SAFETY DATA SHEET
Permabond MS359 Clear

1. Identification

Product identifier

Product name Permabond MS359 Clear

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 Eye Dam. 1 - H318

Label elements

Pictogram

Signal word Danger

Hazard statements H318 Causes serious eye damage.

Precautionary statements P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a poison center/ doctor.
Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Contains 3-(TRIMETHOXYSILYL)PROPYLAMINE, [3-(2,3-EPOXYPROPOXY)PROPYL]TRIMETHOXYSILANE

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3. Composition/information on ingredients

Mixtures

3-(TRIMETHOXYSILYL)PROPYLAMINE **1-5%**

CAS number: 13822-56-5

Classification
Skin Irrit. 2 - H315
Eye Dam. 1 - H318

[3-(2,3-EPOXYPROPOXY)PROPYL]TRIMETHOXYSILANE **1-5%**

CAS number: 2530-83-8

Classification
Eye Dam. 1 - H318

PENTAMETHYL PIPERIDYL SEBACATE **<1%**

CAS number: —

Classification
Skin Sens. 1 - H317
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. Get medical attention if any discomfort continues.

Ingestion Do not induce vomiting. Get medical attention.

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

Eye contact Remove any contact lenses and open eyelids wide apart. Rinse immediately with plenty of water. Get medical attention immediately. Continue to rinse.

Most important symptoms and effects, both acute and delayed

Skin contact Prolonged contact may cause redness, irritation and dry skin.

Eye contact Causes serious eye damage.

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

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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 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

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	Transparent paste.
Color	Colorless.
Odor	Characteristic.

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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.
Upper/lower flammability or explosive limits	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	1.1
Solubility(ies)	Slightly soluble in water. Miscible with the following materials: acetone
Auto-ignition temperature	Not available.
Decomposition Temperature	Not available.
Viscosity	Not determined. Thixotropic
Oxidizing properties	Not available.
Other information	Not relevant.

10. Stability and reactivity

Reactivity	The following materials may react with the product: Strong oxidizing agents. Strong reducing agents. Strong acids. Amines. Peroxides.
Stability	Stable at normal ambient temperatures.
Possibility of hazardous reactions	There are no known reactivity hazards associated with this product.
Conditions to avoid	Avoid heat, flames and other sources of ignition.
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	Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation	Causes serious eye damage.

Respiratory sensitization

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Respiratory sensitization	Based on available data the classification criteria are not met.

Skin sensitization

Skin sensitization	Based on available data the classification criteria are not met.

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	Does not contain any substances known to be carcinogenic.

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.

Aspiration hazard

Aspiration hazard	Based on available data the classification criteria are not met.

Inhalation	May cause irritation.
Ingestion	No harmful effects expected from quantities likely to be ingested by accident.
Skin Contact	Prolonged and frequent contact may cause redness and irritation.
Eye contact	Causes serious eye damage.

Toxicological information on ingredients.

3-(TRIMETHOXYSILYL)PROPYLAMINE

Skin corrosion/irritation

Animal data	Irritating.

Serious eye damage/irritation

Serious eye damage/irritation	Risk of serious damage to eyes.

Skin sensitization

Skin sensitization	Guinea pig maximization test (GPMT) - Guinea pig: Not sensitizing.

Germ cell mutagenicity

Genotoxicity - in vitro	Chromosome aberration: Negative.

Reproductive toxicity

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

Specific target organ toxicity - repeated exposure

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STOT - repeated exposure	NOAEL 200 mg/kg, Oral, Rat LOAEL 600 mg/kg, Oral, Rat LOAEC 0.147 mg/l, Inhalation, Rat
Target organs	Liver Respiratory system, lungs

[3-(2,3-EPOXYPROPOXY)PROPYL]TRIMETHOXYSILANE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	7,010.0
Species	Rat
ATE oral (mg/kg)	7,010.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	6,800.0
Species	Rabbit
ATE dermal (mg/kg)	6,800.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} dust/mist mg/l)	5.3
Species	Rat
ATE inhalation (dusts/mists mg/l)	5.3

Skin corrosion/irritation

Animal data	Method: OECD 404, Rabbit Not irritating.

Serious eye damage/irritation

Serious eye damage/irritation	Method: OECD 405, Rabbit Irritating to eyes.

Skin sensitization

Skin sensitization	Buehler test - Guinea pig: Not sensitizing.

Germ cell mutagenicity

Genotoxicity - in vitro	Read-across data. Chromosome aberration: Negative.
Genotoxicity - in vivo	Chromosome aberration: Positive.

Carcinogenicity

Carcinogenicity	NOAEL >=5 mg/kg/day, Dermal, Mouse

Reproductive toxicity

Reproductive toxicity - fertility	- NOAEL 500 mg/kg/day, Oral, Rat P
Reproductive toxicity - development	Maternal toxicity: - NOAEL: 200 mg/kg/day, Oral, Rabbit

Specific target organ toxicity - single exposure

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STOT - single exposure No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No information available.

Aspiration hazard

Aspiration hazard Not available.

12. Ecological Information

Ecotoxicity There are no data on the ecotoxicity of this product.

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 levels

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)
None above reporting limits

SARA Extremely Hazardous Substances EPCRA Reportable Quantities
None above reporting limits

SARA 313 Emission Reporting
None above reporting limits

SARA (311/312) Hazard Categories
Acute

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

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	Eye Dam. = Serious eye damage
Revision date	1/31/2018
Revision	2
Supersedes date	12/6/2013
Hazard statements in full	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage.