Section 1. Product and Company Identification

Product Name:	A+ Polyurethane Coated Fiberglass Fabric
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:	Intended to repair pipes or for corrosion control.

Section 2. Hazards Identification

Classification of the substance or mixture
Acute Toxicity - Inhalation – Category 4
Skin corrosion/irritation – Category 2
Eye damage/irritation – Category 2A
Sensitization / Respiratory – Category 1
Sensitization / Skin – Category 1
Carcinogenicity – Category 2
Specific target organ toxicity (Single Exposure) – Category 3 (Respiratory System)
Specific target organ toxicity - Inhalation (Repeated Exposure) – Category 2

Hazard pictograms:

Signal word: Danger
Hazard statements:
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
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.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure if inhaled.

Precautionary statements:
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin 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.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P285 In case of inadequate ventilation wear respiratory protection.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
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.
P3 33 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P403 + P233 Store in a well - ventilated p lace. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/ container to an approved waste disposal plant.
Other hazards: The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity: 24.45 %.

Section 3. Composition/Information on Ingredients

Substances: Preparation
Mixture:

Chemical Name	CAS#	Weight %
Calcium Aluminium Borosilicate	65997-17-3	70 – 90
Isocyanic acid, polymethylenepolyphenylene ester	9016-87-9	5 – 10
4,4'-diphenylmethane diisocyanate	101-68-8	5 – 10
Diphenylmethane-2,4' - diisocyanate	5873-54-1	1 – 5
Titanium Dioxide	13463-67-7	0.1 – 1
p-toluenesulfonylisocyanate	4083-64-1	0.1 – 1

Section 4. First Aid Measures

Description of first-aid measures:
General advice: Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.
Inhalation: Call a physician or poison control centre immediately. If unconscious place in recovery position and seek medical advice.
Skin contact: If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.
Eye contact: Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
Ingestion: Induce vomiting immediately and call a physician. Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.
Most important symptoms and effects, both acute and delayed: Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure if inhaled.

Section 5. Fire-fighting Measures

Unsuitable extinguishing media: High volume water jet.
Further information: Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special protective equipment for firefighters: Wear self-contained breathing apparatus for fire-fighting if necessary.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.
Environmental precautions: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and material for containment and cleaning up: Keep in suitable, closed containers for disposal.

Section 7. Handling and Storage

Advice on protection against fire and explosion: Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed.
Advice on safe handling: Avoid formation of respirable particles. Do not breathe vapors/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protect ion see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Conditions for safe storage: Keep container tightly closed in a dry and well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

Section 8. Exposure Controls/Personal Protection

Components with workplace control parameters:

Component	Exposure limits		
	ACGIH	NIOSH	OSHA-PELs
4,4' - diphenylmethane diisocyanate	0.005 ppm – TWA	0.005 ppm 0.05 mg/m^3 (TWA)	-
Titanium Dioxide	10 mg/m^3 – TWA	-	10 mg/m^3 (total dust) TWA

Personal protection equipment:
Respiratory protection: In the case of dust or aerosol formation use respirator with an approved filter. Dust safety masks are recommended when the dust concentration is more than 10 mg/m^3.
Hand protection: The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Eye protection: Eye wash bottle with pure water. Tightly fitting safety goggles. Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection: Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hygiene measures: When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

Section 9. Physical and Chemical Properties

Physical State:	Solid. Fiberglass cloth coated with light gray resin.
Colour:	Fiberglass cloth coated with light gray resin.
Odour:	No data available
Melting Point/ Freezing Point:	No data available
Boiling point:	No data available
Flammability (solid, gas):	No data available
Lower and Upper Explosion limits/ Flammability Limits:	No data available
Flash Point:	>145 °C Method: Seta closed cup
Auto-ignition Temperature:	No data available
Decomposition Temperature:	No data available
pH:	No data available
Kinematic Viscosity:	No data available
Solubility:	No data available
Evaporation rate (ether=1):	No data available
Flammability Limits in Air:	No data available
Solubility in other solvents:	No data available
Partition coefficient (n-octanol/water):	No data available
Vapour Pressure:	0.004 hPa (25 °C)
Density and/or Relative Density:	No data available
Relative Vapour Density:	No data available
Particle Characteristics:	No data available

Section 10. Stability and Reactivity

Reactivity: No decomposition if stored and applied as directed.
Chemical stability: No decomposition if stored and applied as directed.
Possibility of hazardous reactions: Product can decompose at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems
Conditions to avoid: Avoid moisture. Material reacts with water, releasing carbon dioxide, which can cause pressure build up and rupture of closed containers. Avoid elevated temperatures.
Incompatible Materials / Chemicals: Avoid contact with acids, water, alcohols, amines, ammonia, bases, moist air, and strong oxidizers. Reaction with water will generate carbon dioxide and heat. Avoid contact with polyols and other Isocyanates.
Hazardous Decomposition Products: Hazardous combustion products may include but are not limited to: nitrogen oxides, isocyanates, hydrogen cyanide, carbon monoxide, and carbon dioxide.

Section 11. Toxicological Information

Acute toxicity: Harmful if inhaled.

Oral: Acute toxicity estimate: > 5,000 mg/kg. Method: Calculation method
Inhalation: Acute toxicity estimate: 4.74 mg/l. Exposure time: 4 h. Test atmosphere: dust/mist. Method: Calculation method
Acute toxicity estimate: 3.44 mg/l. Exposure time: 4 h. Test atmosphere: dust/mist. Method: Calculation method
Dermal: Acute toxicity estimate: > 5,000 mg/kg. Method: Calculation method

For Isocyanic acid, polymethylenepolyphenylene ester:
Acute inhalation: LC50 (rat): 0.49 mg/l. Exposure time: 4 h. Test atmosphere: dust/mist
For 4,4'-diphenylmethane diisocyanate:
Acute inhalation: LC50 (rat, male and female): 0.49 mg/l. Test atmosphere: dust/mist. Method: OECD Test Guidelines 403

Skin corrosion/irritation: May cause skin irritation and/or dermatitis.
Serious eye damage/irritation: May cause irreversible eye damage.
Respiratory or skin sensitization: May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Germ cell mutagenicity: Not classified based on available information.
Carcinogenicity: Suspected of causing cancer.

IARC	Group 2B: Possibly carcinogenic to humans.	
	Titanium Dioxide	13463-67-7
	Group 3: Not classifiable as to its carcinogenicity to humans.	
	Isocyanic acid, polymethylenepolyphenylene ester	9016-87-9
	4,4'-diphenylmethane diisocyanate	101-68-8
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.	
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.	

Reproductive Toxicity: Not classified based on available information.
STOT - single exposure: May cause respiratory irritation.
STOT - repeated exposure: May cause damage to organs through prolonged or repeated exposure if inhaled.
Aspiration Toxicity: Not classified based on available information.

Section 12. Ecological Information

Toxicity: The following percentage of the mixture consists of ingredient(s) with unknown hazards to the aquatic environment: 24.45%.
Persistence and degradability: No additional information available.
Bioaccumulative potential: Diphenylmethane - 2,4' – diisocyanate: Partition coefficient: n-octanol/water: log Pow: 5.22
Mobility in soil: No additional information available.
Other adverse effects: Ozone-Depletion Potential: Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances. Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Section 13. Disposal Considerations

Disposal methods: Waste from residues: Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company. Contaminated packaging: Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

Uncleaned packaging: Dispose of in accordance to all local, state, and/or national regislation.

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

EPCRA - Emergency Planning and Community Right - to - Know Act
CERCLA Reportable Quantity

Component	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
4,4' - diphenylmethane diisocyanate	101-68-8	5000	*

*Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity: This material does not contain any components with a section 304 EHS RQ.
SARA 311/312 Hazards: Chronic Health Hazard. Acute Health Hazard.
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313: The following components are subject to reporting levels established by SARA Title III, Section 313:

Isocyanic acid, polymethylenepolyphenylene ester	9016-87-9	7.34%
4,4' - diphenylmethane diisocyanate	101-68-8	7.34%

Clean Air Act: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B). The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

4,4' - diphenylmethane diisocyanate	101-68-8	7.34%

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F). The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermedi- ate or Final VOC's (40 CFR 60.489):

4,4' - diphenylmethane diisocyanate	101-68-8	7.34%

Clean Water Act: This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A. This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3. This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307.

California Prop 65: WARNING! This product contains a chemical known to the State of California to cause cancer.

Titanium Dioxide	13463-67-7
Carbon Black	1333-86-4

Section 16. Other Information

The information contained herein is based on the data available to us and is believed to be accurate. The data is offered in good faith as typical values and not as product specification. The information in this data sheet was compiled from information supplied by the vendors of the components of this compound. CSNRI makes no warranty either expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. The recommended industrial hygiene and safe handling procedures are believed to be genuinely applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate. CSNRI assumes no responsibility for injury from the use of the product described herein. The information is intended only to assist in the safe handling of this material. CSNRI DISCLAIMS ALL EXPRESS AND IMPLIED WARRANTIES INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR FREEDOM FROM PATENT INFRINGEMENT. CSNRI WILL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

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