Pipe Repair Bandage - 309221
Technical Data Sheet

Technical Information

Description / Applications

Pipe Repair bandage contains an advanced water activated Polyurethane resin is especially formulated to make quick and effective repairs to cracks, leaks, fractures, casting and corrosion porosity in metal (ferrous and non ferrous) plastic, concrete and asbestos piping carrying Water, Oil, Steam, and most gases and solvents.

Pipe Repair bandage provides immediate repairs in emergency situations and cures in less than 10 minutes saving costly downtime. It has good temperature, pressure and chemical resistance and is quick and easy to use. Ideal for permanent repairs requiring maximum strength and security in the chemical, manufacturing, engineering, marine, greenhouse and food processing industries. Pipe Repair bandage has a knitted fiberglass composition that stretches around joints, fittings and elbows. Other applications, using appropriate reinforcements or splints include broom/tool handles, fishing rods, landing net poles and all manner of support on furniture and equipment.

Pipe Repair bandage fulfills all the requirements of the water bylaws scheme approval (BS6920), which tests the effects of the cured bandage in the presence of potable water.

On its own Pipe Repair bandage is ideal for low pressure repairs, however used with an intermediate repair system it can also be used for high pressure repairs.

There is no mixing or measuring required, Pipe Repair bandage is ready for use after soaking in water for just 10 seconds. There is no need for skilled labour, Pipe Repair bandage is safe and easy to use - and is food safe when cured.

How To Use

1. Shut down pipes and hoses before repair. Clean and abrade lightly the area to be repaired.
2. To activate the bandage, soak in warm fresh or salt water for 10 seconds and squash in the hand whilst submerged. Curing begins immediately upon opening the package, therefore it must be applied quickly to the repair area. The entire bandage must be used.

In all cases, try to achieve a minimum of 9 (nine) complete windings around the circumference of the pipe, even when used in conjunction with an intermediate repair system. If nine windings are not achievable use a second bandage to complete the repair.

FOR DAMAGED & CRACKED PIPES – Wrap the bandage very firmly around the damaged area extending 50mm beyond either side of the repair. Continue to apply pressure to the bandage by wetting the outside of the bandage and moulding in direction of the wrap until the bandage begins to set. The bandage hardens in 10 minutes and is fully cured within 1 hour.

FOR REPAIRING LEAKS & BLOW HOLES – Cut off 75mm of the bandage and force into the hole to form a plug. Wrap the bandage very firmly around the damaged area extending 50mm beyond either side of the repair. Continue to apply pressure to the bandage by wetting the outside of the bandage and moulding in direction of the wrap until the bandage begins to set. The bandage hardens in 10 minutes and is fully cured within 1 hour.

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Characteristics

Resin:	Hydrophilic Polyurethane – Rapid polymerisation.
Bandage:	Aramid Fibre Knitted, not woven, to ease repairs on corner joints, elbows and other shaped fittings.
Tensile Strength:	Fracture toughness test – 2051 Newton's peak stress.
Flexural Strength:	Resists 50 Newton's Force after only 15 minutes cure.
Dielectric Test:	Maximum Voltage at breakdown:16,000 volts+.
Temperature Cycling Test:	Oven cured @ 50°C for 1 hour elevated to 190°C for 1 hour. Results: No delimitation noted.
Temperature Rating:	150°C (Anything over this could cause toxic fumes). The fibre glass has a melting point of 1200°C.

Pressure Tests:

Objective:	To establish by cold, non-shock method the pressure resistance of the moisture curing bandage against water.
Test System:	Hydrostatic Pump SC 1000psi – Model No. 57052.
Manufacturer:	Hydraulic Engineering Corp.
Test Piece:	Carbon steel pipe to API 5L 100mm OD with closed coupling with 2 x 4mm diameter holes at 20mm centres drilled through the wall of the pipe.
Product:	3" x 9" Moisture curing bandage.
Test Procedure:	Submerge bandage in water at room temperature and apply directly to the Test Piece. Leave for one hour and test pressure resistance in general accordance with API 6, and A.S.M.E. 8. Raise pressure in small increments. Observe and record the first signs of leakage. Release pressure and then re-test recording again the first signs of leakage. Repeat test three times to establish an average result.
Results:	First leakage – 13 to 15 Bar Second leakage – 3 to 5 Bar

Chemical Resistance Data:

Chemicals:	Most Dilute Acids, Brine, Oils, Toulene, White Spirit, Xylene, Sodium Hydroxide, Saturated Soda Solution, Fuel Oils, Kerosene Oil, Acetone, Ethyl Alcohol, Diesel fuel, Caustic Soda 50%.
Results:	No softening of the bandage with any of the above.

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