

SAFETY DATA SHEET

Date Prepared : 11/08/2017
 MSDS No : PP ET227/227R B
 Date Revised : 11/08/2017
 Revision No : 4

PACIFIC POLYMERS Elasto-Thane 227/227R Component B

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: PACIFIC POLYMERS Elasto-Thane 227/227R Component B

MANUFACTURER

ITW Polymers Sealants North America
 12271 Monarch St.
 Garden Grove, CA 92841

Product Stewardship: (714) 898-0025

24 HR. EMERGENCY TELEPHONE NUMBERS

CHEMTREC (US Transportation): (800) 424-9300

COMMENTS: PACIFIC POLYMERS and Elasto-Thane are a registered trademarks of Illinois Tool Works, Inc.

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS

Health:

Acute Toxicity (Inhalation), Category 2
 Eye Irritation, Category 2A
 Respiratory Sensitization, Category 1
 Skin Sensitization, Category 2
 Target Organ Toxicity (Single exposure), Category 2

GHS LABEL



Exclamation
mark



Health
hazard

SIGNAL WORD: DANGER

HAZARD STATEMENTS

H315: Causes skin irritation.
 H319: Causes serious eye irritation.
 H332: Harmful if inhaled.
 H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H335: May cause respiratory irritation.

PRECAUTIONARY STATEMENT(S)

Prevention:

[201]: Obtain special instructions before use.
 P202: Do not handle until all safety precautions have been read and understood.
 P233: Keep container tightly closed.
 P260: Do not breathe dust/fume/gas/mist/vapours/spray.
 P264: Wash thoroughly after handling.
 P271: Use only outdoors or in a well-ventilated area.
 P272: Contaminated work clothing should not be allowed out of the workplace.
 P273: Avoid release to the environment.
 P280: Wear protective gloves/protective clothing/eye protection/face protection.
 P284: [In case of inadequate ventilation] wear respiratory protection.

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Response:

P301+P310: IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P302+P352: IF ON SKIN: Wash with plenty of water.
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313: IF exposed or concerned: Get medical advice/ attention.
P312: Call a POISON CENTER/doctor if you feel unwell.
P314: Get medical advice/attention if you feel unwell.
P331: Do NOT induce vomiting.
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
P337+P313: If eye irritation persists: Get medical advice/attention.
P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P362: Take off contaminated clothing.
P391: Collect spillage.

Storage:

P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P403+P235: Store in a well-ventilated place. Keep cool.
P405: Store locked up.

Disposal:

P501: Dispose of contents/container according to local, regional, national, and international regulations.

EMERGENCY OVERVIEW

IMMEDIATE CONCERNS: WARNING! Contains Diphenylmethane Diisocyanate (CAS No. 101-68-8). May cause respiratory tract irritation. May cause allergic respiratory reaction. Harmful if inhaled. Respiratory sensitizer. May cause lung damage. Lung damage and respiratory sensitization may be permanent. May cause skin irritation. May cause allergic skin reaction. Skin sensitizer. Animal tests and other research indicate that skin contact with MDI can cause isocyanate desensitization and respiratory reaction. Contains crystalline silica (quartz). Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs. Silicosis may be progressive; it may lead to disability and death. Crystalline silica (quartz) inhaled from occupational sources is classified as carcinogenic to humans.

POTENTIAL HEALTH EFFECTS

EYES: May cause eye irritation such as redness, tearing, and itching.

SKIN: May cause skin irritation upon contact. May cause allergic reaction in susceptible individuals.

INGESTION: May cause irritation of the mouth, pharynx, esophagus, and stomach. May cause gastrointestinal irritation, nausea and vomiting.

INHALATION: MDI vapors or mist concentration at or above the TLV can irritate (burning sensation) the mucous membrane in the respiratory tract causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function. Persons with pre-existing non-specific bronchial hyper-reactivity can respond to concentrations well below the TLV with similar symptoms as well as asthma attacks. Exposure well above the TLV may lead to bronchitis, bronchial spasm, and pulmonary edema. These effects are usually reversible. Chemical or hypersensitive pneumonitis, with flu-like symptoms (e.g. fever, chills) has also been reported. These symptoms can be delayed up to several hours after exposure. As a result of previous repeated overexposure or a single large dose, certain individuals develop isocyanate sensitization (chemical asthma), which will cause them to react to a later exposure to isocyanate at levels well below the

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TLV. Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air, or other irritants. This increase lung sensitivity can persist for weeks and in severe cases for several years. Overexposure to isocyanates has also been reported to cause lung damage (decrease in lung function), which may be permanent. Sensitization can be either temporary or permanent.

ROUTES OF ENTRY: Eye and Skin Contact, Inhalation and Ingestion

IRRITANCY: Eye and skin irritation.

SENSITIZATION: May cause allergic respiratory and skin reaction. Respiratory and skin sensitizer.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt. %	CAS
Alkylsulfonic Acid Ester of Phenol	< 70	70775-94-9
Methylene Bisphenyl Isocyanate	< 5	101-68-8

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of tempered water (at least 15-20 minutes) lifting upper and lower eye lids occasionally. Get immediate medical attention.

SKIN: Immediately flush skin with plenty of water. Remove clothing. Get medical attention immediately. Wash clothing separately before reuse.

INGESTION: If swallowed, do NOT induce vomiting. Give victim two glasses (16 ounces) of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention. Asthmatic type symptoms may develop and may be immediate or delayed up to several hours. Treatment is essentially symptomatic.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Causes eye irritation.

SKIN: Contact causes skin irritation.

INGESTION: Ingestion of this material can cause mouth, throat, esophageal, and gastrointestinal tract irritation.

INHALATION: Review inhalation signs and symptoms of MDI under Potential Health Effects.

CHRONIC EFFECTS: Prolonged or repeated exposure may cause allergic reaction/sensitization. Adverse skin effects such as rash, irritation or corrosion.

NOTES TO PHYSICIAN: Medical supervision of all employees who handle or come into contact with isocyanates is recommended. This should include pre-employment and periodic medical examinations with respiratory function tests (FEV, FVC as minimum). Persons with asthmatic type conditions, chronic bronchitis, other chronic respiratory diseases or recurrent skin eczema or sensitization should be excluded from working with MDI. Once a person is diagnosed as sensitized, no further exposure can be permitted.

5. FIRE FIGHTING MEASURES

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FLAMMABLE CLASS: Class IIIB

EXTINGUISHING MEDIA: Use dry chemical foam, carbon dioxide or dry chemical powder. If water is used is used, use very large quantities. The reaction between water and hot isocyanate can be vigorous.

OTHER CONSIDERATIONS: Diisocyanates reacts exothermically with water, which may create excessive pressure in containers.

EXPLOSION HAZARDS: Water contamination will produce carbon dioxide. Do not reseal contaminated containers as pressure build-up may result in rupturing of the container. Empty containers may contain product residue which can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind or expose to heat, flame, sparks, static electricity or other ignition sources.

FIRE FIGHTING PROCEDURES: As in any fire, wear self-contained breathing apparatus with pressure-demand, full face piece SCBA (MSHA/NIOSH approved or equivalent) and full protective gear. Use water to cool containers exposed to fire.

SENSITIVE TO STATIC DISCHARGE: Not Applicable

SENSITIVITY TO IMPACT: None known.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon Dioxide, Carbon Monoxide, Nitrogen Oxide, Isocyanate Vapors and Mist, Traces of HCN.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Absorb the isocyanate with sawdust or other absorbent and shovel into open top containers. Do not make containers pressure tight. Transport to a well ventilated area, preferably outside, and treat with neutralizing solution consisting of a mixture of 90% water, 8% concentrated ammonium hydroxide or sodium carbonate, and 2% liquid detergent. Add about 10 parts of neutralizer per part of isocyanate by mixing. Allow to stand for 48 hours, allowing evolved carbon dioxide to escape.

LARGE SPILL: Keep spectators away. Only those persons who are adequately trained, authorized and wearing the required personal protective equipment (PPE) should participate in spill response and clean-up. Know and prepare for spill response before using or handling this product. Dike and contain spill with inert material (e.g. sand, earth). Transfer liquids to covered and labeled containers for disposal. Use appropriate PPE. Place absorbent diking materials in covered containers for disposal. Prevent contamination of sewers, streams, and groundwater with spilled material or used absorbent.

If temporary control of isocyanate vapor is required, a blanket of protein foam (available at most Fire Departments) may be placed over the spill.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: For professional or industrial use only. Follow label instructions. Keep out of the reach of children. Not for consumption. No smoking. Do not breathe vapors. Avoid contact with body. Empty containers must not be washed and re-used for any purpose. Contact lens wearers must wear protective eye wear around chemical vapors and liquid. Wash hands thoroughly after handling. To prevent build-up of vapors, use adequate natural and/or mechanical ventilation (e.g. open all windows and doors to achieve cross ventilation).

HANDLING: Follow all SDS/label precautions even after container is emptied because they may retain product residues. Containers should be tightly closed to prevent contamination with foreign materials and moisture. Open containers should be used within a day or two to prevent the product from skinning. Employee education and training in the safe handling of this product are required under the Federal OSHA Hazard Communication Standard. Avoid contact of liquid with eyes and prolonged skin exposure.

STORAGE: Keep container closed when not in use. Store in a dry, well ventilated area, out of the sun and away

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from ignition sources. Do not remove or deface label. Prevent water or moist air from entering container.

STORAGE TEMPERATURE: 15.5°C (60.0°F) Minimum to 29.4°C (85.0°F) Maximum

SHELF LIFE: 1 year from manufacture date

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)				
Chemical Name	Type	EXPOSURE LIMITS		
			ppm	mg/m ³
Alkylsulfonic Acid Ester of Phenol	OSHA PEL	TWA	NL [1]	NL [1]
		STEL	NL [1]	NL [1]
	ACGIH TLV	TWA	NL [1]	NL [1]
		STEL	NL [1]	NL [1]
Methylene Bisphenyl Isocyanate	OSHA PEL	TWA	0.02 ppm	0.2 mg/m ³
		STEL	NL [1]	NL [1]
	ACGIH TLV	TWA	0.005 ppm	NL
		STEL	NL [1]	NL [1]

Footnotes:
 1. NL = Not Listed

ENGINEERING CONTROLS: Local exhaust ventilation or other engineering controls are recommended to maintain levels below the TLV whenever MDI is processed, heated or spray applied. For spray applications, an air-supplied respirator must be worn. Standard reference sources regarding industrial ventilation (i.e. ACGIH Industrial Ventilation) should be consulted for guidance about proper ventilation.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Wear safety glasses with side shields, goggles, or a full-face shield. Do not wear contact lenses.

SKIN: Wear chemical resistant gloves such as nitrile, neoprene or butyl rubber. Wear chemical protective clothing & boots to prevent repeated or prolonged skin contact.

RESPIRATORY: Where vapor concentrations exceed or are likely to exceed the occupational exposure limits, a NIOSH approved continuous flow supplied air respirator, hood or helmet is recommended. A NIOSH approved self-contained positive pressure breathing apparatus with full face piece is required for spills and/or emergencies. MDI has poor warning properties, since the concentration at which MDI can be smelled is substantially higher than the maximum exposure limit. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

WORK HYGIENIC PRACTICES: Use good hygiene practices when handling this material. Wash hands thoroughly after use.

OTHER USE PRECAUTIONS: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

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9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid
ODOR: Mild aromatic solvent odor
COLOR: Yellowish Clear
pH: Not Determined
PERCENT VOLATILE: 0.01
FLASHPOINT AND METHOD: > 121.1°C (250°F) Pensky-Martens CC
FLAMMABLE LIMITS: Not Determined
AUTOIGNITION TEMPERATURE: Not Applicable
VAPOR PRESSURE: Not Determined
VAPOR DENSITY: > 1 (Air=1)
BOILING POINT: No data
FREEZING POINT: Not Determined
MELTING POINT: Not Determined
POUR POINT: Not Determined
SOLUBILITY IN WATER: Reacts with water
PARTITION COEFFICIENT: N-OCTANOL/WATER: Not Determined
EVAPORATION RATE: < 1.0 (n-Butyl Acetate=1)
DENSITY: 9.55 lbs/gal
PARTICLE SIZE: Not Determined
SPECIFIC GRAVITY: 1.13 to 1.16
VISCOSITY #1: < 500 cps at 23.9°C (75.0°F)
MOLECULAR WEIGHT: Not Determined
(VOC): < 5 gr/L EPA Method 24 VOC
OXIDIZING PROPERTIES: Not Determined

10. STABILITY AND REACTIVITY

REACTIVITY: Yes
HAZARDOUS POLYMERIZATION: Product will not undergo polymerization.
STABILITY: Stable.
CONDITIONS TO AVOID: Avoid contact with water, alcohol, amines, acids and alkalis. Avoid high temperature.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, nitrogen oxide, isocyanate vapors and mist, traces of HCN.
INCOMPATIBLE MATERIALS: Reacts with water, with the formation of carbon dioxide. Risk of bursting. Reacts with alcohols, acids, alkalis, and amines. Risk of exothermic reaction. Risk of violent reaction.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

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Chemical Name	ORAL LD ₅₀ (rat)	DERMAL LD ₅₀ (rabbit)	INHALATION LC ₅₀ (rat)
Alkylsulfonic Acid Ester of Phenol	> 5000 mg/kg (rats)	> 1000 mg/kg (rat)	No data
Methylene Bisphenyl Isocyanate	> 5000 mg/kg (rats)	No data	> 2240 mg/cub m (1-hr dose - rat)

SERIOUS EYE DAMAGE/IRRITATION: Mild to moderate eyes and skin irritation.

RESPIRATORY OR SKIN SENSITISATION: Respiratory and Skin Sensitizer

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: This product contains components that may be harmful to aquatic organisms and may cause long term adverse effects in the aquatic environment.

ECOTOXICOLOGICAL INFORMATION: Contains components that are potentially toxic to freshwater and saltwater ecosystems.

BIOACCUMULATION/ACCUMULATION: Contains components with the potential to bio-accumulate.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of in accordance with all local, state and federal regulations.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Not Regulated

AIR (ICAO/IATA)

SHIPPING NAME: Not Regulated

VESSEL (IMO/IMDG)

SHIPPING NAME: Not Regulated

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

FIRE: No **PRESSURE GENERATING:** No **REACTIVITY:** Yes **ACUTE:** Yes **CHRONIC:** Yes

EPCRA SECTION 313 SUPPLIER NOTIFICATION

Chemical Name	Wt.%	CAS
Methylene Bisphenyl Isocyanate	< 5	101-68-8

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

Chemical Name	Wt.%	CERCLA RQ
Methylene Bisphenyl Isocyanate	< 5	5000 lbs.

TSCA (TOXIC SUBSTANCE CONTROL ACT)

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Chemical Name	CAS
Alkylsulfonic Acid Ester of Phenol	70775-94-9
Methylene Bisphenyl Isocyanate	101-68-8

CLEAN AIR ACT

Chemical Name	Wt. %	CAS
Methylene Bisphenyl Isocyanate	< 5	101-68-8

STATES WITH SPECIAL REQUIREMENTS

Chemical Name	Requirements
Alkylsulfonic Acid Ester of Phenol	Massachusetts Right to Know List New Jersey Right to Know List Pennsylvania Right to Know List

CANADA

WHMIS HAZARD SYMBOL AND CLASSIFICATION



Toxic

16. OTHER INFORMATION

Date Revised: 11/08/2017

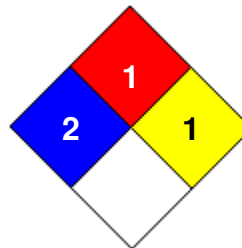
INFORMATION CONTACT: (714) 898-0025

REVISION SUMMARY: This MSDS replaces the 11/08/2017 MSDS. Revised: **Section 1:** Date Issued.

HMIS RATING

HEALTH	*	2
FLAMMABILITY		1
PHYSICAL HAZARD		1
PERSONAL PROTECTION		B

NFPA CODES



GENERAL STATEMENTS: Keep out of reach of children
For professional or industrial use only

MANUFACTURER DISCLAIMER: This document may be used to comply with OSHA's Hazardous Communication Standard, 29 CFR 1910.1200.

To the best of our knowledge, the information contained in this SDS is accurate. It is intended to assist the user in his/her evaluation of the product's hazards and safety precautions to be taken in its use. The data in this SDS relate only to the specific material designated herein. We do not assume liability for the use of, or reliance on this information, nor do we guarantee its accuracy or completeness.

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