



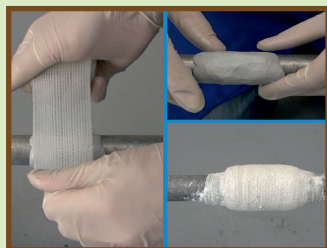
Saves Past...
Protects Future...

Monarch Industrial Products (I) Pvt. Ltd.

(An ISO 9001 : 2008, ISO 14001 : 2004 & OHSAS 18001 : 2007 certified company)
Post Box : 3, No. 25, SIDCO Industrial Estate, THENI - 625 531. Tamilnadu State, India.
Phone : +91 4546-251020/ 250076, Fax : +91 4546-253060,
Mobile : +91 96009 92069, E-mail : info@monarchindia.net

Pipe Repair & Strengthening Kits™
zero-down-time
money
plug your leakages

All the materials needed for stoppage of active leakages and strengthening of Corroded / damaged pipelines are customized in Pipe Repair Kits



- ▶ Leakage can happen anytime, anywhere and without warning. A leaking pipe could threaten to shut down the entire operation, safety hazard and can cost expensive downtime & environmental pollution.
- ▶ The active leakage of water, gas, chemical, oil etc., in pipelines and civil infrastructure puts pressure on bottom line to any round-the-clock process plant. In addition to the leakages leads to wastage of product and energy, increase noise level and pollution, incur cost of down-time, labour and parts replacement, enhance erosion damage and above all endanger the safety of the plant.
- ▶ Monarch's Zero-Down-Time range of Pipe Repair Kits and MonoStick brand of Metal Epoxy Sticks seals the active leakages instantly and permanently even under water or wet/oily environment application - just in minutes. These products are extremely important where plant shutdown is critical and continuous running of plant is absolute necessary by way of repairs and not by replacement.
- ▶ Monarch's Zero-Down-Time, the moisture curing urethane impregnated fiberglass repair bandage is activated by dipping in water and by simply wrapping it around leaking/damaging area. The Zero-Down-Time is fast, permanent and instant emergency repair and strengthening system that seals leak even under pressure. It restores product flow and back in service within minutes. The ease use of kit facilitates to reach odd/intricate/hard areas and can be sanded or over painted if required. The cured membrane has corrosion resistance to most diluted chemicals and fuels.
- ▶ It tenaciously bonds to metals (ferrous & non-ferrous), plastics, concrete, asbestos clad, PVC, PP and rubber surfaces.
- ▶ The selection of Zero-Down-Time depends on pipe diameter, contents & type of leak / damage, application method and hole size.
- ▶ Each package along with Pipe Repair Kit additionally contains 114gm stick of MonoStick ETS. (Express Titanium Stick -for Sealing of Leakages).
- ▶ The products can be used to the application area conforms to all shapes, welds, difficult-to-reach areas with ease of application. The sealing of leakage after repair produces unsurpassed strength and restores integrity and external wall thickness to the pipeline and equipment in such a way that it makes the repair area stronger than the original pipe, thus eliminates the need to replace the defective section of pipelines or civil infrastructure.

Industry

- ◆ Coal Mines, Gold Mines
- ◆ Steel Smelter Works
- ◆ Coil Manufacturing
- ◆ Petroleum, Sugar
- ◆ Copper & Zinc Smelting
- ◆ Power Stations, Quarry
- ◆ Marine/Merchant Shipping/Yacht Chandlery
- ◆ Paper, Automobile, Food
- ◆ Agriculture, Irrigation

Application Areas

- ◆ Stress weld/cracks, Punctures, Pinholes
- ◆ Girth welds, Fractures, Corroded porosity
- ◆ Holes & Voids, Distribution pipelines
- ◆ Process Piping lines, Slurry & Sludge lines
- ◆ Waste Product Pipelines, Gathering lines
- ◆ Oil and Gas risers, Tanks, Cracked castings
- ◆ Vessels, Valves, Drums, Elbows, Tees, Flanges,
- ◆ Couplings, Joints, Splits

Properties

- ◆ Abrasion Resistance Taber Abrasion - 34 mg/1,000 cycles (CS17/1,000 grams)
- ◆ Temperature- Wet 71°C Dry 135°C Intermittent 240°C
- ◆ Tensile Strength - 6,000 psi
- ◆ Compressive Strength - 7,380 psi
- ◆ Flexural Strength - 4,550 psi
- ◆ Lap Shear Strength - > 2,000 psi (137.89 bar)
- ◆ Hardness - Shore D 84
- ◆ Max pressure - 2700 psi
- ◆ Flexibility - 3.2% elongation at break
- ◆ Active gravity flow leak 15 psi or less / 60 psi without shutdown
- ◆ Shelf life - 2 years

Toll Free: 1800-425-1070

Name	Code	Description	Packsize
Pipe Repair Kits			
Zero - Down - Time PRK 301	21301	Pipe Repair Kit - W 2 inch x L 2 ft (24 inch) or W 50 mm x L 0.6 mtr	Kit *
Zero - Down - Time PRK 302	21302	Pipe Repair Kit - W 2 inch x L 5 ft (60 inch) or W 50 mm x L 1.5 mtr	Kit *
Zero - Down - Time PRK 303	21303	Pipe Repair Kit - W 2 inch x L 12 ft (144 inch) or W 50 mm x L 3.6 mtr	Kit *
Zero - Down - Time PRK 304	21304	Pipe Repair Kit - W 3 inch x L 9 ft (108 inch) or W 75 mm x L 2.7 mtr	Kit *
Zero - Down - Time PRK 305	21305	Pipe Repair Kit - W 3 inch x L 12 ft (144 inch) or W 75 mm x L 3.6 mtr	Kit *
Zero - Down - Time PRK 306	21306	Pipe Repair Kit - W 4 inch x L 12 ft (144 inch) or W 100 mm x L 3.6 mtr	Kit *
Zero - Down - Time PRK 307	21307	Pipe Repair Kit - W 4 inch x L 15 ft (180 inch) or W 100 mm x L 4.5 mtr	Kit *
Zero - Down - Time PRK 308	21308	Pipe Repair Kit - W 4 inch x L 30 ft (360 inch) or W 100 mm x L 9 mtr	Kit *

* Containing MonoStick ETS - (Express Titanium Stick - for Sealing of Leakages) - 114 gm - 1 No in all Pipe Repair kits

Application Instructions

- ▶ The pipe leakages can be successfully arrested for the pipes up to 18" in diameters
- ▶ Once the leaking area is identified, shut down relevant pipes or hoses immediately wherever possible.
- ▶ Prepare the surface by cleaning and roughening the pipe to ensure maximum adhesion. Prepare area atleast 3 times of damaged area
- ▶ Put on enclosed latex gloves.
- ▶ Apply MonoStick ETS, knead till uniform consistency, press to fill hole/cracks/voids and hold till leakage stops. The mechanical bond that is created in this step is critical to the performance of the repair system.
- ▶ Open foil pouch and immerse Zero-Down-Time bandage in temperate fresh water for 10 Seconds to activate. The entire contents must be used once the package is opened within 1 minute.
- ▶ Apply Zero-Down-Time around the damaged area extending up to 50mm either side of the leak to ensure complete coverage. It is important that the bandage is applied quickly as curing begins once it is taken out of the water.
- ▶ Whilst wrapping, pull each layer tightly by using your hand to mould and squeeze the layers together. Continue this action during and upon completion.
- ▶ The indirect heat may be applied to accelerate cure times if required
- ▶ The wrapping should be done minimum 4 times around pipes or 4 times of wall thickness whichever is higher.
- ▶ Keep working the urethane back into the tape while moulding and pressing the tape until it has lost its initial tackiness.
- ▶ The urethane impregnated fiberglass tape will be fully hardened in approximately 30 minutes, and the pipe can be returned to service within an hour.
- ▶ The higher temperature & chemicals, if within specified limits, do not cause any softening of the bandage

Clientele List



Toll Free: 1800-425-1070

COST SAVING Solutions for

Repair & Maintenance of aging assets and Protection & Improvement of new assets

Buildings & Civil Infrastructure Maintenance for Civil & Project Engineering

- ▶ Waterproofing ▶ Heat Reflective Coatings ▶ Floor Screeds & Toppings ▶ Surface Treatments ▶ Surface Protective Coatings
- ▶ Road Maintenance Coatings ▶ Repair, Rehabilitation & Strengthening ▶ Grouts & Anchors ▶ Construction Admixture
- ▶ Adhesives & Sealants ▶ ESD - Anti Static/Dissipative/Conductive Floor Coatings

Maintenance, Repair & Overhaul (MRO) for Mechanical & Electrical Engineering

- ▶ Metal Reclamation Putties ▶ Maintenance Coatings ▶ Pipe Repair & Strengthening Kits ▶ Metal Epoxy Sticks ▶ Industrial Maintenance Aerosols
- ▶ Emergency Maintenance Kits ▶ Oil, Grease & Lubricants ▶ Anti-Corrosive Coatings ▶ High Temperature Coatings ▶ Thermal Insulation Coatings
- ▶ Hand Cleaners & Barrier Creams ▶ Crusher Backing Compound ▶ Energy Saving Coatings ▶ Fire Retardant Coatings ▶ Self Fusing Insulation Tapes