



## Safety Data Sheet

Note: Read and understand Safety Data Sheet before handling or disposing of product

### 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

**Material Identity:** Quick Seal Pipe Repair (4299-10, 4299-11)

**Synonym:** Industrial Polyurethane/fiberglass Leak Repair Fabric

**Product Use: General Use:** Leak Repair of pipe

**Manufacturer: Nu-Calgon**

2611 Schuetz Road

St. Louis, MO 63043

**Emergency Number: 1-800-424-9300 (CHEMTREC)** Revised: 06/10/2016

### 2. HAZARD IDENTIFICATION

HEALTH HAZARDS

GHS CLASSIFICATION

Acute Toxicity/Inhalation – Category 3

Acute Toxicity/Dermal – Category 3

Skin Corrosion/Irritation – Category 2

Skin Sensitization – Category 1

Serious Eye damage/irritation – Category 2B

GHS Label elements, including precautionary statements

Pictogram:



Signal Word: Warning

Hazard Statements:

H311 Toxic in contact with skin

H315 Causes Skin irritation

H320 Causes Eye irritation

H332 Harmful if inhaled

H334 May cause allergy or asthma or breathing difficulties if inhaled

**Precautionary Statements:**

P102 - Keep out of reach of children.

P261 – Avoid breathing dust, fumes, gas, mist, vapors/spray

P262 - Do not get in eyes, on skin, or on clothing.

P264 - Wash thoroughly after handling.

P281- Use personal protective equipment as required.

P302 & P352 – If on skin (or hair) wash with plenty of soap and water.

P304 & P340 – If inhaled remove victim to fresh air and keep at rest in a position 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.

### 3, COMPOSITION / INFORMATION ON INGREDIENTS

#### COMPOSITION:

Ingredient	C.A.S. No.	EC No.	Percentage by Weight
Fiberglass cloth (Knitted)	65997-17-3		> 60
4,4'-Diphenylmethane diisocyanate -polypropylene glycol polymer	9048-57-1		30 - 40
Diphenylmethane diisocyanate homopolymer	39310-05-9		1 - 5
Sodium Dodecyl Sulfate	151-21-3		< = 5
Dimorpholinodiethyl ether	6425-39-4		<= 2
Poly(dimethylsiloxane)	63148-62-9		<= 1
Butylated hydroxy toluene	128-37-0		<= 0.5
Colorant	Unknown		<= 0.1

### 4. FIRST AID MEASURES

**EYES:** Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Obtain medical attention without delay.

**SKIN:** Remove material from skin immediately by washing with soap and water. Remove contaminated clothing and wash before reuse or discard. An MDI skin decontamination study demonstrated that cleaning very soon after exposure is important and a polyglycol based skin cleanser or corn oil may be more effective than soap and water.

**INGESTION:** Do not induce vomiting. Get medical advice

**INHALATION:** Remove to fresh air. If breathing is difficult oxygen should be administered by qualified personnel and seek medical help

**NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:** Treat symptomatically.

#### **SYMPTOMS:**

**Acute Inhalation:** MDI/ vapors or mist at concentrations above the TLV can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, and lungs) causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing obstruction). Persons with a preexisting, nonspecific bronchial hyperactivity can respond to concentrations below the TLV with similar symptoms as well as asthma attack. Exposure well above the TLV may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). These effects are usually reversible. Chemical or hypersensitive pneumonitis, with flu-like symptoms (e.g., fever, and chills) has also been reported. These symptoms can be delayed up to several hours after exposure.

**Acute Eye:** Liquid, aerosols or vapor are irritating and can cause tearing, reddening and swelling. If left untreated, corneal damage can occur and injury is slow to heal. Damage, however is usually reversible. **Acute Skin contact:** Isocyanates react with skin protein and moisture and can cause irritation which may include the following symptoms; reddening, swelling, rash, scaling or blistering. Cured material is difficult to remove.

**Acute ingestion:** Irritation and corrosive action can occur in the mouth, stomach tissue and digestive tract. Symptoms can include: sore throat. Abdominal pain, nausea, vomiting and diarrhea,

**Over-exposure signs/symptoms:** Overexposure to isocyanates has also been reported to cause lung damage,

including decrease in lung function) which may be permanent. Sensitization can either be temporary or permanent. Asthma, other respiratory disorders (bronchitis, emphysema, bronchial hyperactivity), skin allergies, eczema.

**Notes to Physician:** Stain for evidence of corneal injury. If cornea is burned, instill antibiotic steroid preparation frequently. Workplace vapors have produced reversible corneal epithelial edema impairing vision, This compound is a known skin and pulmonary sensitizer, Treat symptomatically for contact dermatitis or thermal burns, if burned treat as a thermal burn.

**SECTION 4 NOTES:** Persons receiving significant exposure should be observed for 24-48 hours for signs of respiratory distress.

## 5. FIRE FIGHTING MEASURES / EXPLOSIVE HAZARDS

### **FLASH POINT:**

F: > 350 (Nil for uncured product)

**METHOD USED:** ASTM D-93 (Closed Cup)

**AUTOIGNITION TEMPERATURE:** Not available

**EXTINGUISHING MEDIA:** Water fog or fine spray. Dry chemical, Carbon dioxide fire extinguishers. Foam and alcohol resistant foams are preferred. General purpose synthetic foams or protein foams may function but will be less effective. If water is used it should be used in large quantities. The reaction between water and hot isocyanate may be vigorous.

**SPECIAL FIRE FIGHTING PROCEDURES:** Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by firefighters. During a fire MDI vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. Above 400°F polymeric MDI can polymerize and decompose which can cause pressure build up in closed containers resulting in explosive rupture

**UNUSUAL FIRE AND EXPLOSION HAZARD.** The material reacts slowly with water releasing carbon dioxide which can cause pressure build up in closed containers. Dense smoke is produced when this material burns.

**HAZARDOUS DECOMPOSITION PRODUCTS:** The smoke may contain the original material in addition to combustion of varying composition which may be toxic and/or irritating. Combustion products may include but not limited to nitrogen oxides, isocyanates, hydrogen cyanide, carbon monoxide and carbon dioxide

**SECTION 5 NOTES:** Do not use direct water stream. May spread fire

## 6. ACCIDENTAL RELEASE MEASURES

**Spill or Leak Procedures:** Wear appropriate personal protective equipment. Provide adequate ventilation. Stay upwind of the spilled material. Absorb the viscous resin with sawdust or absorbent. Store material temporarily in an open container and treat absorbed material with a solution of water, ammonia and isopropanol before disposal.

**SECTION 6 NOTES:** If a large amount of resin is present wash the spill site with large quantities of water. Attempt to neutralize by adding decontaminant solution: sodium carbonate 5-10%; liquid detergent 0.2-2% and water to make up 100%

## 7. HANDLING AND STORAGE

**Handling Precautions:** Use appropriate personal protective equipment. Do not eat, drink, or smoke in areas where this material is handled. Store in accordance with local regulations. Avoid breathing vapor. Always wear gloves when handling this product.

**Other Precautions:** Store in a cool, dry, well ventilated area away from strong oxidizing agents. During storage avoid contact with water, alcohols, strong bases, metal compounds or surface active materials

**SECTION 7 NOTES:**

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**EXPOSURE GUIDELINES:**

Ingredient	CAS#	Agency	Limit Type	Units
Diphenylmethane diisocyanate	N/A	ACGIH	TWA	0.02 mg/m <sup>3</sup>
Diphenylmethane diisocyanate	N/A	OSHA	STEL	0.07mg/m <sup>3</sup>
Butylated hydroxy toluene	N/A	ACGIH	Inhalable	2 mg/m <sup>3</sup>
Butylated hydroxy toluene	N/A	OSHA	TWA	10 mg/m <sup>3</sup>
FREE ISOCYANATES			TWA	0.005 ppm
FREE ISOCYANATES			STEL	0.02 ppm
Fibrous Glass Dust	N/A	OSHA	Respirable	5mg/m <sup>3</sup>

**ENGINEERING CONTROLS:** Provide good ventilation controls when unset resin is exposed or when grinding or cutting after the resin has set up.

**VENTILATION:** Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**RESPIRATORY PROTECTION:** Maintain good ventilation when product is being applied or removed.

**EYE PROTECTION:** Safety glasses with side shields or goggles as per 29CFR 1910.133/EN166

**SKIN PROTECTION:** Avoid prolonged skin contact. Rubber, PVC or neoprene gloves should be worn to prevent skin contact with the unset resin.

**OTHER PROTECTIVE CLOTHING OR EQUIPMENT:** Wear rubber or plastic apron to protect skin and clothing. Respiratory protection to be used as required.

**WORK HYGIENIC PRACTICES:** N/A

**SECTION 8 NOTES:**

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Fiber Glass fabric coated with a viscous resin

**Odor:** No distinctive odor **Threshold:** Not available

**PH:** ND

**Melting Point/Freezing Point:** Not available

**Initial Boiling Point and Range:** Decomposition temperature 590°F 310°C)

**Flash Point:** >200°C, Decomposes **Method:** Open Cup

**Evaporation Rate** Not available

**Flammability Limits:** Not available

**Conditions of Flammability:** Not available

**Vapor Pressure (mmHg):** .003 @ 25°C **Density:** Not available

**Relative Density:** ND

**Solubility in Water:** Insoluble in water, Resin reacts with water to produce CO<sub>2</sub>

**Auto-ignition Temperature:** Not available

**Specific Gravity (H<sub>2</sub>O = 1):** 2.5 glass; 1.11 resin

**Molecular Weight:** N/A

**Viscosity:** N/A

**SECTION 9 NOTES:** Reaction of resin with water during cure is exothermic

## 10. STABILITY AND REACTIVITY

**General:** This is a stable material at room temperature.

**Conditions to avoid:** Contamination with water and exposure to heat.

**Incompatible Materials (Materials to avoid):** Avoid contact with water, alcohols, strong bases, metal compounds or surface active materials. Will cause some corrosion to copper alloys and aluminum.

**Hazardous Decomposition:** Carbon monoxide, oxides of nitrogen, traces of hydrogen cyanide, MDI vapors or aerosols

**Hazardous Polymerization:** Hazardous polymerization can occur but under normal conditions of storage and use, will not occur. Polymerization can be catalyzed by water and strong bases.

**SECTION 10 NOTES:**

## 11. TOXICOLOGICAL INFORMATION

### ROUTE(S) OF ENTRY:

Inhalation: Avoid breathing dust from cutting cured product. .

Skin: Wash thoroughly with soap and water.

Ingestion: Drink plenty of water. Consult physician. Do not induce vomiting.

**HEALTH HAZARDS (ACUTE AND CHRONIC):** When water is added to product at temperatures greater than 399°F (204°C), part of the resin may be liberated in the form of MDI fume.

CARCINOGENICITY:	NTP	IARC Monograph	OSHA Regulated
	N/A	N/A	N/A

### SIGNS AND SYMPTOMS OF EXPOSURE:

**Eyes:** irritation.

**Skin:** minor irritation.

### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Open cuts or abrasions or rashes on skin.

### Toxicology test data for MDI resin:

Monomeric MDI (CAS # 101-68-8):

Inhalation LC50 Rat: 370 mg/m<sup>3</sup> for 4 hours;

Oral LD50 Rat: 9200 mg/kg

Polymeric MDI (CAS # 26447-40-5):

Inhalation LC50 Rat: 490 mg/m<sup>3</sup> for 4 hrs. Oral LD50 Rat: 49 g/kg; Dermal LD50 Rabbit: > 9400 mg/kg.

### Carcinogenic study:

Lifetime inhalation of MDI aerosols (47% monomeric MDI and 53% polymeric MDI) on rats at concentrations of 0.2 and 1.0 mg/m<sup>3</sup>. At 0.2 and 1.0 mg/m<sup>3</sup>, observations of only upper respiratory tract irritation.

Sensitization: MDI has shown to produce dermal sensitization in laboratory animals. Evidence of respiratory sensitization has also been observed in guinea pigs. Additionally, there is some evidence suggesting of cross sensitization between different types of diisocyanates.

**SECTION 11 NOTES:**

## 12. ECOLOGICAL INFORMATION

The material is not considered to be dangerous to aquatic organisms. In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyuria's which appear to be stable. In the atmospheric environment the material is expected to have a short tropospheric half-life based on calculations and by analogy with related diisocyanates.

**SECTION 12 NOTES:**

## 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Method:** The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contactor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## 14. TRANSPORT INFORMATION

**UN Number (DOT, ADR, AND, IMDG, IATA):** N/A

**UN Proper Shipping Name (DOT, ADR, AND, IMDG, IATA):** N/A

**Hazard Class (DOT, ADR, AND, IMDG, IATA):** N/A

**Environmental Hazard:** No

**Additional Transport Information:**

**DOT:** Not regulated

**ADR:** Not regulated

**IMDG:** Not regulated

**IATA:** Not regulated

## 15. REGULATORY INFORMATION

### U.S. FEDERAL REGULATIONS:

**TSCA (Toxic Substances Control Act):** All components are listed or exempted

**CERCLA (Comprehensive Environmental Response Compensation and Liability Act):** This product contains 4,4'-Methylenediphenyl diisocyanate CAS # 101-68-8 at <12% which are subject to CERCLA Section 103.

**SARA Title III (Superfund Amendments and Reauthorization Act):**

311/312 HAZARD CATEGORIES: Fire- yes, Reactive- yes, Release of pressure- no, Acute Health Hazard- yes, Chronic Health Hazard- yes

**TSCA (Toxic Substances Control Act):** Ingredients of this product are on the Inventory list.

**State regulations:** Not Regulated

**International Regulations:** Not regulated

## 16. OTHER INFORMATION

WHMIS Classification: Not determined

Reason for Issue: GHS

Previous Date of Issue: 06/2015

Revised Date: 06/10/2016

### NFPA Hazard Ratings:

**Health Hazard: 2 Flammability: 1 Reactivity: 0**

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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