SAFETY DATA SHEET

Section 1 – Product and Company Identification

Product Identifier: BS412 BS425

Product Name: Stop It® BoreShield™

Recommended Use: Pipe Leak Repair and Rehabilitation

Producer: InduMar Systems, LP.
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Houston, Texas 77092 USA
Phone: 800-523-7867
Fax: 713-977-4164
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Emergency Contact: Chemtrec: 1-800-424-9300 (USA & Canada)

Section 2 – Hazards Identification

Classification of the Substance or Mixture:

ACUTE TOXICITY - ORAL	Category 4
SKIN CORROSION/IRRITATION	Category 2
SERIOUS EYE DAMAGE/EYE IRRITATION	Category 2B
RESPIRATORY SENSITIZER	Category 1
SKIN SENSITIZER	Category 1

Hazard Pictograms:

Signal Word: Danger

Hazard Statements:

H302 – Harmful if swallowed.
H315 – Causes skin irritation.
H317 – May cause an allergic skin reaction.
H334 – May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 – May cause an allergic skin reaction.

Precautionary Statements:

P261 – Avoid breathing vapors, mist, spray or dust.
P264 – Wash hands, forearms and other exposed areas thoroughly after handling.
P270 – Do not eat, drink, or smoke when using this product.
P272 – Contaminated work clothing should not be allowed out of the workplace.
P285 – In case of inadequate ventilation wear respiratory protection.
P301+P312 – IF SWALLOWED: Call a Poison Center or doctor/physician if you feel unwell.
P302+P352 – IF ON SKIN: Wash with plenty of soap and water.
P304+P341 – IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest position comfortable for breathing.
P305+P351+P338 – IF IN EYES: Rise cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P330 – Rinse mouth.
P332+P313 – If skin irritation occurs: get medical advice/attention.
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 or doctor/physician.
P362 – Take off contaminated clothing and wash before reuse.
P363 – Wash contaminated clothing before reuse.
P501 – Dispose of contents/container in accordance with local, regional, national, and international regulations.

Other Hazards Not Contributing to the Classification:
Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions
Excessive exposure may cause irritation of the respiratory tract and lungs and pulmonary edema.
May cause asthmatic signs and symptoms in hypersensitive people.
Dust is produced when this product is removed using an electric saw.

Section 3 – Composition/Information on Ingredients

Substance: Not Applicable
Mixture:

Ingredients	% *	CAS Number
PU Prepolymer	16-27	Proprietary
MDI	13-21	26447-40-5
MDI Homopolymer	5-9	39310-05-9
Antifoam	<2	556-67-2
DMDEE	<2	6425-39-4
Color Stabilizer	<1	6683-19-8
AMSA	<1	75-75-2
Fiberglass	44-46	65997-17-3

*Exact concentration of composition has been withheld as a trade secret.
Occupational exposure limits, if available, are listed in Section 8.

Section 4 – First Aid Measures

Description of First Aid Measures:
First-aid Measures after Eye Contact: Flush eyes immediately with flowing water continuously for 15 minutes. Seek medical advice.
First-aid Measures after Skin Contact: Remove from skin immediately by washing with soap and warm water. An alcohol based hand sanitizer can help with removal of resin from skin.
First-aid Measures after Ingestion: Drink plenty of water. Do not induce vomiting. Seek medical attention.
First-aid Measures after Inhalation: In the event of inhalation remove to fresh air. Give oxygen in the event of breathing difficulty. Apply artificial respiration if necessary. Seek medical advice.
Most Important Symptoms and Effects, both Acute and Delayed:
Irritating to eyes, skin, and respiratory system.
Symptoms/Injuries after Eye Contact: May cause very slight, temporary corneal damage.
Symptoms/Injuries after Skin Contact: Resins may stick to skin and cause irritation on removal. May cause allergic reaction in susceptible individuals.
Symptoms/Injuries after Ingestion: Small amounts swallowed incidental to normal handling are not likely to cause injury.
Symptoms/Injuries after Inhalation: At room temperature vapors are minimal. May cause sensation by inhalation and very low concentrations may cause asthmatic signs and symptoms in hypersensitive persons.
Indication of any Immediate Medical Attention and Special Treatment Needed:
If you feel unwell, seek medical advice.

Section 5 – Firefighting Measures

Extinguishing Media:
Suitable Extinguishing Media: Carbon Dioxide (CO_2), Dry Chemical, Alcohol or Polymer Foam, Water Fog
Unsuitable Extinguishing Media: n/a
Specific Hazards Arising from Substance or Mixture:
Exposure Hazard: Under fire conditions, emitted vapors are extremely irritating when inhaled. Self-contained breathing apparatus

(SCBA) should be used.

Special Protective Equipment and Precautions for Firefighters:

Fire fighters and others who may be exposed under fire conditions should be equipped with NIOSH approved positive pressure self-contained breathing apparatus and full protective clothing.

Section 6 – Accidental Release Measures

Not a hazardous waste.

Personal Precautions, Protective Equipment and Emergency Procedures:

Use appropriate personal protective equipment (PPE). At minimum, wear gloves when handling uncured product. Avoid all contact with skin and eyes.

Environmental Precautions:

Prevent entry to sewers and public waters.

Methods and Materials for Containment and Cleaning Up:

Allow product to cure and dispose of in normal manner in accordance to all applicable state, federal, and local laws.

Section 7 – Handling & Storage

Precautions for Safe Handling:

Always wear gloves, and additional personal protective equipment (PPE) as specified by the workplace, when handling. Avoid contact with eyes, skin and clothing. In case of inadequate ventilation wear respiratory protection. Do not eat, drink, or smoke when using this product. Wash hands, forearms and other exposed areas thoroughly after handling.

Conditions for Safe Storage, Including any Incompatibilities:

Storage:	Store in cool, dry, well ventilated area Optimal storage temperature between 40-80°F (4-20°C) Shelf life: 2 years from date of purchase
Incompatibilities:	n/a

Section 8 – Exposure Controls/Personal Protection

Control Parameters:

Exposure Limit Values:

Methylene bisphenyl isocyanate (MDI): ACGIH TLV is 0.005 ppm TWA and OSHA PEL is 0.02 PPM (0.2 mg/m3) Ceiling.

Appropriate Engineering Controls:

Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.

Individual Protection Measures:

Hand Protection: Rubber or plastic gloves should be worn.

Eye Protection: Avoid contact; Protective glasses are always recommended.

Skin Protection: Wear suitable protective clothing.

Respiratory Protection: Not needed in normal application. Use PPE to reduce worker exposure to hazards when engineering and administrative controls are not feasible or effective in reducing exposure below PELs.

Section 9 – Physical and Chemical Properties

Information on Basic Physical & Chemical Properties:

Appearance:	Fiberglass cloth coated with white or black tacky resin
Odor:	Very slight
Odor threshold:	Not known
pH:	n/a
Melting point/Freezing point:	Resin only: <15°C (59°F) / Not known
Boiling point/range:	Resin decomposed >200°C (392°F)
Flash point:	Resin: 218°C

Evaporation rate:	Not known
Flammability (solid, gas):	Not known
Flammability limits:	**LEL:** None **UEL:** None
Vapor pressure:	Resin: 0.0002mm Hg@24°C (75°F)
Vapor density:	Not known
Relative density:	Resin only: 1.210g/cm^{-3}
Solubility:	Water: Insoluble; reacts with water to liberate CO_2 gases Fat: Not Known
Partial coefficient: n-octanol/water:	Not known
Auto-ignition temperature:	Not known
Decomposition temperature:	Resin decomposed >200°C (392°F)
Viscosity:	Resin: 45,000 to 70,000 cps (age dependent)
Specific gravity:	Resin: 1.133

Section 10 – Stability and Reactivity

Reactivity:

Hazardous reactions will not occur under normal conditions.

Chemical stability:

Stable under recommended handling and storage conditions. (see section 7) Hazardous Polymerization will not occur.

Possibility of Hazardous Reactions:

None

Conditions to Avoid:

Elevated temperatures. Moisture contamination may form CO_2 gas pressure.

Incompatible Materials:

Strong bases, alcohols, metal compounds, surface active agents

Hazardous Decomposition Products:

None

Section 11 – Toxicological Information

Likely Routes of Exposure:

Skin, Eyes, Inhalation, Ingestion

Symptoms Related to the Physical, Chemical, and Toxicological Characteristics:

Symptoms/Injuries after Eye Contact: Causes serious eye irritation. Symptoms may include tearing, reddening and swelling. If left untreated may cause very slight, temporary corneal damage.

Symptoms/Injuries after Skin Contact: May cause skin irritation or allergic reaction in susceptible individuals with reddening, swelling, rash, scaling, or blistering. Cured resins are difficult to remove.

Symptoms/Injuries after Ingestion: May be harmful if swallowed. Symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea. Small amounts swallowed incidental to normal handling are not likely to cause injury.

Symptoms/Injuries after Inhalation: Symptoms of irritation of the mucous membranes in the respiratory tract may include runny nose, sore throat, coughing, chest discomfort or shortness of breath. Very low concentrations may cause asthmatic signs and symptoms in hypersensitive persons.

Chronic Effects from Short and Long Term Exposure:

Respiratory/Dermal Sensitizer: Skin sensitization may develop from prolonged, repeated skin contact. There is equivocal evidence from animal studies that respiratory sensitization can be provoked through repeated skin contact with diisocyanates.

Numerical Measures of Toxicity:

Acute Toxicity (LD_{50}): MDI oral LD_{50} for rats is >2000 mg/kg. For DMDEE the LD_{50} (rats) is 2025 mg/kg

Irritant to Skin: MDI LD_{50} for skin absorption in rabbits is >200 mg/kg. For DMDEE Dermal toxicity in rabbits LD_{50} is 3058 mg/kg

Chronic Toxicity/Carcinogenicity: Empirical data on effects on humans: Carcinogenicity or MDI-Industrial experience in humans has not shown any links between MDI based products exposure and cancer development.

Genotoxicity: No links evident
Reproductive Toxicity: No links evident

Section 12 – Ecological Information

Ecotoxicity:
Aquatic Organisms: Material is not expected to be classified as dangerous to aquatic organisms (LC_{50}/ EC_{50}/ IC_{50} greater than 100mg/L in most sensitive species).
Soil Organisms: No impact
Plants & Terrestrial Animals: No impact
Persistence and Degradability: n/a
Bioaccumulative Potential:
Movement in the environment is expected to be limited due to formation of insoluble polymers. Partitioning from water to n-octanol is not applicable. In the aqueous medium formation of insoluble and chemically inert polyureas will occur. No appreciable volatilization from water to air is expected.
Mobility in Soil:
No Impact
Other Adverse Effects:
Ozone Depletion Potential (CO_2 Generation): Minimal
Photochemical Ozone Creation (CO_2 Generation): Minimal
Global Warming Potential (CO_2 Generation): Minimal
Effects on Waste Water Treatment Plants: Minimal

Section 13 – Disposal Considerations

Waste Treatment Methods:
Product/Packaging: Dispose of contents/container in accordance with local, regional, national, and international regulations.
Waste Classification: Hardened material is not classified as a hazardous waste and may be disposed of in ordinary landfill.

Section 14 – Transport Information

Special Precautions Applicable to the Transport of this Product: None

DOT: Not regulated for transport

Classifications for SEA transport (IMO-IMDG): Not regulated for transport

Classifications for AIR transport (IATA/ICAO): Not regulated for transport

TDG: Not regulated for transport

Section 15 – Regulatory Information

Safety, Health, and Environmental Regulations Specific for this Product that is not Indicated Elsewhere: None

Section 16 – Other Information

Please refer to the product labeling or package insert for full instructions on the use of this product.
Contact: EHS@indumar.com with questions or comments

InduMar Systems, LP. urges each customer or recipient of this SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the date of issue. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The

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