

3M™ Scotchkote™ Urethane Metal Repair RG 501

Data Sheet and Application Guide

Product Description

Scotchkote Urethane Metal Repair RG 501 has been specifically developed as a rapid curing repair system for rebuilding and repairing equipment requiring good mechanical strength.

Product Features

- Combines good application characteristics with speed of cure to minimise down time.
- Designed for application by putty knife or spatula at thicknesses upto 6mm.
- Can be applied to any damaged metal surface, plus glass, fibreglass and other composite surfaces.
- Designed for rapid repairs to cracked casting, leaking pipes, tanks, flanges etc.
- Exhibits excellent adhesion to correctly prepared metal surfaces.

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 Metal Repair RG 501 to the required thickness.
4. Allow to cure.
5. Visually inspect the system for defects.
6. Repair any defects.
7. Carry out machining as required.

Properties

Property	Value
Colour	Grey
Ratio	1:1 By volume 4:3 By weight
Drying & Cure times at 20°C (68°F)	
Useable life	3 mins
Initial Set	10 mins
Hard Dry for machining	30 mins
Full Mechanical Cure	2 hours
Volume Solids	100%
Film Thickness	Upto 6mm.
Volume Capacity	570cc (34.7 cu ins) per kilo
Performance Data	
Flexural Strength	50 Mpa (7100 psi) (ASTM D790)
Compressive Strength	86 Mpa (12200 psi) (ASTM D695)
Heat Distortion Temperature	52°C (125°F)
Tensile Shear Adhesion	17.5Mpa (2500 psi) on grit blasted steel (ASTM D1002)
Shore D Hardness	80 (ASTM D2240)
Maximum Operating Temperature	120°C (248°F) - Dry 70°C (158°F) - Wet



Application Procedures for 3M™ Scotchkote™ Urethane Metal Repair RG 501

Surface Preparation

Heavy contamination due to oil or grease must first be removed using 3M™ Scotchkote™ Cleaner 020. All loose material, rust and surface contaminants, including existing coatings, must be removed and the surface roughened by using an angle grinder, needle gun or abrasive blasting. Where grinding or needle gunning is used, the surface should be cross-scored to improve adhesion. Care must be taken, when angle grinding, to avoid polishing rather than roughening metal surfaces. Where possible, abrasive blasting is the preferred surface preparation, especially in fluid flow repairs. Surfaces should finally be carefully degreased using Scotchkote Cleaner 020. Cloths should be frequently changed to avoid spreading contamination. On deeply pitted surfaces or porous castings, the cleaner should be worked into the surface by brush and washed off using excess cleaner. Parts (for example, threads or bearing surfaces) which must remain in position during application but must not adhere to Scotchkote Urethane Metal Repair RG 501 must be coated with 3M™ Scotchkote™ Release Agent 035 prior to application of the product.

Product Mixing

Scotchkote Urethane Metal Repair RG 501 is a two component solvent free material comprising Part A (Base) and Part B (Activator) components which must be mixed together prior to use.

Measure 1 volume of the Part A (Base) component and 1 volume of the Part B (Activator) component onto a clean mixing board or other suitable surface. The two components should then be thoroughly mixed until completely streak free.

The mixed material should be used within 3 minutes of mixing at 20°C (68°F). This time will be reduced at higher temperatures and extended at lower temperatures.

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.

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Application Procedures

Prepared surfaced should be clean and dry. The mixed material should be pressed firmly onto the prepared area, working the material into any cracks and surface defects.

When 3M™ Scotchkote™ Reinforcement Tape 040 is being used to strengthen the repairs the tape should either be impregnated with Scotchkote Urethane Metal Repair RG 501, or the tape should be laid over the product surface and stippled into the material before it cures, then additional Scotchkote product applied over the surface.

Once the Scotchkote Urethane Metal Repair RG 501 has reached 'initial set' the material can be separated from the surfaces treated with Scotchkote Release Agent 035.

When the product is being used to repair leaking pipes, the flow through the pipe should be turned off until the repair is finished. Any leaking liquid must be wiped off the surface to ensure the surface is completely clean and dry before application commences.

All equipment must be cleaned IMMEDIATELY after use, with Scotchkote Cleaner 020.

Volume Capacity

570cc (34.7cu ins) per kilo

Packaging and Storage

Supplied in 125gm and 175gm packs

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

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 or fax +44 (0)1609 783762 (Sales) or 788718 (Technical).

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



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