

SAFETY DATA SHEET

Section 1 – Product and Company Identification

Product Identifier: 24786 24257 21278 21225 41278 41225 42578 42525
Product Name: Stop It® Pipe Repair Tape
Recommended Use: Pipe Leak Repair and Rehabilitation
Producer: InduMar Products, Inc.
2230 W Governors Cir
Houston, Texas 77092 USA
Phone: 1-800-523-7867 / 1-713-977-4100
www.indumar.com

Emergency Contact: INFOTRAC 1-800-535-5053 (US and CANADA); 1-352-323-3500 (INTERNATIONAL)

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.

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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

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 (CO₂), Dry Chemical, Foam, Water Fog

Unsuitable Extinguishing Media: n/a

Specific Hazards Arising from Substance or Mixture:

Fire Hazard: Not flammable but will support combustion; self-extinguishing

Exposure Hazard: Under fire conditions, emitted vapors are extremely irritating when inhaled.

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Special Protective Equipment and Precautions for Firefighters:

Fire fighters and others who may be exposed to the products of combustion should be equipped with NIOSH approved positive pressure self-contained breathing apparatus (SCBA) 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

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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 CO₂ 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 (LD₅₀): MDI oral LD₅₀ for rats is >2000 mg/kg. For DMDEE the LD₅₀ (rats) is 2025 mg/kg

Irritant to Skin: MDI LD₅₀ for skin absorption in rabbits is >200 mg/kg. For DMDEE Dermal toxicity in rabbits LD₅₀ 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:

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Aquatic Organisms: Material is not expected to be classified as dangerous to aquatic organisms (LC₅₀/ EC₅₀/ IC₅₀ 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 (CO₂ Generation): Minimal

Photochemical Ozone Creation (CO₂ Generation): Minimal

Global Warming Potential (CO₂ 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

Reason for Revision: Periodic review.

InduMar Products, Inc. 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 information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of InduMar Products, Inc., it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product.

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Section 1 – Product and Company Identification

Product Identifier: 34978
Product Name: Fix Stix™
Recommended Use: Sealant or Adhesive
Producer: InduMar Products, Inc.
2230 W Governors Cir
Houston, Texas 77092 USA
Phone: 1-800-523-7867 / 1-713-977-4100
www.indumar.com

Emergency Contact: INFOTRAC 1-800-535-5053 (US and CANADA); 1-352-323-3500 (INTERNATIONAL)

Section 2 – Hazards Identification

OSHA/HCS Status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Classification of the Substance or Mixture:

SKIN CORROSION/IRRITATION	Category 2
SERIOUS EYE DAMAGE/EYE IRRITATION	Category 2B
SKIN SENSITIZER	Category 1

Hazard Pictograms:



Signal Word: Warning

Hazard Statements:

Causes skin and eye irritation.
May cause an allergic skin reaction.

Precautionary Statements:

Prevention:

Wear Protective Gloves, protective clothing, eye or face protection
Avoid breathing dust.
Wash hands thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Do not eat, drink, or smoke when using this product.

Response:

IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation or rash occurs get medical advice/attention.
IF IN EYES: Rise cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.
IF SWALLOWED: Call a Poison Center or doctor/physician if you feel unwell.

Other Hazards Not Contributing to the Classification: None Known

Section 3 – Composition/Information on Ingredients

Mixture:

Ingredients	% *	CAS Number
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	10-30	25068-38-6
Crystalline silica non-respirable	0.1-1	14808-60-7
Talc , not containing asbestiform fibres	30-60	14807-96-6
Ferrosilicon	10-30	8049-17-0

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Glass, oxide, chemicals	10-30	65997-17-3
Nepheline syenite	1-5	37244-96-5

Occupational exposure limits, if available, are listed in Section 8.

Section 4 – First Aid Measures

Description of First Aid Measures:

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin Contact: Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Eye Contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Ingestion: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most Important Symptoms and Effects, both Acute and Delayed:

Potential acute health effects

Inhalation: No known significant effects or critical hazards.

Skin Contact: Causes skin irritation. May cause allergic skin reaction.

Eye Contact: Causes serious eye irritation.

Ingestion: Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

Inhalation: No specific data.

Skin Contact: Irritation; redness.

Eye Contact: Pain or irritation; watering; redness.

Ingestion: No specific data.

Indication of any Immediate Medical Attention and Special Treatment Needed:

Notes to physician: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments: No specific data.

Section 5 – Firefighting Measures

Extinguishing Media:

Suitable Extinguishing Media: Use an extinguishing agent suitable for the surrounding fire.

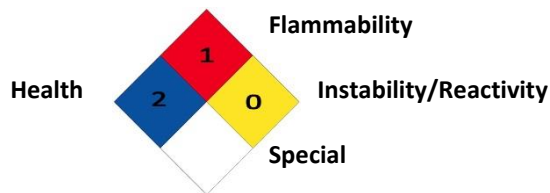
Unsuitable Extinguishing Media: None known.

Specific Hazards Arising from Substance or Mixture:

No specific fire or explosion hazard.

National Fire Protection Association (U.S.A.)

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Hazardous thermal decomposition products: May include carbon dioxide; carbon monoxide; sulfur oxides; halogenated compounds; metal oxide/oxides.

Special Protective Equipment and Precautions for Firefighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Section 6 – Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures:

For non-emergency responders: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency responders".

Environmental Precautions:

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and Materials for Containment and Cleaning Up:

Small spill: Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill: Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7 – Handling & Storage

Precautions for Safe Handling:

Protective Measures:

Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene:

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for Safe Storage, Including any Incompatibilities:

Do not store above the following temperature: 35°C (95°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

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Section 8 – Exposure Controls/Personal Protection

Control Parameters:

Occupational Exposure Limit Values

Ingredient name	CAS #	Exposure limits
crystalline silica non-respirable	14808-60-7	OSHA PEL Z3 (United States, 9/2005). Notes: 250/(%SiO₂+5) TWA: 250 MPPCF / (%SiO₂+5) 8 hours. Form: Respirable OSHA PEL Z3 (United States, 9/2005). Notes: 10/(SiO₂+2) TWA: 10 MG/M³ / (%SiO₂+2) 8 hours. Form: Respirable ACGIH TLV (United States, 3/2012). TWA: 0.025 mg/m³ 8 hours. Form: Respirable fraction NIOSH REL (United States, 1/2013). TWA: 0.05 mg/m³ 10 hours. Form: Respirable dust OSHA PEL Z3 (United States, 9/2005). Notes: 30/(%SiO₂+2)

Canada

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			Notations
Ingredient	List name	ppm	mg/m ³	Other	ppm	mg/m ³	Other	ppm	mg/m ³	Other	
Talc, not containing asbestiform fibres	AB 4/2009	-	2	-	-	-	-	-	-	-	[a]
	BC 4/2012	-	2	-	-	-	-	-	-	-	[b]
	ON 1/2013	-	-	0.1 f/cc	-	-	-	-	-	-	
		-	2	-	-	-	-	-	-	-	[c]
		-	2	-	-	-	-	-	-	-	[d]
	QC 12/2012	-	-	2 f/cc	-	-	-	-	-	-	
glass, oxide, chemicals	US ACGIH 3/2012	-	3	-	-	-	-	-	-	-	[e]
	AB 4/2009	-	5	-	-	-	-	-	-	-	[f]
		-	-	1 f/cc	-	-	-	-	-	-	[g]
		-	5	1 f/cc	-	-	-	-	-	-	[h]
		-	5	-	-	-	-	-	-	-	[i]
		-	5	-	-	-	-	-	-	-	[j]
	ON 1/2013	-	-	1 f/cc	-	-	-	-	-	-	
		-	10	-	-	-	-	-	-	-	[k]
		-	5	-	-	-	-	-	-	-	[l]
	QC 12/2012	-	-	1 f/cc	-	-	-	-	-	-	[m]
		-	-	1 f/cc	-	-	-	-	-	-	[n]
		-	10	-	-	-	-	-	-	-	[o]
Crystalline silica non-respirable	US ACGIH 3/2012	-	0.025	-	-	-	-	-	-	-	[p]
	BC 4/2012	-	0.025	-	-	-	-	-	-	-	[b]
	ON 1/2013	-	0.1	-	-	-	-	-	-	-	[c]
	QC 12/2012	-	0.1	-	-	-	-	-	-	-	[e]
Nepheline syenite	ON 1/2013	-	10	-	-	-	-	-	-	-	[q]

Form: [a]Respirable particulate [b]Respirable [c]Respirable fraction: means that size fraction of the airborne particulate deposited in the gas-exchange region of the respiratory tract and collected during air sampling with a particle size- selective device that, (a) meets the ACGIH particle size-selective sampling criteria for airborne particulate matter; and (b) has the cut point of 4 µm at 50 per cent collection efficiency. [d]The value is for particulate matter containing no asbestos and < 1 per cent crystalline silica. [e]Respirable dust. [f]Inhalable fraction [g]Respirable fibers: length greater than 5 µm; aspect ratio equal to or greater than 3:1 as determined by the membrane filter method at 400-450X magnification (4-mm objective) phase contrast illumination. [h]Fibres [i]Fibres, total particulate [j]Inhalable [k]Fiber [l]Inhalable fraction: means that size fraction of the airborne particulate deposited anywhere in the respiratory tract and collected during air sampling with a particle size-selective device that, (a) meets the ACGIH particle size-selective sampling criteria for airborne particulate matter; and (b) has the cut point of 100 µm at 50 per cent collection efficiency.

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[m]Respirable fibres: length $>5\mu\text{m}$; aspect ratio $\geq 3:1$, as determined by the membrane filter method at 400-450 times magnification (4-mm objective), using phase-contrast illumination. [n]RESPIRABLE FIBRES (other than respirable asbestos fibres): Objects, other than respirable asbestos fibres, longer than $5\mu\text{m}$, having a diameter of less than $3\mu\text{m}$ and a ratio of length to diameter of more than 3 :1. [o]Total dust. [p]Respirable fraction [q]Total dust

Appropriate Engineering Controls:

No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Environmental exposure Controls:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual Protection Measures:

Hygiene Measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory Protection: Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin/Hand Protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body Protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other Skin Protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Eye/Face Protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Section 9 – Physical and Chemical Properties

Information on Basic Physical & Chemical Properties:

Physical state:	Solid
Appearance:	Dark grey with black core
Odor:	Pungent [Strong]
Odor threshold:	Not available
pH:	Not available
Melting point/Freezing point:	Not available
Boiling point/range:	Not available
Flash point:	Closed cup: $>93.3^{\circ}\text{C}$ ($>199.9^{\circ}\text{F}$) [Setaflash.] [Product does not sustain combustion.]
Evaporation rate:	Not available
Flammability (solid, gas):	Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge.
Flammability limits:	LEL: Not available UEL: Not available
Vapor pressure:	Contains no VOCs.
Vapor density:	Not available

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Relative density: 2.247
Solubility: Water: Not available
Fat: Not available
Auto-ignition temperature: Not available
Decomposition temperature: >200°C (392°F)
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: Product is stable.

Possibility of Hazardous Reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to Avoid: No specific data.

Incompatible Materials: No specific data.

Hazardous Decomposition Products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11 – Toxicological Information

Information on toxicological effects:

Acute toxicity: No specific data.

Irritation/Corrosion:

Product/ingredient name	Result	Species	Score	Exposure	Observation
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 microliters	-
	Skin - Severe irritant	Rabbit	-	24 hours 2 milligrams	-

Sensitization: No specific data.

Mutagenicity: No specific data.

Carcinogenicity: No specific data.

Classification:

Product/ingredient name	OSHA	IARC	NTP
Crystalline silica non-respirable	-	1	Known to be a human carcinogen.

Reproductive toxicity: No specific data.

Teratogenicity: No specific data.

Specific target organ toxicity (single exposure): No specific data.

Specific target organ toxicity (repeated exposure): No specific data.

Aspiration hazard: No specific data.

Information on the likely routes of exposure: Not available

Potential acute health effects:

Symptoms/Injuries after Eye Contact: Causes serious eye irritation.

Symptoms/Injuries after Inhalation: No known significant effects or critical hazards.

Symptoms/Injuries after Skin Contact: Causes skin irritation. May cause an allergic skin reaction.

Symptoms/Injuries after Ingestion: Irritating to mouth, throat and stomach.

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

Symptoms/Injuries after Eye Contact: Adverse symptoms may include pain or irritation; watering; redness

Symptoms/Injuries after Inhalation: No specific data.

Symptoms/Injuries after Skin Contact: Adverse symptoms may include irritation; redness

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Symptoms/Injuries after Ingestion: No specific data.

Delayed and immediate effects and also chronic effects from short- and long-term exposure:

Short-term exposure:

Potential immediate effects: Not available.

Potential delayed effects: Not available.

Long-term exposure:

Potential immediate effects: Not available.

Potential delayed effects: Not available.

Potential chronic health effects:

No specific data.

General: Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental effects: No known significant effects or critical hazards.

Fertility effects: No known significant effects or critical hazards.

Numerical Measures of Toxicity:

No specific data.

Section 12 – Ecological Information

Ecotoxicity: No Specific data.

Persistence and Degradability: No specific data.

Bioaccumulative Potential:

Product/ingredient name	LogPow	BCF	Potential
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	2.64 to 3.78	31	low

Mobility in Soil: Not available

Other Adverse Effects: No known significant effects or critical hazards

Section 13 – Ecological Information

Waste Treatment Methods:

Product/Packaging: 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. 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. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

RCRA Classification: Not available.

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

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TDG: Not regulated for transport

Section 15 – Regulatory Information

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

United States

U.S. Federal regulations TSCA 8(a) PAIR: Siloxanes and Silicones, di-Me, reaction products with silica
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
United States inventory (TSCA 8b): All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs): Not listed

Clean Air Act Section 602 Class I Substances: Not listed

Clean Air Act Section 602 Class II Substances: Not listed

SARA 302/304

Composition/information on ingredients: No products were found

SARA 304 RQ: Not applicable.

SARA 311/312

Classification: Immediate (acute) health hazard

Composition/information on ingredients:

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	10 - 30	No.	No.	No.	Yes.	No.
Crystalline silica non-respirable	0.1 - 1	No.	No.	No.	No.	Yes.

State regulations

Massachusetts: The following components are listed: SOAPSTONE; MINERAL WOOL FIBER

New York: None of the components are listed.

New Jersey: The following components are listed: SOAPSTONE; SILICA, QUARTZ; QUARTZ (SiO₂); FERROSILICON; FERROCERIUM

Pennsylvania: The following components are listed: SOAPSTONE DUST; QUARTZ (SiO₂)

Minnesota Hazardous Substances: None of the components are listed.

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

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Talc, not containing asbestiform fibres	Yes.	No.	No.	No.
Crystalline silica non-respirable	Yes.	No.	No.	No.
Carbon black non-respirable	Yes.	No.	No.	No.

Canada

WHMIS (Canada) Class D-1B: Material causing immediate and serious toxic effects (Toxic).
Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).

Canadian Lists

Canadian NPRI: None of the components are listed

CEPA Toxic Substances: None of the components are listed

Canada Inventory: All components are listed or exempted

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

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International Regulations

International Lists

Australia inventory (AICS):	Not determined
China inventory (IECSC):	Not determined
Japan inventory:	Not determined
Korea inventory:	Not determined
Malaysia Inventory (EHS Register):	Not determined
New Zealand Inventory of Chemicals (NZIoC):	Not determined
Philippines inventory (PICCS):	Not determined
Taiwan inventory (CSNN):	Not determined

Section 16 – Other Information

Key to abbreviations

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL 73/78 = International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978.

("Marpol" = marine pollution)

UN = United Nations

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

Reason for Revision: Periodic review.

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