substance is readily biodegradable.

METHACRYLIC ACID

Biodegradation Water - Degradation 86%: 28 days

Bioaccumulative potential

Partition coefficient Not available.

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)

Permabond MM115 Pure

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 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

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.

Permabond MM115 Pure

ACETOPHENONE
Present.

California Directors List of Hazardous Substances

CUMENE
Present.

METHACRYLIC ACID
Present.

Massachusetts "Right To Know" List

CUMENE HYDROPEROXIDE
Present.

CUMENE
Present.

ACETOPHENONE
Present.

METHACRYLIC ACID
Present.

Rhode Island "Right To Know" List

CUMENE HYDROPEROXIDE
Present.

CUMENE
Present.

ACETOPHENONE
Present.

METHACRYLIC ACID
Present.

Minnesota "Right To Know" List

CUMENE
Present.

ACETOPHENONE
Present.

METHACRYLIC ACID
Present.

New Jersey "Right To Know" List

CUMENE HYDROPEROXIDE
Present.

CUMENE
Present.

ACETOPHENONE
Present.

METHACRYLIC ACID
Present.

Permabond MM115 Pure

Pennsylvania "Right To Know" List

CUMENE HYDROPEROXIDE
Present.

CUMENE
Present.

ACETOPHENONE
Present.

METHACRYLIC ACID
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
Revision date	1/31/2018
Revision	3
Supersedes date	5/5/2015
Hazard statements in full	H242 Heating may cause a fire. H301 Toxic if swallowed. H302 Harmful if swallowed. H311 Toxic in contact with skin. 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. H332 Harmful if inhaled. H335 May cause respiratory irritation. H373 May cause damage to organs through prolonged or repeated exposure.