

3M™ Scotchkote™ Urethane Pipe Repair PR 504

Updated
Supersedes

September 2015
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Data Sheet and Application Guide

Product Description

Scotchkote Urethane Pipe Repair PR 504 is a special fast curing moisture activated repair bandage for repairs to leaking pipes.

Product Features

Easy to apply, requiring no special tools or equipment.

Specially selected woven polyester fabric impregnated with a polyurethane resin which is activated by immersion in water.

- Ideal for repairing pipes operating at low pressures.
- Designed for use for repairs to pipes upto 65mm diameter.
- Can be used on a wide variety of surfaces, including all metals and many types of plastic.

General Application Steps

1. Remove oil, grease and loosely adhering deposits.
2. Abrade by appropriate means to create a coarse profile.
3. Apply Scotchkote Urethane Pipe Repair PR 504 to the required thickness.
4. Allow to cure.

Properties

Property	Value
Colour	Cream
Ratio	N/A, supplied ready for use
Drying & Cure times at 20°C (68°F)	
Useable life	2-3 mins
Initial Set	5 mins
Full Mechanical Cure	30 mins
Volume Solids	100%
Performance Data	
Flexural Strength	32Mpa (4640 psi) (ASTM D790)
Tensile Strength	19 Mpa (2740psi) (ASTM D6382)
Maximum Heat Resistance	270°C (500°F)
Maximum Service Pressure	10 bar (150 psi) - ½ inch/12mm thick repair 27.5 bar (400 psi) – 1inch/25mm thick repair
Shore D Hardness	82 (ASTM D2240)
Adhesion (Bond Strength)	14Mpa (2000 psi)



Application Procedures for Scotchkote Urethane Pipe Repair PR 504

All pressure should be removed from the pipe. For leaks where pressure cannot be removed, holes should be stopped using a pipe repair clamp. Remove all oil, grease, loose rust scale, sealant tape and paint from the repair area. Rough score a 10 cm (4 inch) patch around the pipe centring on the leak site.

If the pipe is pitted with rust, surfaces must be wire brushed to remove the loose scale. If the surface is smooth, as with copper or stainless steel, surfaces should be roughened with a coarse file, rasp or saw blade. For plastic pipe, the external mould release must be removed. Abrade surfaces with a coarse grit sandpaper. A saw blade may also be used to create a cross hatch pattern. This is particularly useful on polypropylene and PVDF piping.

Application Procedures

Before and during application, lightweight disposable gloves should be worn to protect the hands.

Scotchkote Urethane Pipe Repair PR 504 is a single component material, which should be immersed in water and squeezed two or three times for about five seconds prior to use.

Remove roll from water and wrap quickly and tightly as follows.

Centre tape over leak site, wrap from bottom of roll, pulling firmly throughout application. After 5-7 plies, resin foam will come through the tape, which is desirable and aided by pulling tightly. Continue until entire roll is applied, building to a minimum thickness of ½ inch (12 mm), use a second roll if necessary. Firmly press and smooth end of roll into wrap in the direction of application. Wet gloves in water, smooth and firmly press the wet resin back into the wrap.

When used in conjunction with a plug of 3MT™ Scotchkote™ Epoxy Metal Repair SG 527 repeat the above instructions but having first plugged the hole. Knead a small bead of putty in a gloved hand and flatten out into a disc centrally over the hole pressing gently and feathering out the edges. Leave to semi-harden (full cure 30 minutes) before applying the tape, although the tape may be applied immediately if necessary.

KEEP HANDS MOVING QUICKLY AND WET GLOVES FREQUENTLY TO AVOID STICKING.

Continue rapid hand movement pressing and polishing resin in motions around and parallel to the pipe. Continue process until resins are no longer tacky. The repair should now have a smooth, hard surface and an enamel-like appearance with no fabric protruding through the surface.

NOTE: If a thicker application is needed, spend a little less time finishing the first roll and immediately begin the application of the next. Finish the final roll as if a single roll application.

Packaging and Storage

Supplied as a rolled bandage in an air tight sachet. Bandage dimension approximately
10 x 1.5 metre x 50mm.
5 x 3.6 metre x 50mm
5 x 3.6 metre x 75mm
5 x 3.6 metre x 100mm

Use within 5 years of date of manufacture. Store in original sealed containers at temperatures between 5°C and 32°C.

Application Procedures for Scotchkote Urethane Pipe Repair PR 504

Scotchkote Urethane Pipe Repair PR 504 User Chart						
Pipe nb	Pipe circum.	9 circum.	50 X 1.5 m	50 X 3.6 m	75 X 3.6 m	100 X 3.6 m
15	47	424	One	-	-	-
20	63	566	One	-	-	-
25	79	707	One	-	-	-
32	101	905	One	-	-	-
40	126	1131	One	-	-	-
50	157	1414	One	-	-	-
80	251	2262	Two	One	-	-
100	314	2828	Two	One	One	One
125	393	3535	-	One	One	One
150	471	4242	-	Two	Two	Two
200	628	5656	-	Two	Two	Two
250	786	7070	-	Two	Two	Two
300	943	8483	-	Three	Three	Three
mm	mm	mm				

Hydrostatic tests based on 9 wraps around circumference.

Handling and Safety Precautions

Read all health hazard, precautionary and first aid statements found in the Material Safety Data Sheet, and/or product label prior to handling or use.

Ordering Information/Customer Service

For ordering, technical and product information or to request a copy of the Material Safety Data Sheet, call +44 (0)1609 780170 .

For emergencies, please contact +44 (0)1344 858000.

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