


PIPE WRAP
Section 1. Identification

Product Name: Pipe Wrap
Supplier: CSNRI | 621 Lockhaven Drive. Houston, TX 77073 | +1 281.590.8491
Emergency Phone Number: 800.424.9300 (CHEMTREC)
 +1 703.741.5970 (Outside the US)
Product Description: Fiberglass cloth impregnated with water activated resin.
Product Use: Leak repair of pipe

Section 2. Hazards Identification
Classification of the substance or mixture

Acute toxicity / oral – Category 4
 Acute toxicity / inhalation – Category 4
 Skin Corrosion / Irritation – Category 2
 Eye damage / irritation – Category 2A
 Sensitization / Skin – Category 1
 Sensitization / respiratory – Category 1
 STOT (SE) – Category 3

Label Elements:


Signal Word: Danger

Hazard Statements:

H302 Harmful if swallowed
 H332 Harmful if inhaled.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H317 May cause an allergic skin reaction
 H334 May cause allergy or asthma or breathing difficulties if inhaled
 H335 May cause respiratory irritation

Precautionary statements:

P261 Avoid breathing dust, fumes, gas, mist, vapors or spray
 P281- Use personal protective equipment as required.
 P301 + P312 IF SWALLOWED: Call a Poison Center / doctor if you feel unwell.
 P302 & P352 – If on skin (or hair) wash with plenty of soap and water.
 P304 + P340 + P310 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.

Section 3. Composition/Information on Ingredients

**Composition:**

Chemical Name	CAS No.	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

Section 4. First Aid Measures**Description of 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

Most important symptoms and effects, both acute and delayed:

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.

Overexposure 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 5. Fire-fighting Measures

Suitable 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.

Unsuitable Extinguishing Media: Do not use direct water stream. May spread fire. The reaction between water and hot isocyanate may be vigorous.

Special Protective Equipment and Precautions for Fire-fighters: 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 o 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.

Specific Hazards Arising from the Chemical (Under Fire Conditions): 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 6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: No action shall be taken involving any personal risk or without suitable training. Keep people at a distance and stay upwind. Evacuate surrounding areas. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. (See Section 8)

Environmental Precautions: Do not allow to enter sewers/ surface or ground water.

Methods and Materials for Containment and Cleaning Up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

Section 7. Handling and Storage

Precautions for safe handling: 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.

Conditions for safe storage including any incompatibilities: 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 8. Exposure Controls/Personal Protection

Component	Exposure limits	
	ACGIH	OSHA-PELs



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Diphenylmethane diisocyanate	0.02 mg/m ³ (TWA)	0.07mg/m ³ (STEL)
Butylated hydroxy toluene	2 mg/m ³ (inhalable)	10 mg/m ³ (TWA)
Free isocyanates	-	0.005 ppm (TWA) 0.02 ppm (STEL)
Fibrous Glass Dust	-	5mg/m ³ (Respirable)

Engineering controls: Good general ventilation should be sufficient to control worker exposure to airborne contaminants. Provide good ventilation controls when unset resin is exposed or when grinding or cutting after the resin has set up.

Personal Protective Equipment:

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.

Section 9. Physical and Chemical Properties

Appearance:	Fiber Glass fabric coated with a viscous resin
Odor:	No distinctive odor
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):	0.003 @ 25°C
Density:	Not available
Relative density:	ND
Solubility in water:	Insoluble in water. Resin reacts with water to produce CO ₂
Auto-ignition temperature:	Not available
Specific gravity (H₂O=1):	2.5 (glass); 1.11 (resin)
Molecular weight:	Not available
Viscosity:	Not available

Section 10. Stability and Reactivity

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical Stability: Stable under standard use and storage conditions.

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

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



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.

Section 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: N/A

IARC: Monograph N/A

OSHA: Regulated 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/m³ for 4 hours;

Oral LD50 Rat: 9200 mg/kg

Polymeric MDI (CAS #26447-40-5): Inhalation LC50 Rat: 490 mg/m³ 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/m³. At 0.2 and 1.0 mg/m³, 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 12. Ecological Information

Ecotoxicity: In the atmospheric environment the material is expected to have a short tropospheric half-life based on calculations and by analogy with related diisocyanates.

Aquatic toxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

Section 13. Disposal Considerations

Waste treatment methods: 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 contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.



Uncleaned packaging: 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.

Section 14. Transport Information

DOT / ADR / AND / IMDG / IATA

UN number:	Not regulated
UN proper shipping name:	N/A
Transport hazard class:	N/A
Packing group:	N/A
Environmental hazard:	No

Section 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

Section 16. Other Information

Key Legend Information:

N/A – Not Applicable

ACGIH – American Conference of Governmental Industrial Hygienists

OSHA – Occupational Safety and Health Administration

PEL – Permissible Exposure Limit

NIOSH – National Institute for Occupational Safety and Health

NFPA Hazard Ratings:

Health Hazard: 2 Flammability: 1 Reactivity: 0

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