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



works on:

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.



is used for:

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



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



STOP IT® PIPE REPAIR SYSTEM

Each kit includes:

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

FIX STIX™







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











3 Indumar Products, Inc. 2006

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 STIX™, 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 STIXTM 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 plastic 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 638-111, 3,920 PSI (275 kg/cm²).

Bond Strength: ASTM D 2095-72, 230 PSI (16 kg/cm²) average.

Flexural Yield Strength: ASTM D 790-1-B, 2,260 PSI (159 kg/cm²).

Durometer Hardness: ASTM D 2240, 82 type (d).

Tension Pull Strength: Applying 2" x 12' STOP IT® to a 2 inch (5.08 cm) PVC pipe coupling provides an average increase of 2,132 pounds (967 kg) in pull-out strength. Tension pull strength will vary with type of pipe, pipe diameter and amount of product applied.

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.

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

Case Contents: Ten (10) kits.

Case Dimensions: 22" x 9.5" x 5" (56 cm x 24 cm x 13 cm).

Case Weight:

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

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

(ASTM used as a quideline.)



Problem Solving Products for Industry™



Indumar Products, Inc, 3355 West Alabama, Suite 110 Houston, TX 77098 Phone 713.977.4100 1.800.523.7867 Fax 713.977.4164 Email stopit@indumar.com www.indumar.com







Stop Leaks and Restore Flow in Minutes



















© 2006 Indumar Products,



First Response TM **Leak Repair Kit**

From InduMar Products, Inc.





Plug N Dike Plug Rug: Apply to hole in tank or place over drain. May be overlapped and is available separately in larger sizes.





Wooden wedges and dowels



Lead Wool Filler: Used to repair stress fractures in tanks and welds. It can also be used on pipe connections where the threads meet elbows, T's and flanges.

Fix Stix[™] Epoxy: Knead until uniform color and apply. Works on cracks and small holes on wet, flat, or curved surfaces, pipes, flanges, elbows, and T's.



InduMar Products, Inc. 3355 West Alabama St., Suite 110 Houston, TX 77098 Phone: (800) 523-7867 Fax: (713) 977 4164 www.indumar.com



Stop It® Pipe Repair System:

Fiberglass tape coated with polyurethane resin activated when immersed in water.

Simply wrap around pipe where it is leaking.

Works on straight runs, elbows, and T's. Used in conjunction with Fix Stix™ Epoxy, it

will also work on some small flang leaks. Instructional CD included.



EMERGENCY LEAK CONTROL KITS

UNIVERSAL SERIES - Kits AE and D

Universal kits are designed to plug hazardous material leaks in any type of low-pressure vessel. The kits contain everything needed to respond to leaks in tanks and drums. The wide variety of sealing devices and materials address surface holes of all shapes, as well as cracks and gashes. All bolts, back-up plates, and hardware manufactured from 304 stainless steel. Accompanying tools are available in standard or non-sparking versions.

Kits 'AE' and 'D' contain two toggle-bolt ball plugs, six toggle-bolt surface plugs, two T-bolt crack patches, five self tapping screw patches, nine assorted wooden plugs, Fix Stix™ Epoxy, Plug-N-Dike™ Plug Pattie, lead wool pack, hot/cold hose repair tape, sorbent pad, tubeless tire repair kit, 8" x 12" solid neoprene and 20" x 20" closed-cell foam gasketing material, steel drift pin, OSHA approved 200' roll of barricade tape, tools for installing all patches and heavy duty carrying case.







KIT D - For Drums

Kit 'AE' contains items for larger holes, cracks and gashes in addition to the standard items listed above. These include one $8" \times 12"$ stainless steel plate lined with 3/4" thick soft neoprene material and three T-bolts with preassembled wingnut washer combos. A second $8" \times 12"$ stainless steel neoprene backed plate is included with hardwood cribbing ladder patch and two 22' heavy-duty nylon straps.

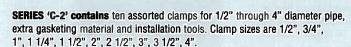


EXTERNAL PIPE LEAK CONTROL KITS - Kits C-2 and C-3

Pipe Leak Control Kits are designed to quickly respond to leaks in straight runs of piping. Simply snap the clamp around the pipe, drop bolt head through open-slotted lug and tighten nuts. Versatile clamps respond to water, wastewater, fuel, chemical, air and gas leaks.

Repair clamps are made of corrosion resistant 304 stainless steel, lugs are made of rugged ductile iron and shop coated for added protection. Bolts are plated for longer life. Grade 304 rubber compound gasket offers superior resistance to oils, aromatic and aliphatic hydrocarbons, condensates, gasoline and natural gas.

All External Pipe Leak Control Kits include extra solid neoprene and closed-cell foam gasketing material for odd sized, out-of-round, and corroded pipe applications. Accompanying tools are available in standard or non-sparking versions. Kits are packaged in a heavy-duty carrying case.



SERIES 'C-3' contains three large clamps for 5", 6" and 8" diameter pipe, extra gasketing material and installation tools. Clamp sizes are 5", 6" and 8".



PIPE PLUGGER KIT - KIT C-1

The Pipe Plugger Kit is designed to quickly plug openended pipes. Kit allows you to instantly plug knocked-off pipes carrying water, fuel, chemicals and gas. Great for knocked-off gas meters and tank truck discharge valves. 1" to 5" sizes have pressure relief vents to help get the plugs seated under pressure. Pressure relief vents on 1 1/2" through 5" plugs can connect to enclosed valve and discharge hose. This enables fluid or gas to be rerouted to another line, discharged to a recovery vessel or flared. The Pipe Plugger Kit can also

be used for drain line cleaning and nitrogen purging operations.

SERIES 'C-1' contains ten stainless steel pipe plugs, wooden plug, valve and discharge hose set, all necessary tools for installation and heavy-duty carrying case. Plug sizes are 3/4", 1", 1 1/4", 1 1/2", 1 3/4", 2", 2 1/2", 3", 4".

A separate 5" 'C-1' plug is also available.



KIT C-1



THE ROLL-OVER KIT - Kit F

The Roll-over Kit is designed to patch a large hole, crack, or gash in a large vessel or tank. The kit has a patch that conforms to the curvature of the vessel. The patch uses a variety of T-bolts to support itself directly to the hole. The leak is then sealed by tightening the compression bolts around the frame, conforming the patch to the vessel.

Series 'F' contains one 3/4" neoprene gasketed stainless steel patch measuring 13" x 23". One stainless steel support frame with compression bolts, three stainless steel T-bolts with preassembled wingnut washer combos, all necessary tools and heavy-duty carrying case.

From the makers of the STOP IT® PIPE REPAIR SYSTEM



20-MINUTE EPOXY

A hand-moldable, industrial strength, steel filled epoxy... stop leaks, fill holes and cracks, bond and repair almost anything.



No hot work or special tools required. Ready to use.

This simple, easy to use epoxy stick will stop leaks, fill holes and cracks fast. FIX STIX™ sets rock hard in about 20 minutes, works underwater and in a wide temperature range. FIX STIX™ is pre-measured, non-toxic. solvent free, has little odor, can be used on potable water lines and has excellent chemical resistance. It will not shrink, crack or pull away. FIX STIXTM can be machined, threaded and painted after fully curing.



THOUSANDS OF USES!













Easy to use, super strength, saves money in repairs









Fill holes, cracks and voids, repair threads, broken parts. Keep at least one in every toolbox.

FIX STIX™-TECHNICAL INFORMATION

Physical Properties

Working time: 2 minutes Set time: 20 minutes

Maximum use temperature: 300° F (149° C) Dielectric strength: 300 volts/mil at 0.15 cm

Volume resistivity: 1 x 1012 ohm/cm Density 18.5 lb/gal (22gm/cm Compression Strength: 12,000 psi Tensile Strength: 6,000 psi Modulus of Elasticity: 6 x 10 psi Lap Shear Strength (steel): 900 psi

Izod Impact: 0.3 lb/in (notched)

Hardness (Shore D) 80

USDA: Acceptable for use in federally inspected meat and poultry plants

Chemical Resistance: Resistant to hydrocarbons, ketones, alcohols, esters, halocarbons, aqueous salt solutions and dilute acids and bases.

Ordering Information

Packaged: 28 units/case

Product Dimensions: 3.6" (9.2cm) x 7/8" (2.2cm) each unit Case Dimensions: 12" x 9" x 5" (31cm x 23cm x 13cm

Case Weight: 4.75 lbs (2kg)



Indumar Products, Inc. 3355 West Alabama, Suite 110 Houston, TX 77098 Phone 713,977,4100 1.800.523.7867 Fax 713.977.4164 Email stopit@indumar.com



SELF-FUSING TAPE

High temperature, heavy duty, self-bonding, seamless silicone tape.

Simple to use, all purpose self-fusing tape is superior to shrink wrap tubing and vinyl tapes.

FUSION TAPE™ bonds into a permanent, inseparable, cohesive insulator at room temperature and has a dielectric strength of 400 volts/mil. This remarkable tape maintains its insulating, sealing and elastic properties in a wide range of temperatures. It won't crack or separate with sudden shock, vibration,

expansion or contraction. **FUSION TAPETM** is not tacky to the touch and requires no heat or tools to promote fusion. An ideal wrap for terminating high voltage cables. **FUSION TAPETM** can also be used as a primary cable insulation where Class H temperatures (180° C / 356° F) are present. It also resists moisture and ozone, making it an excellent environmental insulator.

THOUSANDS OF USES!

Fuses into a solid piece of silicone rubber!











FUSION TAPE™ fuses into a solid piece of silicone rubber with no adhesive residue.

FUSION TAPETM'S triangular cross section results in a more uniform thickness when the edges are overlapped.



electrical connection.





FUSION TAPE™ is still intact after submersion in used motor oil for over 1 1/2 years.





FUSION TAPE™ is sand blasted and cut away to reveal undisturbed





FUSION TAPE™ - TECHNICAL INFORMATION

Physical Properties

Operating Temperatures (Intermittent):

-85º F to 500º F (-65º C to 260º C)

 ${\bf Operating\ Temperatures\ (Continuous):}$

-65º F to 500º F (-54º C to 260º C)

Dielectric strength, Minimum: 400 volts/mil (0.020" thick)

Dielectric Constant, 1Khz: 2.95
Dissipation Factor, 1Khz: <.0004
Volume Resistivity: 3 x 10¹⁴ ohm/cm
Cold Brittle Point, Maximum: -65° C
Water Absorption: 3% maximum by weight

Tensile strength: 700 psi minimum **Ultimate Elongation:** 300% minimum

Tear Resistance: 85 psi

Durometer hardness: 50 shore A room cured 24 hours **Meets or Exceeds:** U.S. Military Spec A-A-59163 (Supercedes MIL I-46852C) Type II Triangular Guideline and Type I, Rectangular, Self-fusing silicone rubber tape.

Ordering information

Packaged: 12 rolls/case

Product Dimensions: Width 1" (2.5cm), Length 20'

(6.1m), Thickness 0.020" (0.05cm)

Case Dimensions: 12" x 9" x 5" (31cm x 25cm x 13cm)

Case Weight: 2.5 lbs (1.1kg)



Indumar Products, Inc, 3355 West Alabama, Suite 110 Houston, TX 77098 Phone 713.977.4100 1.800.523.7867 Fax 713.977.4164 Email stopit@indumar.com www.indumar.com



STOP IT® CASE HISTORIES

REFINERIES & PETROCHEMICAL

Arco Bayport - Pasadena, TX: STOP IT® was used on a 12" dia. steel flare header carrying fuel gas. The operating pressure was 8 psi and the temperature was ambient. The line had pin hole leaks over a 15' area, and could not be shut down. They used 20 rolls of 4" x 12' STOP IT® to seal the leaks and reinforce the thin wall pipe. Quote: "Easy to use, works great."

S. R. P. Texaco - Long Beach, CA: STOP IT® was used on a 20" dia. steel pipe carrying sulfur. They used 6 rolls of 4" x 12' STOP IT® to seal the leak. Quote: "Works good."

N.G.O. Chemical – Baytown, TX: STOP IT® was needed because they odorize natural gas and their product is very concentrated. Any little leak causes great concern. They used STOP IT® on a 2" dia. black iron pipe carrying mercaptan. The operating pressure was 60 psi and its temperature was ambient. Two rolls of 2"x12' STOP IT® were used to seal the leak. Quote: "This is the best 'quick fix' for odorant leaks I have ever used, and in gas odorant leaks time is everything."

PULP AND PAPER MILLS

Norit Americas, Inc. – Marshall, TX: STOP IT® is used on several different types of pipes, pressures and temperatures on a monthly basis. Steel, copper, stainless, galvanized, black iron, aluminum, PVC and fiberglass are the types of pipes that they have repaired with STOP IT®. Their pressures have ranged from 120 psi to 600 psi and temperatures have been from ambient to 212°F. They have used it on ¼" dia. to 10" dia. pipes that carry water, steam and various chemicals. They have twenty millwrights and all are pleased with the results from STOP IT®. Quote: "This is an industrial facility & STOP IT® eliminates costly 'down time' in many cases."

Armstrong Ceiling – Marietta, PA: Have used STOP IT® on several occasions on steel, stainless, galvanized, black iron, PVC and fiberglass pipes. Diameters range from 4" to 10". Product in line is mostly reclaim water, pressure is up to 650 psi and temperatures up to 175°F. Quote: "Quick fix to a major problem."

METALS & MINERALS

Consolidated Coal – Sesser, IL: STOP IT® was used on a rubber hose that had a hole approximately 3/8" wide x 3" long. The hose was 12" in diameter and carried magnetite and water. Four rolls of 4" x 12' STOP IT® was used and the application sealed the leak. Quote: "This pipe was approximately eight feet from the pump and is under a lot of pressure and also moves under pressure. Repairing this hole helped us to keep running coal on our weekly start up."

Martin Mareitta – Manistee, MI: STOP IT® helps make temporary repairs in pipes to keep production running until replacement parts can be made up and downtime scheduled. They use STOP IT® on steel, stainless, galvanized, PVC and fiberglass with diameters ranging from 1" to 10". The pipes carry MGO slurry's and brine and operate up to 50 psi and up to 150° F. Quote: "It's simple and fast. We are a round the clock operation."



STOP IT® CASE HISTORIES (con't)

POWER GENERATION

Boston Edison – Boston, MA: STOP IT® is used to repair cracks on lead covered cable which leaks oil. Diameters range from 1"-4" and the cables carry electricity @ 5, 13.8 and 25 KVA. They use two or three rolls of 2"x4' STOP IT® for each application. Quote: "Very good product. Sets up well, smooths out perfect, sealed crack good."

Florida Power & Light Co. – Parrish, FL: Use STOP IT® on steel and fiberglass pipes ranging from 8" – 10" dia. and carrying ash and water. Operating pressure is 60 psi and temperature is ambient. Typically use seven rolls of 4"x12' STOP IT® to seal leak. Quote: "The product works very well, it is very easy to use and is very effective on any size pipe. It works well on different types of pipe also. Hats off to your product."

COMMERCIAL MARINE

Keystone Shipping – Tampa, FL: Have used STOP IT® on a variety of applications including steel, copper, galvanized and black iron piping ranging from ½" dia. to 14" dia. Pressures have ranged from 10 psi to 135 psi and product carried in line has been steam, water and petroleum. Quote: "STOP IT® works great. We use it on cargo piping, saltwater piping and steam piping. We have used it since 1992."

Apex Marine Corp. – Hammonton, NJ: Used STOP IT® on a steel pipe carrying inert gas @ 3% Oxygen. The line could not be welded because of the gas and not requiring a stainless steel band clamp for inert gas line perforation. The pipe diameter was 6" with a pressure of 2.5 psi, and temperature 10°F above sea water temperature. Quote: "This product is enormously handy here. Due to our service, age and cargoes (Gasoline, Jet A, etc.), it allows quick, safe, long term if necessary, temporary repairs."

BUILDING MAINTENANCE & PLUMBING

Salisbury State University – Salisbury, MD: Used STOP IT® to repair a leaking joint in a 2" dia. copper pipe carrying domestic water. The operating pressure was 40 psi and the temperature was 120°F. They used three rolls of 2" x 4' STOP IT® to fix the leak. Quote: "I've never had much faith in 'patch it' type repairs, but to avoid long down times at our dorms we tried your product with success. We have used this product five or six times and saved hours in down times. Thanks".

Bay Plumbing – Bay St. Louis, MS: Used STOP IT® to repair a 4" crack in a 6" cast iron pipe that was four feet underground. The operating pressure was 60 psi. They used two rolls of 4" x 12' STOP IT® to fix the leak. Quote: "The STOP IT® tape worked far beyond my expectations".

POOL & SPA

Mr. Water – Hastings, NE: Used STOP IT® to repair a spa hose. The operating pressure ranged from 10 to 70 psi and the temperature was 104° F. They used one roll of 2" x 12' to repair and reinforce the area. Quote: "The 2" tubing going into a 90°, hooked to the pressure side of the pump, became separated from the glue. We took the FIX STIX™ and applied it around the 90° and the 2" tubing and then applied our STOP IT® fiberglass tape. It worked exceptionally well"!



STOP IT® PIPE REPAIR SYSTEM

Chemical Compatibility Guide for FIX STIXTM ***

*** 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
- 2 Good
- 3 Fair
- 4 Not recommended

Superscript Detail

- A Satisfactory to 72 °F (22.2 °C)
 B Satisfactory to 120°F (48.8 °C)

		T 5 . 37	14	1.0		T T 1 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Acetaldehyde	I	Barium Nitrate	1^ 3^	Copper Sulfate 5%	1^ 1^	Hydrochloric Acid, Dry Gas	1 2^
Acetamide	1	Barium Sulfate	3** 2*	Copper Sulfate >5%		Hydrochloric Acid 20%	
Acetate Solvent	1	Barium Sulfide		Cream	I 1^	Hydrochloric Acid 37%	1
Acetic Acid, Glacial	2 ⁸	Beer	1^	Cresols		Hydrocyanic Acid	1
Acetic Acid 20%	1	Beet Sugar Liquids	1*	Cresylic Acid	.1^	Hydrofluoric Acid 20%	1
Acetic Acid 80%	3	Benzaldehyde	ĪÅ	Cyanic Acid	I.	Hydrofluoric Acid 50%	3 ^B
Acetic Acid	3	Benzoic Acid	1^	Cyclohexane	ī^	Hydrofluoric Acid 75%	2^
Acetic Anhydride	1	Benzoi	1^	Detergents	1^	Hydrofluositicic Acid 20%	3^
Acetone	4	Borax (Sodium Borate)	1*	Dichlorethane	2 ^B	Hydrofluositicic Acid 100%	3^
Acetyl Chloride (Dry)	1	Boric Acid	I.	Diesel Fuel	I^	Hydrogen Peroxide 10%.	3^
Acetylene	1	Brewery Slop	. 1	Diethylamine	1	Hydrogen Peroxide 30%	2
Acrylonitrile	1	Bromine	4	Diethylene Glycol	3	Hydrogen Peroxide 100%	1
Alcohols Amyl	4	Butadiene	·/ . 1 ^A	Diphenyl Oxide	.1	Hydrogen Sulfide (Aqua)	1
Benyzi	1^	Butane	IA	Dyes	1	Hydrogen Sulfide (Dry)	1
Butyl	1	Butanol (Butyl Alcohol)	4	Epsom Salts (Magnesium Sulfate)	1	Hydroxyacetic Acid 70%	1
Diacetone	i	Butter	1	Ethane	1^	Ink	1
Ethyl	ìВ	Buttermilk	14	Ethanolamine	ÎA:	Iodine	3
Hexyl	i	Butylene	įA	Ether	14	Isotane	ī
Isobutyi	i	Butylacetate	2^1	Ethyl Acetate	34	Isopropyl Acetate	í l
Isopropyl	1 .	Butaric Acid	3^	Ethyl Chloride	ĨA	Isopropyl Ether	4
Methyl	2^	Calcium Bisulfate	i	Ethyl Sulfate	jA.	Jet Fuel (JP3,-4,-5)	∞ i i
Octyl	1	Calcium Bisulfide	1	Ethylene Chloride	2^	Kerosene	il
	1	Calcium Bisulfite	1^	Ethylene Dichloride	34	Ketones	3
Propyl	IA	Calcium Carbonate	1A	Ethylene Glycol	34	Lacquers	ī
Aluminum Chloride 20%	14		14		14	Lacquer Thinners	1
Aluminum Chloride	2^	Calcium Chloride	14	Ethylene Oxide	1A	Lacquer Timmers Lactic Acid	2^
Aluminum Fluoride		Calcium Hydroxide	I^	Fatty Acids	IA I	Lactic Acid	2 2
Aluminum Hydroxide	2 ^A	Calcium Hypochlorite		Ferric Chloride	1^4		
Aluminum Potassium Sulfate 10%	10	Calcium Sulfate	1^	Ferric Sulfate	14	Latex	1,50
Aluminum Potassium Sulfate 100%	i^	Calgon +	1	Ferrous Chloride	14	Lead Acetate	1
Aluminum Sulfate	I	Cane Juice	1	Ferrous Sulfate	- 1	Lead Sulfamate	1
Amines	IA	Carbolic Acid (See Phenol)	3^	Fluoboric Acid	1	Ligroin	1
Ammonia 10%	1*	Carbon Bisulfide	1	Fluorine	4	-Lime	1 2
Ammonia, Anhydrous	1	Carbon Dioxide	I ^A	Fluosilicic Acid	3	Lubricants	I
Ammonia, Liquid	1^	Carbon Dioxide (Dry)	IA	Formaldehyde 40%	I^	Magnesium Carbonate	1
Ammonia Nitrate	1	Carbon Dioxide (Wet)	1*	Formaldehyde 190%	1	Magnesium Chloride	1
Ammonium Bifluroide	1^	Carbon Disulfide	3^	Formic Acid	3 ^A	Magnesium Hydroxide	1 .
Ammonium Carbonate	14	Carbon Monoxide	1^	Freon 11	1	Magnesium Nitrate	1
Ammonium Casenite	1	Carbon Tetrachloride	í^ l	Freon 12	1	Magnesium Oxide	1
Ammonium Chloride	1^	Carbonated Water	1	Freon 22	1	Magnesium Sulfate	1
Ammonium Hydroxide	1^	Carbonic Acid	2^	Freon 113	1	Maleic Acid	1
Ammonium Nitrate	Ι^	Catsup	1	Freon TF	1	Maleic Anhydride	1
Ammonium Oxalate	1	Chloroacetic Acid	3^	Fruit Juice	1	Mash	. 1
Ammonium Persulfate	1^	Chlorinated Glue	1	Fuel Oils	1^	Mayonnaise	1
Ammonium Phosphate, Dibasic	1^	Chlorine, Anhydrous Liquid	3^	Furan Resin	i^	Melamine	1
Ammonium Phosphate, Monobasic	i	Chlorine Water	1^	Furfural	i^	Mercuric Chloride (Dilute)	i
Ammonium Phosphate, Tribasic	î	Chlorobenzene (Mono)	3 ^B	Gasoline	ī	Mercuric Cyanide	1
Ammonium Sulfate	i^	Chloroform	3^	Gelatin	2	Mercury	1
Ammonium Thiosulfate	1	Chlorosulfonic Acid	3^	Glucose		Methanol (Methyl Alcohol)	2^
Amyl Acetate	i^	Chocolate Syrup	ĩ l	Glue, P.V.A.		Methyl Acetate	4
Amyl Alcohol	4	Chromic Acid 5%	2^	Glycerin		Methyl Acrylate	ī
Amyl Chloride	14	Chromic Acid 10%	3^	Glycolic Acid	- 1	Methyl Acetone	3
	34	Chromic Acid 10% Chromic Acid 30%	34	Gold Monocyanide			2^
Aniline	5	Chromic Acid 50%	2	Оога гионосумнае	T 1	Methyl Alcohol 10%	4

^{© 2000} InduMar Products Inc.

Anti-Freeze	1	Chromic Acid 50%	4	Grape Juice	1	Methyl Bromide	
Aqua Regia (80% HCl, 20% HNO3)	4	Cider	1	Grease	1	Methyl Butyl Ketone	-
Arochlor 1248	1^	Citric Acid	14	Heptane	1	Methyl Cellosolve	
Aromatic Hydrocarbons	1	Citric Oils	1	Hexane	2	Methyl Dichloride	
Arsenic Acid	I^	Clorox (Bleach)	1	Нопеу	ī	Methyl Ethyl Ketone	
Asphalt	1	Coffee	1	Hydraulic Oil (Petro)	1	Methyl Isobutyl Ketone	
Barium Carbonate	14	Copper Chloride	1	Hydraulic Oil (Synthetic)	i	Methyl Isopropyl Ketone	
Barium Chloride	14	Copper Cyanide	2^		i	Methyl Methacrylate	
Barium Cyanide	í	Copper Fluoborate	1	Hydrobromic Acid 20%	2^	Methylamine	
Barium Hydroxide	14	Copper Nitrate	14		4	1.10-1.) 1-111110	
Milk	i	Phosphoric Acid (<40%)	ı İ		1	Methyllene Chloride	
Molasses	1			Acid Fluoborate Bath R.T.	-	Sodium Sulfate	
		Phosphoric Acid (>40%)	2	Alkaline Cyanide Bath R.T.	I	Sodium Sulfide	
Mustard	1	Phosphoric Acid (Crude)	2	Potash	1	Sodium Sulfite	₂₀ 1
Naphtha	1	Photographic Developer	I	Potassium Bicarbonate	1	Sodium Tetraborate	100
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%)	ĮA.	Brass Plating:	_	Potassium Chromate.	3	Stannic Choride Stannic Fluoborate	•
Nitric Acid (20%)	24				-	1	1
		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^	Cadmium Plating:	•	Potassium Hydroxide (Caustic	1	Stoddard Solvent	1
1		1		Potash)	-	1	•
Oils: Analine	1	Cyanide Bath 90°F	2	Potassium Nitrate	I	Styrene	1
Anise	ì	Fluoborate Bath 130°F	2	Potassium Permanganate	1		
Bay	I		4		_	Sugar (Liquids)	.1
Bone	_	Chromium Plating:	-	Potassium Sulfate	1	Sulfate (Liquors)	1
•	I	Chromic-Sulfuric Bath 130°F	3	Propane (Liquified)	I	Sulfur Chloride	3
Castor	1		3	Propylene Glycol	3	Sulfur Dioxide (Dry)	1,
Cinnamon	1	Fluoride Bath 130°F	3	Pyridine	1	Sulfur Trioxide (Dry)	1
Citric	1	Black Chrome Bath 115°F	3	Pyrogallic Acid	i	Sufuric Acid (<10%)	į^
Clove	1	Barrel Chrome Bath 95°F	3	Rosins	î	Sulfuric Acid (10-75%)	34
Cocoa Nut	i	Copper Plating (Cyanide):	_	Rum	1		1.A
Cod Liver	i		2		-	Sulfuric Acid (75-100%)	
	- 1	Copper Strike Bath 120°F		Rust Inhibitors	1	Sulfuric Acid (Hot conc)	4
Com	1	Rochelle Salt Bath 150°F	3	Salad Dressings	1	Sulfuric Acid (Cold conc)	4
Cotton Seed	1^	High Speed Bath 180°F	3	Sea Water	1	Sulfurous Acid	1
Creosote	I^	Copper Plating (Acid):		Shellac (Bleached)	1	Sulfuryl Chloride	1
Diesel Fuel (20, 30, 40, 50)	140	Copper Sulfate Bath R.T.	4	Shellac (Orange)	ī	Tallow	i
Fuel (1,2,3,5A, 5B, 6)	i^	Copper Fluoborate Bath 120°F		Silicone	i	Tannic Acid	1
	î l	Copper Plating (Misc.)	, ,	Silver-Bromide	1		
Hydraulic (See Hydraulic)	* 8		a-	Silver Nitrate	1	Tanning Liquors Tartaric Acid	1
	1		·· . 2·				1
		Copper (Electroless)	2	Soap Solutions	1	Tetrachloroethane	1
	1	Gold Plating:		Soda Ash (See Sodium Carbonate)		Tetrahydrofuran	1
	1	Cyanide 150°F	.4	Sodium Acetate	I	Toluene (Toluoi)	2^
	1	Neutral 75°F	1	Sodium Aluminate	1	Tomato Juice	1
Orange	1	Acid 75°F	1	Sodium Bicarbonate	ī	Trichloroethane	1
_	i l	Indium Sulfamate Plating R.T.	i	, Sodium Bisulfate	i	Trichloroethylene	34
	i l	Iron Plating:	^	Sodium Bisulfite	il	Trichloropropane	-
	i		4	Sodium Borate	- 1		1
		Ferrous Chloride Bath 190°F	0.16		1	Tricresylphosphate	1
	1	Ferrous Sulfate Bath 150°F	4	Sodium Carbonate	3^	Triethylamine	1
	1	Ferrous AM Sulfate Bath 150°F	4	· Sodium Chlorate	1	Turpentine	2
Rosin I	1	Sulfate Chloride Bath 160°F	4	Sodium Chloride	ī	Urine	1
Sesame Seed I	ı 1	Fluoborate Bath 145°F	4	Sodium Chromate	3	Varnish	1
Silicone 1		Sulfamate 140°F	i	Sodium Cyanide	i	Vegetable Juice	1
Soybean I			i				_
		Lead Fluoborate Plating	1	Sodium Fluoride	1,8	Vinegar	1
Sperm 1		Nickel Plating:	. 1	Sodium Hydroxide (20%)	1 ^B	Water, Acid, Mine	1
Tanning 1	- 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%)	14	Water, Fresh	1
Dleic Acid 1		Fluoborate 100-170°F	1	Sodium Hypochlorite (<20%)	. 3	Water, Salt	1
Dieum 25% 4	- 1		1	Sodium Hypochlorite (100%)	4	Weed Killers	Î
Dieum 100% 4			2	Sodium Hyposulfate			_
		Electroless 200°F			3	Whey	1
Oxalic Acid (Cold)		Rhodium Plating 120°F	1	Sodium Metaphosphate	1	Whiskey and wines	2
araffin I		Silver Plating 80-120°F	1	Sodium Metasilicate	1	White Liquor (Pulp mill)	1
entane 1	1	Tin-Fluoborate Plating 100°F	ı	Sodium Nitrate	1	White Water (Paper mill)	vi i
erchloroethylene 4	- 1	Tin-Lead Plating 100°F		Sodium Perborate	- 1	Xylene	1
etrolatum 1	*	Zinc Plating:		Sodium Peroxide	,		•
thenol (10%)	.			Sodium Polyphosphate		Zinc Chloride	1
	1	Acid Chloride 140°F		Some Polypagenate	1	Zinc Hydrosulfite	1
henol (Carbolic Acid) -3		Acid Sulfate Bath 150°F		Sodium Silicate		Zinc Sulfate	

MATERIALS HEALTH, SAFETY AND ENVIRONMENTAL SHEET RESIN COATED, KNITTED FIBERGLASS, WATER ACTIVATED REPAIR TAPE Prepared 07/14/08



NFPA PLACARD CODE HMIS CODE					
Health Fire	2	Moderate Slight			
Reactivity	1	Slight			

INGREDIENTS	CAS NO.	PERCENT	EXPOSURE LIMITS
Fiber Glass	65997-17-3	48-52	
4,4' - Diphenylmethane diisocyanate Other MDI isomers and oligomers	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 identified (including Polyethylene glycols) are proprietary and non-hazardous.		<12	12

SOURCE OF EXPOSURE LIMIT DATA--ACGIH (American Conference of Governmental Industrial Hygienists)
THRESHOLD LIMIT VALUES ABBREVIATIONS: N/A - NOT APPLICABLE

Product Name: STOP IT® Repair Tape For Further Information Contact: Telephone Number (713) 977-4100 Producer's Name: InduMar Products, Inc. Address: 3355 West Alabama, Suite 110

Houston, Texas 77098 Office: (713) 977-4100

PHYSICAL STATE: Tacky Resin on a Fiberglass Substrate

ODOR: Very Slight

FLASH POINT: 440° F./227° C. Flash Back DOES NOT OCCUR.

I lasti back DOES NOT OCCON.

Recommended Extinguishing Media: CO2, dry chemical or foam

COLOR: White/Yellowish, also Black (uncured product)

Method: Closed Cup

No Unusual Fire or Explosion Hazards. Decomposition/Combustion Products:

Carbon dioxide, carbon monoxide and traces of

oxides of nitrogen

Hazardous Polymerization WILL NOT OCCUR. Product will not violently react with air or water.

Toxic Products will not form. Product is stable, not a hazardous waste.

Recommended storage conditions: Optimum 40-80° F. /4-27° C.

RECOMMENDED WASTE DISPOSAL METHOD: Solid waste landfill or authorized incineration.

PERSONAL PROTECTION: Apply in well ventilated area. Protective clothing for normal application: Latex or plastic gloves. Eye protection for normal application: Safety glasses. Special fire fighting procedures: Wear self-contained breathing apparatus. STOP IT® polyurethane resin will adhere to clothing. STOP IT® polyurethane resin will not cause skin bond.

NOT FOR INTERNAL CONSUMPTION. KEEP AWAY FROM CHILDREN.

HEALTH DATA SHORT TERM EXPOSURE					
Route Of Entry	Description of Effect	Minimum Concentration For Effect			
Inhalation	No significant inhalation hazard upon removal of cured material. N/A Isocyanate vapors of uncured material below detectable limits.				
Skin	Contact: Modified human draize patch test: Product is neither an irritant nor an allergen. Absorption: Acute dermal LD50 >2.0g./kg., no reaction at this dose. Cured and uncured products are not expected to be sensitizing when used as directed.	N/A			
Eyes	Avoid contact; uncured material is not expected to be an irritant when used as directed.	N/A			
Ingestion	Oral LD50>5g./kg.; no mortalities, or untoward behavior reactions were noted.	N/A			

LONG TERM EFFECTS: May be Slightly irritating to unprotected skin.

EMERGENCY AND FIRST AID PROCEDURES:

Inhalation: Provide fresh air, if breathing becomes difficult, call a physician.

Skin: Wash thoroughly with soap and water.

Eyes: Wash immediately with plenty of water and consult a physician. Ingestion: Unlikely route. Drink plenty of water. Do not induce vomiting. Consult a nurse or physician. (Keep out of reach of children).

IMPORTANT NOTICE TO PURCHASER: All statements, technical information, and recommendations contained herein are based on information and tests we believe to be reliable. The accuracy or completeness thereof are not guaranteed. In accordance with "Terms and Conditions of Sale" and since conditions of use are outside our control, the purchaser should determine the suitability of the product for his/her intended use and assumes all risks and liability whatsoever in connection therewith.



MATERIAL SAFETY DATA SHEET

Preparation Date: 07/14/08



SECTION I - PRODUCT AND COMPANY INFORMATION

Fix StixTM Product Name: CAS Number:

Health: 1 Fire: 1 Reactivity: 0 Mixture Hazard Rating:

PPI: B

InduMar Products, Inc. 3355 West Alabama Suite 110 Identification: Company

Houston, TX 77098

713-977-4100/713-977-4164 800-523-7867 felephone/Fax: Foll Free:

EPOXY PUTTY Fix StixTM Product Class: Trade Name:

PUTTY, NMFC 150110 38746 Shipping Name: Product Code:

SECTION II – INGREDIENT AND HAZARD INFORMATION

Tri(dimathylaminomethyl)phenol Glycidyl ethers of Ingredient Name:

Bisphenol A resins

10 - 30 Y HMIS Health: 2 0.5-1.5 Y HMIS Health: 3 25068-38-6 90-72-2 Percent TSCA: CAS Number:

***ALL ingredients in this product are listed in the T.S.C.A. Inventory

SECTION III - PHYSICAL DATA

Insoluble in Water Mercaptan/Sulfur Not Applicable Metallic/Black Solubility (in water): Appearance/Color: PH Value:

Not Applicable Not Applicable Not Applicable Vapor Pressure (mmHg): Boiling Range: Melting Point:

Non Volatile

Evaporation Rate:

Non Volatile 0. % % Volatile Weight: Vapor Density: % Volatile:

< 1.0 % Heavy Elements (ppm) Specific Gravity: VOC:

Note: The physical data represented above are typical values and should not be construed as a specification. For additional physical data and details on use, please obtain a technical data sheet for this product.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

none Flammability Class: Flash Range:

none Explosive Range:

Water spray, foam, CO2, dry chemicals. Extinguishing Media:

Unusual Hazards:

Fire Fighting:

Aldehydes, acids, and oxides of carbon, nitrogen, and sulfur.

Anyone 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.

4

SECTION V - HEALTH HAZARD DATA

LD50 5000, mg/Kg LD50 20000, mg/Kg LD50 1630, mg/Kg Exposure and Dose Rabbit, adult Rat, adult Rat, adult Species Route Oral Skin Oral Glycidył ethers of bisphenol A resins Tri(dimethylaminomethyl)phenol

Not Evaluated Permissible Exposure Level:

PPI:B PPI:D

Fire: 1 Reactivity: 1 Fire: 1 Reactivity: 0

EFFECTS OF OVEREXPOSURE:

Possible irritation of intestinal tract. Possible irritant and sensitizer. Skin Contact: nhalation: ngestion:

Possible irritant and sensitizer. Eye Contact:

FIRST AID:

Seek medical advice. Remove to fresh air. Skin Contact: Inhalation: Ingestion:

Immediately flush eyes with plenty of water for at least 15 minutes. Wash with plenty of soap and water. Eye Contact:

Seek medical advice.

NOTE:

Never give anything by mouth to an unconscious person.

SECTION VI - STABILITY AND REACTIVITY DATA

This product is stable Hazardous polymerization will not occur Hazardous Polytherization: Incompatibility

None None Conditions to Avoid: Hazardous

Aldehydes, acids, and oxides of carbon, nitrogen, and sulfur. Decomposition Products:



MATERIAL SAFETY DATA SHEET

Preparation Date: 07/14/08



SECTION VI - STABILITY AND REACTIVITY DATA

Hazardous Polytherization: Stability: Hazardous polymerization will not occur This product is stable

Incompatibility

Conditions to Avoid: None

Hazardous

Decomposition Products: Aldehydes, acids, and oxides of carbon, nitrogen, and sulfur.

Storage Temperature: < 90°F (32°C

SECTION IX – HANDLING AND STORAGE

Storage Conditions: Store in cool, dry, well ventilated area

Transfer: No special precautions are needed.

Follow good manufacturing and handling practices

Personal Hygiene: drinking, smoking and using restroom facilities. Wash Wash thoroughly after handling, especially before eating,

Professionally launder contaminated clothing before re-use. contaminated goggles, face shield, and gloves.

precautions: Empty container

label cautions even after the container is empty since empty or animal consumption, or where skin contact can occur. This container can be hazardous when empty. Follow empty containers for food, clothing, or products for human containers could retain product residues. Do not re-use

SECTION X - REGULATORY INFORMATION.

SECTION VII - SPILL AND LEAK PROCEDURES

Cured Material: Waste Disposal Method: Dispose of in normal manner.

Incinerate in furnace or bury in landfill in accordance

with all applicable regulations; not a hazardous waste

SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

Tri(dimethytaminomithyl)phenol	Glycidyl ethers of bispehnol A resins	Occupational Exposure Limits
N/est	N/est [♣]	ACGIH TLV
N/est	N/est	ACGIH TLV ACGIH TLV-C ACGIH STEL OSHA STEL OSHA PEL
N/est	N/est	ACGIH STEL
N/est	N/est	OSHA STEL
N/est	N/est	OSHA PEL

PROTECTIVE EQUIPMENT TYPES:

Eyes: Safety glasses of goggles.

Respiratory: None required unless sanding or abrading.

Gloves: Appropriate impervious gloves. Because a variety of protective gloves exist

consult glove manufacturer to determine the proper type for a specific operation.

Other: None required.

VENTILATION:

General Mechanical: None required

Local Exhaust: Only if heated above 100°F (38°C)

RIGHT-TO-KNOW: The non-hazardous ingredients in the product subject to the Right-to-Know laws are: Trade Secret 65997-17-3 14807-96-6 37244-96-5 Pennsylvania, New Jersey, and/or Massachusetts Polyether Polymercaptan Nepheline Syenite Sodium Calcium Magnesium Silicate Magnesium Silicate Hydrate Chemical Name

ers or employees as the case may be. if, or where, precautions - in addition to those described herein - are required. Any workplace, all aspects of an individual operation should be examined to determine health hazard and safety information herein should be passed on to your custompossible individual situations. As the user has the responsibility to provide a safe USERS RESPONSIBILITY: A bulletin such as this cannot be expected to cover all

knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for described herein, we cannot guarantee that these are the only hazards that exist health hazards and should be used with caution. Although certain hazards are damages incurred by the use of this material. All chemicals may present unknown DISCLAMER OF LIABILITY: The information contained herein is, to the best of our fitness for a particular purpose or any other natures are made hereunder with No representation or warrantee, either expressed or implied, of merchantability, applicable federal, state and local laws and regulations. respect to the information refers. It is the responsibility of the user to comply with all Final determination of suitability of the chemical is the sole responsibility of the user.



Product Selection Guide

STOP IT® is produced in four sizes: 2" x 4', 2" x 12', 4" x 12' and 4" x 25'

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" arger diameter pipe	For all diameters over 18" contact InduMar for detailed application instructions @ www.indumar.com © Indumar Products, Inc. 2006			

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