

**Epoxy.com Product #449 JOINT SEALANT
MATERIAL SAFETY DATA SHEET**

I. PRODUCT AND COMPANY IDENTIFICATION

Company: Epoxy Systems, Inc.
Address: 20774 W. Pennsylvania Ave.
Dunnellon, FL 34431
Product Name: **A Component Product #449**
Product Description: Joint Sealant
Emergency Contact No.: 1-800-633-8253 (PERS)
Date Prepared or Revised: June 2013
For most current MSDS, please visit our website at www.epoxy.com

II. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Names	CAS Numbers
Urethane Prepolymer	57516-88-8
Toluene diisocyanate isomers	26471-62-5
Coal Tar Pitch	65996-93-2
Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1
Siloxanes and Silicones, di-Me, reaction products with silica	67761-90-7
Calcium Carbonate	1317-65-3

The remaining ingredients are designated as "trade secret".

III. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW

Causes respiratory tract irritation. May cause allergic respiratory reaction. Harmful if inhaled. Respiratory sensitizer. Lung damage and respiratory sensitization may be permanent. Causes skin irritation. May cause allergic skin reaction. Skin sensitizer. Causes eye irritation. May cause lung damage.

POTENTIAL HEALTH EFFECTS

ACUTE

Eye Contact: Causes irritation with symptoms of reddening, tearing, stinging, and swelling. May cause temporary corneal injury. Vapor may cause irritation with symptoms of burning and tearing.

Skin Contact: Causes irritation with symptoms of reddening, itching, and swelling. Persons previously sensitized can experience allergic skin reaction with symptoms of reddening, itching, swelling, and rash.

Inhalation: Can cause irritation of the respiratory tract causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function. This material can produce asthmatic sensitization upon either single inhalation exposure to a relatively high concentration or upon repeated inhalation exposures to lower concentrations. Asthma-like symptoms may include coughing, difficult breathing and a feeling of tightness in the chest. Occasionally, breathing difficulties may be life threatening. Exposure to high concentrations may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). Symptoms can be delayed up to several hours after exposure. Preexisting, nonspecific bronchial hyperreactivity can cause reaction at low concentrations with similar symptoms as well as asthma attack or asthma-like symptoms.

Ingestion: May cause irritation; Symptoms may include abdominal pain, nausea, vomiting, and diarrhea.

Systemic Effects: Lungs, eyes, and skin.

Chronic Inhalation: Individuals may develop sensitization to diisocyanates that may cause them to react to a later exposure to diisocyanates at low levels. These symptoms, which can include chest tightness, wheezing, cough, shortness of breath or asthmatic attack, could be immediate or delayed up to several hours after exposure. Sensitization can be permanent. Chronic overexposure to diisocyanates has also been reported to cause lung damage (including fibrosis, decrease in lung function) that may be permanent.

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IV. FIRST AID MEASURES

- Eye Contact:** Immediately flush eyes with plenty of cool water for at least 15 minutes while holding the eyes open. If redness, burning, blurred vision, or swelling persists, **SEEK MEDICAL ATTENTION.**
- Skin Contact:** Remove product and immediately wash affected area with soap and water. Do not apply greases or ointments. Remove contaminated clothing. Wash clothing with soap and water before reuse. If redness, burning, or swelling persists, **CONSULT A PHYSICIAN.**
- Ingestion:** **DO NOT INDUCE VOMITING. SEEK IMMEDIATE MEDICAL ATTENTION.** Never administer anything by mouth to an unconscious person. Rinse out mouth with water. Prevent aspiration of material into the lungs.
- Inhalation:** Move to an area free from further exposure. **SEEK IMMEDIATE MEDICAL ATTENTION.** Administer oxygen or artificial respiration as needed. Asthmatic symptoms may develop and may be immediate or delayed up to several hours. Extreme asthmatic reactions can be life threatening.
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V. FIRE-FIGHTING MEASURES

- Suitable Extinguishing Media:** Water fog, carbon dioxide or dry chemical, aqueous foam.
- Fire And Explosion Hazard:** Closed container may forcibly rupture under extreme heat or when contents are contaminated with water (CO₂ formed). Use cold-water spray to cool fire-exposed containers to minimize the risk of rupture. Large fires can be extinguished with large volumes of water applied from a safe distance, since reaction between water and hot diisocyanate can be vigorous. Do not allow run-off from fire fighting to enter drains or water courses.
- Fire Fighting Equipment and Procedures:** Firefighters should wear NFPA compliant structural firefighting protective equipment, including self-contained breathing apparatus and NFPA compliant helmet, hood, boots and gloves. Avoid contact with product. Decontaminate equipment and protective clothing prior to reuse. During a fire, isocyanate vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion.
- Hazardous Decomposition Products:** Fire or intense heat will decompose the product into CO₂, CO, Hydrogen Cyanide, Oxides of Nitrogen, Isocyanates, Isocyanic Acid, and dense black smoke.
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VI. ACCIDENTAL RELEASE MEASURES

- Personal Precautions:** Evacuate non-essential personnel. Isolate the area and prevent access. Remove ignition sources. Wear protective clothing. Control source of the leak.
- Environmental Precautions:** Construct a dike to prevent spreading. Keep out of sewers, storm drains, surface waters, and soils.
- Clean-up Methods:** **Small spills:** Cover spill area with suitable absorbent material. Saturate absorbent material with neutralization solution (such as Calorimetric Laboratories Inc. decontamination solution) and mix. Wait 15 minutes. Collect material in open-head metal containers.
Large spills: To minimize vapor, cover the spillage with fire fighting foam (AFFF). Released material may be pumped into closed, but not sealed, metal container for disposal. Process can generate heat.
- Additional Information:** Notify authorities if any exposures to the general public or environment occur or are likely to occur. Dispose in accordance with federal, state, and local regulations.
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VII. STORAGE AND HANDLING

- Storage:** Prevent exposure to moisture. Keep in cool, dry, well-ventilated area in closed containers. Protect containers from physical damage. Keep in manufacturer's sealed nitrogen packed pail. Maintain storage temperatures between 65°F to 86°F (18°C to 30°C).
- Handling:** Do not breathe vapors, mists, or dusts. Use adequate ventilation to keep airborne isocyanate levels below the exposure limits. Wear respiratory protection (see Section VIII) if material is heated, sprayed, used in a confined space, or if the exposure limit is exceeded. Avoid contact with skin and eyes. Wash thoroughly after handling. Decomposition products can be highly toxic and irritating. Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected.
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VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION

Protective Measure: Wear appropriate personal protective equipment.
Eye Protection: Avoid contact with eyes. Wear chemical splash goggles or chemical safety goggle in combination with a full face shield when there is a greater risk of splash.
Hand Protection: Wear chemical-resistant gloves such as: Nitrile, neoprene, butyl.
Skin and Body Protection: Avoid all skin contact. Depending on the conditions of use, cover as much of the exposed skin area as possible with appropriate clothing to prevent skin contact.
Respirator Protection: At normal room temperatures, airborne TDI can exceed exposure limits. When atmospheric levels may exceed the exposure limits respiratory protection must be used. The type of respiratory protection selected must comply with the requirements set forth in OSHA's Respiratory Protection Standard (29 CFR 1910.134). For situations where the atmospheric levels may exceed the level for which an air-purifying respirator is effective, use a positive-pressure air-supplying respirator (air line or self-contained breathing apparatus). For emergency response or for situations where the atmospheric level is unknown, use an approved positive-pressure self contained breathing apparatus or positive-pressure air line with auxiliary self-contained air supply.

Exposure Limits:

COMPONENT	ACGIH (TLV)	OSHA (PEL)
Toluene diisocyanate isomers	0.005 ppm	0.02 ppm
Coal Tar Pitch	.2 mg/m ³	.2 mg/m ³
Benzenesulfonyl isocyanate, 4-methyl-	.02mg/m ³	.02mg/m ³
Siloxanes and Silicones, di-Me, reaction products with silica	N/E	N/E
Calcium Carbonate	2 mg/m ³	10 mg/m ³

IX. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid	Freezing Point:	N/E
Color: Black	Flash Point:	200°F (94°C)	
Odor:	Musty	Specific Gravity:	1.10
Boiling Point:	N/E	Solubility In Water:	Reacts with water to release CO ₂ gas
Vapor Pressure:	N/E		

X. REACTIVITY DATA

Stability: Stable under normal storage conditions.
Conditions to Avoid: Avoid temperatures above 86°F (30°C). Avoid sources of ignition. Avoid temperatures below 65°F (18°C).
Materials to Avoid: Water, Amines, Strong bases, Alcohols, Copper alloys.
Hazardous Decomposition Products: Fire or intense heat will decompose the product into carbon monoxide, carbon dioxide, hydrogen cyanide, oxides of nitrogen, isocyanates, isocyanic acid, and dense black smoke.
Hazardous Polymerization: During normal polymerization CO₂ is produced. Will polymerize with heat and/or moisture.

XI. TOXICOLOGICAL PROPERTIES

Acute Oral (LD₅₀, Rat): N/E
Acute Dermal (LD₅₀, Rabbit): N/E
Acute Inhalation (LC₅₀, Rat): N/E
Chronic Health Hazard: This product has ingredients that are listed as a carcinogen by one or more of the following: NTP, OSHA, ACGIH or IARC. Prolonged vapor contact with eyes may cause conjunctivitis. Exposure can cause sensitization which may be permanent. A sensitized individual may experience asthma or asthma like symptoms immediately or the symptoms may be delayed several hours. Extreme asthmatic reactions can be life threatening. Once sensitized an individual can experience these symptoms upon exposure to dust, cold air, or other irritants.

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XII. DISPOSAL CONSIDERATIONS

**Waste From Residues/
Unused Products:** Dispose of container and unused contents in accordance with federal, state, and local requirements. Do not reuse container.

XIII. TRANSPORTATION

DOT: Not regulated for transport.
IATA: Not regulated for transport.
IMDG: Not regulated for transport.

XIV. REGULATORY INFORMATION

Country	Regulatory List
USA	TSCA

EPA SARA Title III Section 312 (40 CFR 370) Hazardous Classification:

Acute/Chronic Health Hazard.

EPA SARA Title III Section 313 (40 CFR 372) Component(s) above 'de minimus' level:

2,4-Toluene Diisocyanate, 2,6-Toluene Diisocyanate, Polycyclic Aromatic Compounds.

US. California "Safe Drinking Water and Toxic Enforcement Act" (Proposition 65): This product contains the following chemicals that are known to the State of California to cause cancer and/or reproductive toxicity and other harm:

Component	Regulation	Concentration	Remarks
2,4-Toluene diisocyanate	ACGIH	<1.5%	Carcinogenic
2,6-Toluene diisocyanate	ACGIH	<0.5%	Carcinogenic
Benzo(b)floranthene	ACGIH	0.25%	Carcinogenic
Benzo(a)pyrene	ACGIH	0.3-0.4%	Carcinogenic
Dibenz(a,h)anthracene	ACGIH	0.07%	Carcinogenic
Benzo(a)anthracene	ACGIH	0.3-0.4%	Carcinogenic
Naphthalene	ACGIH	0.01-0.07%	Carcinogenic
Indeno(1,2,3-cd)pyrene	ACGIH	0.2-0.3%	Carcinogenic
Chrysene	ACGIH	0.3-0.4%	Carcinogenic

XV. OTHER INFORMATION

HMIS RATING

Health	Flammability	Physical Hazard
2	1	1

N/E – Not Established

This Material Safety Data Sheet (MSDS) is prepared by Epoxy Systems, Inc. in compliance with the requirements of OSHA 29 CFR Part 1910.1200. The information it contains is offered in good faith as accurate as of the date of this MSDS. This MSDS is provided solely for the purpose of conveying health, safety, and environmental information. No warranty, expressed or implied, is given. Health and Safety precautions may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations.

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Product Description: Joint Sealant
Emergency Contact No.: 1-800-633-8253 (PERS)
Date Prepared or Revised: June 2013
For most current MSDS, please visit our website at www.epoxy.com

II. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Names	CAS Numbers
Coal Tar Pitch	
Polyether Polyol	9082-00-2
Carbon Black	1333-86-4
Calcium Carbonate	1317-65-3
Xylene Mixed isomers	1330-20-7
Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1
Tris-2,4,6-(dimethylaminomethyl)phenol	90-72-2
Dibutyl Tin Dilureate	77-58-7

The remaining ingredients are designated as "trade secret".

EMERGENCY OVERVIEW

May cause respiratory tract irritation.
May cause sensitization by skin contact.
May cause skin and eye irritation.
Harmful if swallowed.
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

POTENTIAL HEALTH EFFECTS

ACUTE

Eye Contact: May cause eye irritation. May cause irreversible damage and burns to the eyes.
Skin Contact: May cause skin irritation. Absorption may cause acute red blood cell damage and kidney effects.
Inhalation: Inhalation may cause irritation of the respiratory tract. May cause headaches, dizziness, nausea and vomiting. May cause central nervous system depression.
Ingestion: Harmful if swallowed. May cause central nervous system depression.
Systemic Effects: Lungs, eyes, and skin.

IV. FIRST AID MEASURES

Eye Contact: Immediately flush eyes with plenty of cool water for at least 15 minutes while holding the eyes open. **SEEK MEDICAL ATTENTION.**
Skin Contact: Remove product and immediately wash affected area with soap and water. Remove contaminated clothing. Wash clothing with soap and water before reuse. If irritation develops, **CONSULT A PHYSICIAN.**
Ingestion: **DO NOT INDUCE VOMITING.** Never administer anything by mouth to an unconscious person. If conscious give two glasses of water for dilution. **SEEK MEDICAL ATTENTION.**
Inhalation: Remove patient to fresh air. If patient continues to experience difficulty breathing, **CONSULT A PHYSICIAN.**

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V. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: All extinguishing media are suitable.
Fire And Explosion Hazard: Irritating and toxic fumes may be produced at high temperature. In a fire, may produce carbon monoxide, carbon dioxide and other organic compounds.
Fire Fighting Equipment and Procedures: Wear full protective clothing and self-contained breathing apparatus for fire fighting. Isolate fuel supply from fire. Clear fire area of all non-emergency personnel.

VI. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use cautious judgment when cleaning up spill. Shut off leaks, if possible without personal risk. Wear suitable protective clothing, gloves and eye/face protection.
Environmental Precautions: Construct a dike to prevent spreading. Keep out of sewers, storm drains, surface waters, and soils.
Clean-up Methods: **Small spills:** Soak up with absorbent material such as clay, sand or other suitable non-reactive material. Place in leak-proof containers. Seal tightly for proper disposal.
Large spills: Approach suspected leak areas with caution. Create a dike or trench to contain material. Soak up with absorbent material such as clay, sand or other suitable non-reactive material. Place in leak-proof containers. Seal tightly for proper disposal.
Additional Information: Notify authorities if any exposures to the general public or environment occur or are likely to occur. Dispose in accordance with federal, state, and local regulations.

VII. STORAGE AND HANDLING

Storage: Keep away from: acids, oxidizers, heat, or flames. Keep in cool, dry, well-ventilated area in closed containers. Protect containers from physical damage. Protect from moisture.
Handling: To prevent skin and eye contact under the foreseeable conditions of use, wear appropriate protective clothing and safety eyewear. When handling, do not eat, drink, or smoke. Wash thoroughly after handling.

VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION

Protective Measure: Wear appropriate personal protective equipment.
Eye Protection: Avoid contact with eyes. Wear chemical splash goggles or safety glasses with side shield.
Hand Protection: Wear chemical-resistant gloves such as: Nitrile, neoprene, butyl.
Skin and Body Protection: Wear chemical-resistant gloves and other clothing as required to minimize contact.
Respirator Protection: Not required for properly ventilated areas.
Exposure Limits:

Chemical Names	ACGIH (TLV)	OSHA (PEL)
Coal Tar Pitch	0.2 mg/m ³	0.2 mg/m ³
Carbon Black		
Polyether Polyol	N/E	N/E
Benzenesulfonyl isocyanate, 4-methyl-	N/E	N/E
Xylene Mixed isomers	100 ppm	100 ppm
Dibutyl Tin Dilureate	0.1 mg/m ³	0.1 mg/m ³
Tris-2,4,6-(dimethylaminomethyl)phenol	N/E	N/E

IX. PHYSICAL PROPERTIES

Form:	Liquid	Freezing Point:	N/E
Color:	Black	Vapor Pressure:	N/E
Odor:	Ammonia	Flash Point:	151°F (66°C)
Boiling Point:	N/E	Specific Gravity:	1.10
Solubility In Water:	Insoluble		

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X. REACTIVITY DATA

Stability: Stable under normal storage conditions.
Conditions To Avoid: Incompatible chemicals, high heat, and open flame.
Materials To Avoid: **Strong oxidizing agents.**
Hazardous Decomposition Products: Combustion may produce carbon monoxide, carbon dioxide, and other organic substances.
Hazardous Polymerization: Will not occur.

XI. TOXICOLOGICAL PROPERTIES

Acute Oral (LD₅₀, Rat): N/E
Acute Dermal (LD₅₀, Rabbit): N/E
Acute Inhalation (LC₅₀, Rat): N/E
Chronic Health Hazard: This product has ingredients that are listed as a carcinogen by one or more of the following: NTP, OSHA, ACGIH or IARC. Absorption by inhalation or repeated skin contact may cause injury to liver, kidney and cause blood damage. This product contains a material considered a fetotoxin.

XII. DISPOSAL CONSIDERATIONS

Waste From Residues / Unused Products: Dispose of container and unused contents in accordance with federal, state, and local requirements.

XIII. TRANSPORTATION

DOT: Not Regulated For Transport
IATA: UN3082, Environmentally Hazardous Substances, Liquid, n.o.s.
(Di(methylthio)toluenediamine), 9, III
IMDG: UN3082, Environmentally Hazardous Substances, Liquid, n.o.s.
(Di(methylthio)toluenediamine), 9, III, Marine Pollutant

XIV. REGULATORY INFORMATION

Country	Regulatory List
USA	TSCA

EPA SARA Title III Section 312 (40 CFR 370) Hazardous Classification:

Acute/Chronic Health Hazard.

EPA SARA Title III Section 313 (40 CFR 372) Component(s) above 'de minimus' level:

2-Butoxyethanol

US. California "Safe Drinking Water and Toxic Enforcement Act" (Proposition 65): This product contains the following chemicals that are known to the State of California to cause cancer and/or reproductive toxicity and other harm:

Component	Regulation	Concentration	Remarks
Carbon Black	ACGIH	<3.5%	Carcinogenic
Methanol	ACGIH	Trace	Reproductive Harm

XV. OTHER INFORMATION

HMIS RATING

Health	Flammability	Physical Hazard
2	1	0

N/E – Not Established

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