

Repair any Pipe **FAST!** with the Proven **PIPE REPAIR SYSTEM**

Restore Product Flow and Profit Flow in Minutes Prevent Environmental Contamination!



Use for Permanent Repair or to Extend the Service Life of Piping



Any metal or plastic pipe: Steel • Copper • Aluminum • Galvanized Black Iron • Stainless Steel • PVC CPVC • Fiberglass • Polyethylene Polypropylene and even PVDF. Pressure to 400 PSI Temperatures to 500° F Recommended for use on pipes up to 18 inches in diameter.



Routine and Emergency Leak Repair Hazardous Material Spill Control Structural Reinforcement • Sealing Joints Rebuilding Thinning Wall Corrosion Proofing • Abrasion Protection Repairs in Hard to Reach Areas Underwater Repairs Electrical Conduit Repair

STOP IT® PIPE REPAIR SYSTEM

Each kit includes:

TRI-CHEM

- STOP IT® knitted fiberglass tape pre-coated with water-activated polyurethane resins
- FIX STIX[™] hand moldable epoxy.*
- · Gloves for easy clean-up.
- · Detailed directions.

* Included FIX STIXTM hand moldable epoxy is resistant to hydrocarbons and most chemicals and is NSF certified for use on potable water.

is used by:

Petrochemical • Industrial Processing Pulp and Paper • HazMat Response Military • Marine • Irrigation Power Generation • Facilities Maintenance Water/Wastewater • Manufacturing Commercial Fishing Food Processing • Pharmaceutical Automotive





ANSI/NSF 61



STOP IT PIPE REPAIR SYSTEM GETS THE JOB DONE TIME AFTER TIME SINCE 1986!

Ideal for repairing pipe leaks, reinforcing pipe joints, rebuilding thinning pipe walls and corrosion proofing - in virtually any situation. even underwater! It fully cures to a hard, durable repair in 30 minutes.

The STOP IT® Pipe Repair System includes a strong knitted fiberglass tape coated with fast setting urethane resins that are water-activated. The system also includes FIX STIXTM, a steel-filled hand-moldable epoxy that sets rock hard in only 20 minutes. It is perfect for plugging leaks, filling cracks and complex voids and offsets at couplings and fittings.

Using the STOP IT[®] urethane rich fiberglass tape in combination with FIX STIX™ greatly increases repair capacity. One person, with no special tools and no hot work can apply this quick in-field repair system in minutes.

Whether you are repairing a chemical process line or any other critical pipeline, the STOP IT® Pipe Repair System is your dollar-saving ally in the battle against lost-production costs in common situations. Under certain conditions an active gravity-flow leak (about 15 PSI or less) from a pinhole may be repaired without shutting down.

STOP IT® PIPE REPAIR SYSTEM - TECHNICAL INFORMATION

Compatibility and Chemical Resistance: The STOP IT® Pipe Repair tape combined with FIX STIX™ epoxy is generally compatible with a wide range of chemicals and may be used with any type of plasic or metal piping containing:

· Hydrocarbons including Petrochemicals,

- Fuels, Solvents, Gases
- · Acids
- · Bases
- · Water
- Slurries
- · Steam
- Organics
- · Salts

The durability of the repair may be affected by very strong acids (pH under 3) or bases (pH over 12). Consult the STOP IT® Pipe Repair System and the FIX STIX™ Chemical Compatibility Charts for more detailed chemical resistance information.

Potable Water: The FIX STIX™ included in each STOP IT® Pipe Repair System kit is NSF certified for use on potable water. STOP IT® is also accepted for use on potable water lines by the WRC (U.K.)

Shelf Life: 2 years from date of purchase when stored at 40° F to 83° F (5° C to 28° C) with proper stock rotation.

Color: White or Black.

Tensile Strength: ASTM D 6039, 24,950psi/in width 172MPa.

Modulus: ASTM D 6039, 62,505psi 4309MPa.

Flexural Yield Strength: ASTM D790, 12,005psi / 82.77MPa.

Durometer Hardness: ASTM D 2240 63 Type D.

Temperature/Heat Resistance: From -20° F up to 250° F (-29° C to 121° C) - continuous. From 250° F to 500° F (121° C to 260° C) - intermittent. If possible, the pipe should be at ambient temperature before application.

STOP IT® is compliant with US DOT 49CFR parts 192 and 195. Testing was performed under the ASME PCC-2 Article for ASME B31.1 B31.4 and B31.8.

Pressure Retention Capacity: Recommended for pressures up to about 400 PSI (28 kg/cm²). Results may vary depending on hole size, type of pipe, pipe diameter, contents of pipe and method of application.

Set Time: Tack free in 3 to 5 minutes at ambient temperatures of 50° F to 80° F (10° C to 27° C). Set time is slower below 50° F and faster above 80° F.

Cure Time: Normally cures in 30 minutes at ambient temperatures between 50° F to 80° F (10° C to 27° C). Longer cure times may occur when ambient temperature is less than 50° F (10° C). Heat may be applied to accelerate cure times. Cure time is greatly accelerated at extremely high ambient or pipe surface temperatures. The UNOPENED foil pouch may be immersed in cool water for at least 15 minutes to slow set and cure times and to provide ease of handling.

Description: Each STOP IT® Pipe Repair System kit contains a roll of knitted fiberglass tape precoated with water activated polyurethane resins enclosed in a sealed foil pouch, a piece of FIX STIX™ epoxy, latex gloves and printed instructions.

Roll Sizes:

- Small: 2 inches wide by 4 feet long (5.08cm x 1.2m).
- . Medium: 2 inches wide by 12 feet long (5.08cm x 3.6m).
- . Large: 4 inches wide by 12 feet long (10.16cm x 3.6m).
- X-Large: 4 inches wide by 25 feet long (10.16cm x 7.62m).

Case Content: Ten (10) kits.

Case Weight:

- · Small: approximately 4 pounds (1.8 kg).
- · Medium: approximately 6 pounds (2.7 kg).
- Large: approximately 8 pounds (3.6 kg).
- · X-Large: approximately 14 pounds (6.3 kg).

Item and NSN Numbers:

- . Small: White 24786, NSN 4730-01-301-3686, Black 24257.
- Medium: White 21278, NSN 4730-01-301-3687, Black 21225.
- Large: White 41278, NSN 4730-01-301-3688, Black 41225.
- X-Large: White 42578, NSN 4730-01-600-0273, Black 42525.

STOP IT[®] does not contain any Volatile Organic Compound (VOC) as defined in the USA for regulatory purposes.





Stop Leaks and Restore Flow in Minutes





























QUESTIONS & ANSWERS ABOUT THE STOP IT® PIPE REPAIR SYSTEM

This question and answer series has been prepared to address common questions and to assist in the application and use of STOP IT[®]. Refer to the product information brochure, online video and application directions for further details.

WHAT IS THE STOP IT® PIPE REPAIR SYSTEM?

STOP IT[®] Pipe Repair System is a strong knitted fiberglass tape with fast setting urethane resins that are wateractivated. The system also includes FIX STIXTM, a steel filled hand - moldable epoxy that sets rock hard in only 20 minutes.

WHAT IS THE PRODUCT USED FOR?

STOP IT® Pipe Repair System can be used on any <u>metal</u> or <u>plastic</u> pipe and is used for repairing pipe leaks, reinforcing pipe joints, rebuilding thinning pipe walls and corrosion proofing – in virtually any situation, even underwater! It fully cures to a hard, durable repair in 30 minutes.

WHAT IS THE MARKET FOR STOP IT®?

STOP IT® is used in a wide verity of markets. Simply put, any operation or facility that utilizes pipe is a potential STOP IT® customer.

WHERE IS STOP IT® BEING USED IN THE INDUSTRIAL MARKETPLACE?

STOP IT® is being used in maintenance sectors in oil & gas (upstream & downstream), petrochemical, processing facilities, pulp & paper mills, power generation, facility maintenance, water/wastewater, manufacturing, maritime, food processors, automotive and aerospace.

HOW IS STOP IT® APPLIED?

The simplicity and ease of application is the attractive benefit of using STOP IT[®]. The product is applied by hand with minimum surface preparation (the only surface preparation needed; a rasp, file or a wire brush to rough score the pipe and remove any lose scale). One person with no special tools and no hot work can apply this quick in-field repair in minutes. Refer to install instructions [included in each kit] for step-by-step directions.

HOW DIFFICULT IS IT TO APPLY STOP IT®?

STOP IT® is very simple to apply and it's much e asier to use than most composites and epoxy products on the market. Unlike most repair products, there is no mixing involved, no special training required and each STOP IT® kit contains everything needed to do a repair including simple step-by-step instructions.

WHAT SIZE KITS ARE AVAILABLE FOR STOP IT®?

STOP IT® comes in four (4) sizes: small: 2"x4', medium: 2"x12', large: 4"x12', and extra-large: 4"x25'. All sizes are packed and shipped in quantities of ten (10) rolls to the case.

HOW MUCH PRODUCT IS NEEDED TO STOP A LEAK?

STOP IT[®] can be used on pipe diameters from $\frac{1}{2}$ "to 24" and the number of STOP IT[®] rolls needed is based on the number of ply's/layers required depending on pipe diameter and the pressure. See <u>Product Selection Guide</u> which can be found on the lid of each kit, back side of each instruction sheet, and from your sales rep.

CAN STOP IT® BE USED ON LEAKS UNDER PRESSURE?

Ideally all pressure should be relieved off the line before applying the STOP IT[®] Pipe Repair System. If the pressure cannot be shut off, STOP IT[®] can be applied to an active leak if the pressure is reduced to gravity flow, head pressure or 15- 30 psi. The technique used on an active leak is as follows; knead the steel filled epoxy and roll it into a ball. Firmly press the Fix Stix[™] epoxy ball into the fiberglass tape about 2-4 inches from the edge of the roll. Flatten the epoxy (size of quarter) with your thumb so that the epoxy penetrates into the other side of the tape. Once you have submerged the fiberglass tape in water, position the tape with the epoxy over the leak-site so the FIX STIX[™] will be pulled into and fully cover the leak site when wrapping. In one quick motion, cinch down on the tape and wrap quickly around the pipe, pulling the roll as tightly and evenly as possible.

WHAT IS THE WORKING SET TIME AND CURE TIME FOR STOP IT®?

From opening the foil pouch, immersing the roll in water, and applying the product until all bubbling has stopped; the working time is about 3-4 minutes. It will fully cure in about 30 minutes at 75 degrees F.

WHAT KIND OF REPAIRS ARE MADE WITH STOP IT®

STOP IT® is used to repair leaks on a wide verity of applications including hydrocarbons, fuels, solvents, gases, acids, bases, water, slurries, steam, organics and salts. See <u>Chemical Compatibility Guide</u> for a full list of compatible chemicals. The end user should determine the suitability of STOP IT® for its intended use. STOP IT® not only repairs straight runs of pipe but the conformability also allows repairs on, elbows, tees, fittings, flanges and couplings. Simply put; <u>STOP IT® will work where clamps won't!</u>

HOW LARGE OF A HOLE CAN BE REPAIRED USING STOP IT®?

STOP IT[®]'s testing is based on repairing a 1/8" h *ole*. *Ideally, the smaller the hole is the easier it is to repair*. *However, larger size holes can be repaired but, the larger the hole the more challenging the repair becomes.*

WHAT ARE THE TEMPERATURE AND PRESSURE LIMITS OF STOP IT®?

STOP IT[®] can be used on lines that reach up to **500 degrees** F and pressures up to **400 PSI**. STOP 1T[®] should be applied when the pipe is at ambient temperature. Normal directions for application apply. Thermal decomposition may occur over an indeterminable period of time when temperatures exceed 250 degrees F.

CAN STOP IT® BE A PERMANENT REPAIR?

If the repair site is kept within STOP IT[®]'s pressure and temperature limits, the repair could be considered permanent. However, there are many factors that could affect a "permanent repia"; condition of pipe, the size of the hole, the *location of the hole, and material that is corrosive or abrasive that runs through the line. Another factor in the decision* about whether or not the repair would be considered "permanent" is the maintenanpeocedure and policies of the facility where the repair is being made.

HOW IS STOP IT® DIFFERENT COMPARED OTHER WATER ACTIVATED TAPES ON THE MARKET?

STOP IT® is different in two distinct ways.

- 1. STOP IT® is a <u>knitted</u> fiberglass tape whereas other products use a <u>woven</u> fiberglass tape. A woven tape is very stiff and doesn't conform well to something that's not a straight pipe. Therefored a *dvantages of using a knitted tape, is its high* elasticity which gives it the ability to conform to tee', *elbows, couplings and odd configurations.*
- 2. STOP IT[®] uses unique urethane resin mixture which allows the resin to penetrate <u>each</u> layer of the fiberglass tape which creates one solid piece of material.

IS STOP IT® COMPLIANT WITH DOT?

Yes, STOP IT® is compliant with US DOT 49CRF parts 192 and 195. Testing was performed under the ASME PCC-2 Article for ASME B31.4 and B31.8.



STOP IT® PIPE REPAIR SYSTEM

Chemical Compatibility Guide for FIX STIX^{TM ***}

*** Note: The chemical compatibility table listed below is to serve only as a reference guide and is based on data obtained from an independent source. It does not represent actual testing performed by InduMar Products, Inc. and should not be interpreted as a warranty, expressed or implied, as to the suitability or compatibility of FIX STIXTM in contact with the listed substances. Before using, the user shall determine the suitability of the product for its intended use and user assumes all risk and liability, whatsoever in connection therewith. No warranty is expressed or implied regarding the accuracy of the data, suitability or the results from use thereof.

Resistance - Chemical Effect 1 - Excellent

Superscript Detail

- 2 Good
- 3 Fair
- 4 Not recommended
- ^A Satisfactory to 72 °F (22.2 °C) ^B Satisfactory to 120 °F (48.8 °C)

Acetaldehyde	1	Barium Nitrate	1 ^A	Copper Sulfate 5%	1^{A}	Hydrochloric Acid, Dry Gas	1
Acetamide	1	Barium Sulfate	3 ^A	Copper Sulfate >5%	1 ^A	Hydrochloric Acid 20%	2^{A}
Acetate Solvent	1	Barium Sulfide	2 ^A	Cream	1	Hydrochloric Acid 37%	1
Acetic Acid, Glacial	2^{B}	Beer	1 ^A	Cresols	1 ^A	Hydrocyanic Acid	1
Acetic Acid 20%	1	Beet Sugar Liquids	1 ^A	Cresvlic Acid	1 ^A	Hydrofluoric Acid 20%	1
Acetic Acid 80%	3	Benzaldehyde	1 ^A	Cvanic Acid	1 1 ^A	Hydrofluoric Acid 50%	3 ^B
Acetic Acid	3	Benzoic Acid	1 ^A	Cyclohexane	1 ^A	Hydrofluoric Acid 75%	2 ^A
Acetic Anhydride	1	Benzol	1 1 ^A	Detergents	1 1 ^A	Hydrofluositicic Acid 20%	2A
Acetone	4	Boray (Sodium Borate)	1 1 A	Dichlorethane	2 ^B	Hydrofluositicic Acid 100%	2A
Acetyl Chloride (Dry)	1	Boric Acid	1 1A	Diesel Fuel	1 ^A	Hydrogen Peroxide 10%	2A
A cetylene	1	Brewery Slop	1	Diethylamine	1	Hydrogen Perovide 30%	2
Acrylonitrile	1	Bromine	1	Diethylene Glycol	3	Hydrogen Perovide 100%	1
Alcohols Amyl	1	Butadiana	1A	Diphenyl Ovide	1	Hydrogen Sulfide (Aqua)	1
Bonyzl		Butane	1 1 A	Dues	1	Hydrogen Sulfide (Dry)	1
Dutyl	1	Putanel (Putyl Alashal)	1	Ensor Salts (Magnasium Sulfata)	1	Hydrogen Sunde (Dry)	1
Disastona	1	Buttar	4	Ethono	1A	Infrance Acid 70%	1
Ethyl	1 1 B	Buttermilk	1	Ethenolomine	1	Ink	2
Eulyi	1-	Dutterland	1	Eulanolamme	1.		5
Hexyl	1	Butylene	1	Ether	1		1
Isobutyi	1	Butylacetate	2.4	Ethyl Acetate	3.	Isopropyl Acetate	1
Isopropyi	- 4		3		1.	Isopropyl Ether	4
Metnyl	2	Calcium Bisulfate	1	Ethyl Sulfate	11	Jet Fuel (JP3,-4,-5)	1
Octyl	1	Calcium Bisulfide	1	Ethylene Chloride	2	Kerosene	1
Propyl	1	Calcium Bisulfite	1	Ethylene Dichloride	3	Ketones	3
Aluminum Chloride 20%	14	Calcium Carbonate	14	Ethylene Glycol	3	Lacquers	1
Aluminum Chloride	14	Calcium Chloride	14	Ethylene Oxide	1 ^A	Lacquer Thinners	1
Aluminum Fluoride	2	Calcium Hydroxide	1	Fatty Acids	1	Lactic Acid	2 ^A
Aluminum Hydroxide	2 ^A	Calcium Hypochlorite	1 ^A	Ferric Chloride	1 ^A	Lard	2
Aluminum Potassium Sulfate 10%	1 ^A	Calcium Sulfate	1 ^A	Ferric Sulfate	1 ^A	Latex	1
Aluminum Potassium Sulfate 100%	1 ^A	Calgon	1	Ferrous Chloride	1 ^A	Lead Acetate	1
Aluminum Sulfate	1 ^A	Cane Juice	1	Ferrous Sulfate	1 ^A	Lead Sulfamate	1
Amines	1 ^A	Carbolic Acid (See Phenol)	3 ^A	Fluoboric Acid	1	Ligroin	1
Ammonia 10%	1 ^A	Carbon Bisulfide	1	Fluorine	4	Lime	1
Ammonia, Anhydrous	1	Carbon Dioxide	1 ^A	Fluosilicic Acid	3	Lubricants	1
Ammonia, Liquid	1 ^A	Carbon Dioxide (Dry)	1^{A}	Formaldehyde 40%	1^{A}	Magnesium Carbonate	1
Ammonia Nitrate	1	Carbon Dioxide (Wet)	1 ^A	Formaldehyde 100%	1	Magnesium Chloride	1
Ammonium Bifluroide	1 ^A	Carbon Disulfide	3 ^A	Formic Acid	3 ^A	Magnesium Hydroxide	1
Ammonium Carbonate	1 ^A	Carbon Monoxide	1 ^A	Freon 11	1	Magnesium Nitrate	1
Ammonium Casenite	1	Carbon Tetrachloride	1 ^A	Freon 12	1	Magnesium Oxide	1
Ammonium Chloride	1 ^A	Carbonated Water	1	Freon 22	1	Magnesium Sulfate	1
Ammonium Hydroxide	1 ^A	Carbonic Acid	2^{A}	Freon 113	1	Maleic Acid	1
Ammonium Nitrate	1 ^A	Catsup	1	Freon TF	1	Maleic Anhydride	1
Ammonium Oxalate	1	Chloroacetic Acid	3 ^A	Fruit Juice	1	Mash	1
Ammonium Persulfate	1 ^A	Chlorinated Glue	1	Fuel Oils	1^{A}	Mayonnaise	1
Ammonium Phosphate, Dibasic	1 ^A	Chlorine, Anhydrous Liquid	3 ^A	Furan Resin	1^{A}	Melamine	1
Ammonium Phosphate, Monobasic	1	Chlorine Water	1 ^A	Furfural	1^{A}	Mercuric Chloride (Dilute)	1
Ammonium Phosphate, Tribasic	1	Chlorobenzene (Mono)	3 ^B	Gasoline	1	Mercuric Cyanide	1
Ammonium Sulfate	1 ^A	Chloroform	3 ^A	Gelatin	2	Mercury	1
Ammonium Thiosulfate	1	Chlorosulfonic Acid	3 ^A	Glucose	2	Methanol (Methyl Alcohol)	2^{A}
Amyl Acetate	1 ^A	Chocolate Syrup	1	Glue, P.V.A.	1	Methyl Acetate	4
Amyl Alcohol	4	Chromic Acid 5%	2^{A}	Glycerin	1	Methyl Acrylate	1
Amyl Chloride	1 ^A	Chromic Acid 10%	3 ^A	Glycolic Acid	1	Methyl Acetone	3
Aniline	3 ^A	Chromic Acid 30%	3 ^A	Gold Monocyanide	1	Methyl Alcohol 10%	2 ^A
Anti-Freeze	1	Chromic Acid 50%	4	Grape Juice	1	Methyl Bromide	2
Aqua Regia (80% HCl, 20% HNO ₂)	4	Cider	1	Grease	1	Methyl Butyl Ketone	3
Arochlor 1248	1 ^A	Citric Acid	1 ^A	Heptane	1	Methyl Cellosolve	3
Aromatic Hydrocarbons	1	Citric Oils	1	Hexane	2	Methyl Dichloride	1
Arsenic Acid	1 A	Clorox (Bleach)	1	Honey	-	Methyl Ethyl Ketone	2 ^A
Asphalt	1	Coffee	1	Hydraulic Oil (Petro)	1	Methyl Isobutyl Ketone	3
Barium Carbonate	1A	Copper Chloride	1	Hydraulic Oil (Synthetic)	1	Methyl Isopropyl Ketone	3
Barium Chloride	1 A	Copper Cyanide	2^{A}	Hydrazine	1	Methyl Methacrylate	1
Barium Cvanide	1	Copper Fluoborate	2 1	Hydrobromic Acid 20%	2 ^A	Methylamine	1
Barium Hydroxide	1 A	Copper Nitrate	1 A	Hydrobromic Acid 100%	4	Methyllene Chloride	1
Sarah Hydroxide	1	copport initiation	1	rijarobronne riela 10070	T		1

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Milk	1	Phosphoric Acid (<40%)	1	Acid Fluoborate Bath R.T.	1	Sodium Sulfate	1
Molasses	1	Phosphoric Acid (>40%)	2	Alkaline Cyanide Bath R.T.	1	Sodium Sulfide	1
Mustard	1	Phosphoric Acid (Crude)	2	Potash	1	Sodium Sulfite	1
Naphtha	1	Photographic Developer	1	Potassium Bicarbonate	1	Sodium Tetraborate	1
Naphthalene	1	Picric Acid	1	Potassium Bromide	1	Sodium Thiosulfate (Hypo)	1
Nickel Chloride	1	Plating Solutions		Potassium Carbonate	1	Sorghum	1
Nickel Sulfate	1	Antimony Plating 130°F	2	Potassium Chlorate	1	Soy Sauce	1
Nitrating Acid (>15% H ₂ SO ₄)	4	Arsenic Plating 110°F	2	Potassium Chloride	1	Stannic Chloride	1
Nitric Acid (5-10%)	1^{A}	Brass Plating:		Potassium Chromate	3	Stannic Fluoborate	1
Nitric Acid (20%)	2 ^A	CU-CD Bronze Bath R.T.	2	Potassium Cyanide Solutions	1	Stannous Chloride	1
Nitric Acid (50%)	4	CU-SN Bronze Bath 160°F	3	Potassium Dichromate	3	Starch	1
Nitric Acid (Concentrated)	4	CU-ZN Bronze Bath 100°F	2	Potassium Ferrocyanide	1	Stearic Acid	2
Nitrobenzene	3 ^A	Cadmium Plating:		Potassium Hydroxide (Caustic	1	Stoddard Solvent	1
Oils: Analine	1	Cyanide Bath 90°F	2	Potassium Nitrate	1	Styrene	1
Anise	1	Fluoborate Bath 130°F	2	Potassium Permanganate	1	Sugar (Liquids)	1
Bay	1	Chromium Plating:		Potassium Sulfate	1	Sulfate (Liquors)	1
Bone	1	Chromic-Sulfuric Bath 130°F	3	Propane (Liquified)	1	Sulfur Chloride	3
Castor	1	Fluosilicate Bath 95°F	3	Propylene Glycol	3	Sulfur Dioxide (Dry)	1 ^A
Cinnamon	1	Fluoride Bath 130°F	3	Pyridine	1	Sulfur Trioxide (Dry)	1
Citric	1	Black Chrome Bath 115°F	3	Pyrogallic Acid	1	Sufuric Acid (<10%)	1 ^A
Clove	1	Barrel Chrome Bath 95°F	3	Rosins	1	Sulfuric Acid (10-75%)	3 ^A
Cocoa Nut	1	Copper Plating (Cyanide):		Rum	1	Sulfuric Acid (75-100%)	1 ^A
Cod Liver	1	Copper Strike Bath 120°F	2	Rust Inhibitors	1	Sulfuric Acid (Hot conc)	4
Corn	1	Rochelle Salt Bath 150°F	3	Salad Dressings	1	Sulfuric Acid (Cold conc)	4
Cotton Seed	1 ^A	High Speed Bath 180°F	3	Sea Water	1	Sulfurous Acid	1
Creosote	1 ^A	Copper Plating (Acid):		Shellac (Bleached)	1	Sulfuryl Chloride	1
Diesel Fuel (20, 30, 40, 50)	1 ^A	Copper Sulfate Bath R.T.	4	Shellac (Orange)	1	Tallow	1
Fuel (1,2,3,5A, 5B, 6)	1 ^A	Copper Fluoborate Bath 120°F	4	Silicone	1	Tannic Acid	1
Ginger	1	Copper Plating (Misc.)		Silver Bromide	1	Tanning Liquors	1
Hydraulic (See Hydraulic)		Copper Pyrophosphate	2	Silver Nitrate	1	Tartaric Acid	1
Lemon	1	Copper (Electroless)	2	Soap Solutions	1	Tetrachloroethane	1
Linseed	1	Gold Plating:		Soda Ash (See Sodium Carbonate)		Tetrahydrofuran	1
Mineral	1	Cvanide 150°F	4	Sodium Acetate	1	Toluene (Toluol)	2 ^A
Olive	1	Neutral 75°F	1	Sodium Aluminate	1	Tomato Juice	1
Orange	1	Acid 75°F	1	Sodium Bicarbonate	1	Trichloroethane	1
Palm	1	Indium Sulfamate Plating R.T.	1	Sodium Bisulfate	1	Trichloroethylene	3 ^A
Peanut	1	Iron Plating:		Sodium Bisulfite	1	Trichloropropane	1
Peppermint	1	Ferrous Chloride Bath 190°F	4	Sodium Borate	1	Tricresylphosphate	1
Pine	1	Ferrous Sulfate Bath 150°F	4	Sodium Carbonate	3 ^A	Triethylamine	1
Rapeseed	1	Ferrous AM Sulfate Bath 150°F	4	Sodium Chlorate	1	Turpentine	2
Rosin	1	Sulfate Chloride Bath 160°F	4	Sodium Chloride	1	Urine	1
Sesame Seed	1	Fluoborate Bath 145°F	4	Sodium Chromate	3	Varnish	1
Silicone	1	Sulfamate 140°F	1	Sodium Cvanide	1	Vegetable Juice	1
Sovbean	1	Lead Fluoborate Plating	1	Sodium Fluoride	1	Vinegar	1
Sperm	1	Nickel Plating	1	Sodium Hudroxide (20%)	1 ^B	Water Acid Mine	1
Tanning	1	Watts Type 115-160°F	4	Sodium Hydroxide (50%)	2 ^B	Water Distilled	1
Turbine	1	High Chloride 130-160°F	4	Sodium Hydroxide (80%)	2 1 ^A	Water Fresh	1
Oleic Acid	1	Fluoborate 100-170°F	1	Sodium Hynochlorite (<20%)	3	Water Salt	1
Oleum 25%	4	Sulfamate 100-140°F	1	Sodium Hypochlorite (100%)	4	Weed Killers	1
Oleum 100%	4	Electroless 200°F	2	Sodium Hyposulfate	3	Whey	1
Oxalic Acid (Cold)	-+	Rhodium Plating 120°E	1	Sodium Metaphosphate	1	Whiskey and wines	2
Paraffin	1	Silver Plating 80 120°F	1	Sodium Metasilicate	1	White Liquor (Pulp mill)	2 1
Pentane	1	Tin Eluchorate Plating 100°E	1	Sodium Nitrate	1	White Water (Paper mill)	1
Perchloroethylene	1	Tin Lead Plating 100°E	1	Sodium Perborate	2	Xylene	1
Petrolatum	4	Zine Plating:	1	Sodium Perovide	2	Zinc Chloride	1
Phenol (10%)	1	Acid Chlorida 140°E	1	Sodium Polyphosphete	5	Zine Hydrogulfite	1
Phanal (Cashalia Aaid)	2	Acid Chionde 140°F	1	Sodium Silicoto	1	Zine frydrosume	1



Produc6electiorGuide

STORT®sproducednfoursizes: 2" x 4', 2" x 12', 4" x 12' and 4" x 25'

Pipe Repair System

Find pipe diameter and line pressure to determine number and size of kits to apply.

Nominal Pipe Diameter	50 PSI (10 Plys)	150 PSI (15 Plys)	400 PSI (20+ Plys)
1/2"	1 (2X4)	1 (2X4)	1 (2X4)
3/4"	1 (2X4)	1 (2X4)	1 (2X4)
1"	1 (2X4)	1 (2X4)	2 (2X4)
1-1/4"	1 (2X4)	2 (2X4)	3 (2X4)
1-1/2"	2 (2X4)	2 (2X4)	1 (2X12)
2"	1 (2X12)	1 (2X12)	1 (2X12)
2-1/2"	1 (2X12)	1 (2X12)	2 (4X12)
3"	1 (2X12)	2 (4X12)	2 (4X12)
3-1/2"	1 (2X12)	2 (4X12)	2 (4X12)
4"	1 (2X12)	2 (4X12)	3 (4X12)
5"	2 (4X12)	2 (4X12)	3 (4X12)
6"	2 (4X12)	2 (4X12)	4 (4X12)
8"	1 (4X25)	2 (4X25)	2 (4X25)
10"	1 (4X25)	2 (4X25)	2 (4X25)
12"	2 (4X25)	2 (4X25)	3 (4X25)
14"	2 (4X25)	3 (4X25)	3 (4X25)
16"	2 (4X25)	3 (4X25)	4 (4X25)
18"	2 (4X25)	3 (4X25)	4 (4X25)
>18" largerdiameterpipe	Foralldiameter applicatiorinstr	sover 18" contact Tri-Che uctions at 800.456.6255	enfordetailed

Note: These are suggestions only. This is a hand-applied product and results may vary depending on the expertise of the applicator. Alwaysapply the entire roll. This information is presented in nominal sizes and actual diameters may vary with the type of pipe and thickness of ttings. Fitting repair may require additional product. For ttings, use the next larger pipe size as a guide

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SAFETY DATA SHEET

Section 1. Identification

Producer

InduMar Products, Inc. 1238 N. Post Oak, Suite 100 Houston, TX 77055 Tel: (800) 523-7867 Fax: (713) 977-4164 Web: indumar.com	
Emergency telephone number	(800)262-8200 (24 Hours) Chemtrec Contract No.: 17567
Product name	FIX STIX™
Code	34978
Specific uses	Sealants and adhesives
Section 2. Hazards	s 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 SENSITIZATION - Category 1
<u>GHS label elements</u> Hazard pictograms	
Signal word	Warning!
Hazard statements	Causes skin and eye irritation. May cause an allergic skin reaction.
Precautionary statements	
Prevention	Wear protective gloves. Wear eye or face protection. Avoid breathing dust. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.
Response	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
Storage	Not applicable.
Disposal	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazards not otherwise classified	None known.
Date of issue/Date of revision	3 March 2014 Date of previous issue No previous validation Version 1 1

Section 3. Composition/information on ingredients

Substance/mixture

Mixture

Ingredient name	% by weight	CAS number
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin crystalline silica non-respirable	10 - 30 0.1 - 1	25068-38-6 14808-60-7

Canada

Name	CAS number	%
Talc , not containing asbestiform fibres	14807-96-6	30 - 60
Ferrosilicon	8049-17-0	10 - 30
glass, oxide, chemicals	65997-17-3	10 - 30
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	25068-38-6	10 - 30
Nepheline syenite	37244-96-5	1 - 5
crystalline silica non-respirable	14808-60-7	0.1 - 1

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

Section 4. First aid measures

Description of necessary 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/effects, acute and delayed

Potential acute health effects	
Inhalation	No known significant effects or critical hazards.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Ingestion	Irritating to mouth, throat and stomach.
Over-exposure signs/sympto	<u>ms</u>
Inhalation	No specific data.

2

Section 4. First aid measures

Skin contact	Adverse symptoms may include the following: irritation redness
Eye contact	Adverse symptoms may include the following: pain or irritation watering redness
Ingestion	No specific data.
Indication of immediate medi	ical attention and special treatment needed, if necessary
Notes to physician	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	No specific treatment.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

<u>Extinguishing media</u>	
Suitable extinguishing media	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	No specific fire or explosion hazard.
National Fire Protection Associa	ation (U.S.A.)
	Flammability
Health 2 0	Instability/Reactivity
	Special
Hazardous thermal decomposition products	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides halogenated compounds metal oxide/oxides
Special protective actions for fire-fighters	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.
Special protective equipment for fire-fighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	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.

3

Section 6. Accidental release measures

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 personnel".
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 cont	ainment 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 and storage

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.
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.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

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/m ³ 8 hours. Form: Respirable fraction NIOSH REL (United States, 1/2013). TWA: 0.05 mg/m ³ 10 hours. Form: Respirable dust OSHA PEL Z3 (United States, 9/2005). Notes: 30/(%SiO2+2) TWA: 30 MG/M3 / (%SiO2+2) 8 hours. Form: Total dust.
Date of issue/Date of revision 3 M	larch 2014	Date of previous issue No previous validation. Version 1 4/1

Section 8. Exposure controls/personal protection

<u>Canada</u>

Occupational exposure limits		TWA	8 hours	5)	STEL (15 mins)		s)	Ceiling			
Ingredient	List name	ppm	mg/ m³	Other	ppm	mg/ m³	Other	ppm	mg/ m³	Other	Notations
Talc , not containing asbestiform fibres	AB 4/2009	-	2	-	-	-	-	-	-	-	[a]
	BC 4/2012	-	2	-	-	-	-	-	-	-	[b]
		-	-	0.1 f/cc	-	-	-	-	-	-	
	ON 1/2013	-	2	-	-	-	-	-	-	-	[C]
		-	2	-	-	-	-	-	-	-	[d]
		-	-	2 f/cc	-	-	-	-	-	-	
	QC 12/2012	-	3	-	-	-	-	-	-	-	[e]
Glass, oxide, chemicals	US ACGIH 3/2012	-	5	-	-	-	-	-	-	-	[f]
	US ACGIH 3/2012	-	-	1 f/cc	-	-	-	-	-	-	[g]
	AB 4/2009	-	5	1 f/cc	-	-	-	-	-	-	[h]
		-	5	-	-	-	-	-	-	-	[i]
	BC 4/2012	-	5	-	-	-	-	-	-	-	[j]
		-	-	1 f/cc	-	-	-	-	-	-	
	ON 1/2013	-	10	-	-	-	-	-	-	-	[k]
		-	5	-	-	-	-	-	-	-	[1]
		-	-	1 f/cc	-	-	-	-	-	-	[m]
	QC 12/2012	-	-	1 f/cc	-	-	-	-	-	-	[n]
		-	10	-	-	-	-	-	-	-	[0]
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 uM; 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 [I]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. [m]Respirable fibres: length > 5µm; aspect ratio ≥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 µm, having a diameter of less than 3 µm 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 sufficien control worker exposure to airborne contaminants. If this product contains ingre with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statu limits.					
Environmental exposure controls	Emissions fro they comply cases, fume will be neces	om ventilation or work proces with the requirements of envir scrubbers, filters or engineer sary to reduce emissions to a	s equipment should be c ronmental protection legi- ing modifications to the p acceptable levels.	hecked to ensur slation. In some rocess equipme	e ent	
Individual protection measur	<u>es</u>					
Hygiene measures	Wash hands, eating, smok Appropriate t Contaminate contaminated showers are	forearms and face thorough ing and using the lavatory an echniques should be used to d work clothing should not be d clothing before reusing. En close to the workstation locat	ly after handling chemica d at the end of the workir remove potentially conta a allowed out of the workp sure that eyewash station tion.	al products, befor ng period. Iminated clothing blace. Wash ns and safety	re g.	
Date of issue/Date of revision	3 March 2014	Date of previous issue	No previous validation.	Version 1	5/11	

Section 8. Exposure controls/personal protection

	• •
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 protection	
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

Physical state	Solid.
Color	Dark greyBlack
Odor	Pungent. [Strong]
Odor threshold	Not available.
рН	Not available.
Melting point	Not available.
Boiling point	Not available.
Flash point	Closed cup: >93.3°C (>199.9°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.
Lower and upper explosive (flammable) limits	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	2.247
Solubility	Not available.
Solubility in water	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	The 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.

Section 11. Toxicological information

Aspiration hazard

No specific data.

Information on the likely routes of exposure	Not available.
Potential acute health effects	
Eye contact	Causes serious eye irritation.
Inhalation	No known significant effects or critical hazards.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Ingestion	Irritating to mouth, throat and stomach.
Symptoms related to the phys	sical, chemical and toxicological characteristics
Eye contact	Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	No specific data.
Skin contact	Adverse symptoms may include the following: irritation redness
Ingestion	No specific data.
<u>Short term exposure</u> Potential immediate effects	Not available.
Potential delayed effects	Not available.
<u>Long term exposure</u>	
Potential immediate effects	Not available.
Potential delayed effects	Not available.
Potential chronic health effe	<u>cts</u>
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 toxicit	<u>v</u>
Acute toxicity estimates	

8/11

Section 12. Ecological information

Toxicity

No specific data.

Persistence and degradability

No specific data.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin	2.64 to 3.78	31	low

Mobility in soil

Soil/water p	arti	tion
coefficient	(K _{oc})

Not available.

Other adverse effects

No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal 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. 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

				-	
	DOT Classification	TDG Classification	Mexico Classification	IMDG	ΙΑΤΑ
UN Number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	-	-	-	-	-

Section 14. Transport information

Special precautions for user

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

<u>United States</u>							
U.S. Federal regulations	TSCA8	(a) PAIR : S	iloxanes ar	nd Silicones, d	li-Me, reaction	products with s	silica
	TSCA 8	8(a) CDR Ex	empt/Part	ial exemptior	n: Not determi	ned	
	United	States inve	entory (TSC	CA 8b): All coi	mponents are	listed or exemp	oted.
Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)	Not liste	ed					
Clean Air Act Section 602 Class I Substances	Not liste	ed					
Clean Air Act Section 602 Class II Substances	Not liste	ed					
SARA 302/304							
Composition/information on i	ingredie	<u>nts</u>					
No products were found.							
SARA 304 RQ	Not app	licable.					
<u>SARA 311/312</u>							
Classification	Immedia	ate (acute) l	nealth haza	ırd			
Composition/information on i	i <mark>ngredie</mark>	<u>nts</u>					
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 foll	owina comp	onents are	listed: SOAP	STONE MINE		BER
New York	None of	f the compo	nents are li	sted.			
New Jersey	The following components are listed: SOAPSTONE; SILICA, QUARTZ; QUARTZ (SiO2); FERROSILICON; FERROCERIUM						
Pennsylvania	The foll	owing comp	onents are	listed: SOAP	STONE DUST	; QUARTZ (SIC	J2)

Minnesota Hazardous Substances

California Prop. 65

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

None of the components are listed.

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Section 15. Regulatory information

0 ,				
Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Talc , not containing asbestiform fibres crystalline silica non-respirable carbon black non-respirable	Yes. Yes. Yes.	No. No. No.	No. No. No.	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).
<u>Canadian lists</u>	
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 classif	fied in accordance with the hazard criteria of the Controlled Products Reg

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.

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.

Substances of very high concern

None of the components are listed.

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 = Internediate 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
References	Not available.

Indicates information that has changed from previously issued version.

Notice to reader

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Material Safety Data Sheet Product: **Stop It[®] Pipe Repair Tape** Product Code: IPI 786748 MSDS Number: 120105 Print Date: Revision Date: January 5 , 2012

1. PRODUCT AND COMPANY IDENTIFICATION

<u>Product Name</u> :	Stop It[®] Pipe Repair Tape
<u>Product Use Description</u> :	Pipe Leak Repair and Rehabilitation
<u>Company</u> :	InduMar Products Inc. 3355 West Alabama, Suite 110 Houston, Texas 77098
<u>Telephone</u> :	713-977-4100
<u>Fax</u> :	713-977-4164
Emergency/Hazmat Phone:	CHEMTREC: 1-800-262-8200

2. HARZARDS IDENTIFICATION

EMERGENCY OVERVIEWS

Color: White/Yellowish, also Black (uncured product) Physical State: Tacky Resin on a Fiberglass Substrate Odor: Very Slight Hazards of Product: No unusual fire or explosive hazards

OSHA Hazard Communication Standard

This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

POTENTIAL HEALTH EFFECTS

RESIN SYSTEM: Irritating to eyes, skin and respiratory system.

EYE CONTACT: May cause very slight, temporary corneal damage.

SKIN CONTACT: May stick to skin and cause irritation on removal. May cause allergic reaction in susceptible individuals.

SKIN ABSORPTION: Not applicable

INGESTION: Small amounts swallowed incidental to normal handling are not likely to cause injury.

INHALATION: At room temperature vapors are minimal. May cause sensation by inhalation. Very low concentrations may cause asthmatic signs and symptoms in hypersensitive people.

TERATOLOGY (BIRTH DEFECT) INFORMATION: Not applicable

<u>REPRODUCTION INFORMATION:</u> Not applicable

3. COMPOSITION INFORMATION

Ingredients	CAS No.	Percent	Exposure Limits
Fiber Glass	65997-17-3	48 - 52	
4,4' – Diphenylmethane diisocyanate.	101-68-8	34 - 38	8 hour time weighted average (TWA) 0.005
Amine catalyst	6425-39-4	1-5	
Methanesulfonic acid	75-75-2	<1	
Ingredients not precisely idenfied (including Polyethlene glycols) are proprietary and non-hazardous.		<12	

4. FIRST AID MEASURES

EVES: Flush eyes immediately and thoroughly with flowing water for 15 minutes. If effects occur, consult a physician, preferably an ophthalmologist.

SKIN CONTACT: Remove from skin with alcohol based hand sanitizer. Wash skin with plenty of soap and water.

INGESTION: If swallowed seek medical attention. Drink plenty of water. Do not induce vomiting. Seek medical attention. Keep out of reach of children.

INHALATION: Provide fresh air. Give oxygen in the event breathing becomes difficult. Seek medical attention

<u>NOTE TO PHYSICIAN</u>: Consider additional thorough skin wash with mild, nonabrasive soap and plenty of warm water for at least fifteen minutes.

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: CO2, DRY CHEMICAL OR FOAM

FIRE FIGHTING PROCEDURES: Respiratory equipment should be worn to avoid inhalation of concentrated vapors. 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.

6. ACCIDENTAL RELEASE MEASURES

<u>SPILLS</u>: Dispose of in normal manner in accordance to all applicable state, federal, and local laws. Not a hazardous waste.

7. HANDLING AND STORAGE

GENERAL HANDLING: Avoid contact with skin or clothing.

STORAGE: Shelf Life: 2 years from date of purchase. Temperature: Optimum 40 – 80° F/4-20° C Storage: Store in cool, dry, well –ventilated area.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

EXPOSURE LIMITS

LIMIT VALUES FOR WORKPLACE AIR: The UK Health and Safety Executive has established a maximum exposure limit, expressed as isocyanate, of 0.02mg/m³ 8 hour TWA, 0.07mg/m³ 15 min STEIL. National guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapors of this product.

PERSONAL PROTECTION

EYE PROTECTION: Avoid contact; Protective glasses are always recommended.

SKIN PROTECTION: Rubber or plastic gloves should be worn to protect skin.

<u>RESPIRATORY PROTECTION</u>: Not needed in normal application. In case of needed air supply mask or respirator with canister for organic vapors (type cc).

INGESTION: Keep mouth closed.

ENGINEERING CONTROLS: Not applicable.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Tacky Resin on a Fiberglass Substrate <u>COLOR</u>: White/Yellowish, also Black (Uncured product) <u>ODOR</u>: Very slight <u>VAPOR PRESSURE</u>: Resin: 0.0002mm Hg@24°C <u>BOILING POINT</u>: Resin decomposed > 200°C <u>SPECIFIC GRAVITY</u>: Resin: 1.133 <u>FREEZING POINT</u>: Not applicable <u>MELTING POINT</u>: Resin only: <15°C <u>SOLUBILITY IN WATER</u>: Insoluble in water, reacts, evolution of CO₂ <u>pH</u>: Unknown

10. STABILITY AND REACTIVITY

STABILITY/INSTABILITY: Stable under recommended storage conditions. See Storage, Section 7.

HAZARDOUS DECOMPOSITION PRODUCTS: Moisture contamination may form CO₂ gas pressure.

HAZARDOUS POLYMERIZATION: Will not occur by itself.

THERMAL DECOMPOSITON: Carbon dioxide, aldehydes, acids, oxides of sulfur and nitrogen.

11. TOXICOLOGICAL INFORMATON

ACUTE TOXICITY

EYE: Not applicable

INGESTION: Not applicable

SKIN ABSORPTION: Not applicable

INHALATION: Not applicable

SUBCHRONIC: Not applicable

CHRONIC/CARCINOGENICITY: Not applicable

TERATOLOGY: Not applicable

<u>REPRODUCTION:</u> Not applicable

MUTAGENICITY: Not applicable

<u>CHRONIC (CANCER) INFORMATION:</u> Industrial experience in humans has not shown any links between MDI based products exposure and cancer.

12. ECOLOGICAL INFORMATION

<u>BIOACCUMULATION AND MOBILITY:</u> Limited environmental affect and in an aqueous medium resins are activated and cure to a chemically inert polyurea.

ECOTOXICOLOGY: Based largely or completely on information for similar material (s). Material is not expected to be classified as dangerous to aquatic organisms on an acute basis (LC50/EC50/IC50 greater than 100mg/L in most the most sensitive species tested).

CHEMICAL FATE INFORMATION: Not applicable

13. DISPOSAL CONSIDERATIONS

DISPOSAL: Incineration under approved, controlled conditions using incinerators suitable or designed for the disposal of hazardous chemical wastes, is the preferred method of disposal. Buried landfill waste disposal should be in accordance with local and national regulations.

14. TRANSPORT INFORMATION

D.O.T. Non-Bulk: Not Regulated

D.O.T. Bulk: Not Regulated

IMDG: Not Regulated

ICAO/IATA: Not Regulated

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

OSHA HARZARD COMMUCNICATION STANDARD

This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312.

Immediate *Acute) Health Hazard:NoDelayed (Chronic) Health Hazard:NoFire Hazard:NoReactive Hazard:NoSudden Release of Pressure Hazard:No

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313: To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

<u>Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or</u> <u>Pennsylvania Environmental Hazardous Substance List:</u> This product does contain chemicals at levels which require reporting under this statute.

<u>California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986</u>): This product contains no listed substance d known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

US. TOXIC SUBSTANCES CONTROL ACT

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

European Inventory of Existing Commercial Chemical Substances (EINECS)

The components of this product are on the EINECS inventory or are exempt from inventory requirements.

CEPA – Domestic Substances List (DSL)

All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

16. OTHER INFORMATION

HAZARD RATING SYSTEM

NFPA	Health	Physical Data	PPE
	1	0	0

Recommended Uses and Restrictions

Used in application such as: Pipe leak repair and then wall remediation. Adhesives. Civil engineering. Coil coatings. Marine and protective coatings. Potting and encapsulation.

Legend	
N/A:	Not Available
W/M:	Weight or Measurement
OEL:	Occupational Exposure Limit
STEL:	Short Term Exposure Limit
TWA:	Time Weighted Average
ACGIH:	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG:	Dow Industrial Hygiene Guideline
WEEL:	Workplace Environmental Exposure Level
HAZ_DES:	Hazard Designation
Action Level:	A value set by OSHA that is lower than the PEL which will trigger the need for activities such as exposure monitoring and medical surveillance if exceeded.

InduMar Products, Inc. urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. 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 the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained and (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.





































