

3M™ Scotchkote™ Urethane Metal Repair RG 501

Updated
Supersedes

August 2014
July 2014

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 castings, 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	Up to 6mm.
Volume Capacity	570cc (34.7 Cu Ins) per kilo
Performance Data	
Flexural Strength	45 MPa (6525 psi) (ASTM D790)
Compressive Strength	84 MPa (12200 psi) (ASTM D695)
Heat Distortion Temperature	52°C (125°F)
Tensile Shear Adhesion	17.5 MPa (2500 psi) on grit blasted steel (ASTM D1002)
Shore D Hardness	80 (ASTM D2240)
Maximum Operating Temperature	120°C (248°F) - Dry 60°C (158°F) - Wet



Application Procedures for 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 material comprising Part A (Base) and Part B (Activator) components which must be mixed together prior to use.

Measure 1 volume of Part A (Base) component and 1 volume 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.

3M and Scotchkote are trademarks of 3M Company.

Important Notice

All statements, technical information and recommendations are based on information believed to be reliable, but the accuracy or completeness is not guaranteed. Before using the 3M™ Scotchkote™ Product, you must evaluate it and determine if it is suitable for your intended application. Because conditions of product use are outside of 3M control's and vary widely you assume all risks and liability associated with such use. Any product related statements not contained in current 3M publications, or any contrary statements contained in your purchase order, shall have no force or effect unless expressly agreed to in writing by an authorised officer of 3M.

Warranty; Limited Remedy; Limited Liability.

3M warrants that the 3M™ Scotchkote™ Product will conform to 3M published specifications upon shipment. If the product is proven not to have met the specifications your exclusive remedy within 12 months of sale by 3M of the product and 3M's sole obligation will be, at 3M's option, to replace the Product or to refund the purchase price of the Product. Except where prohibited by law, this warranty is made in lieu of all other warranties, express or implied, including, but not limited to, any implied warranty of suitability or fitness for a particular purpose, or those arising from a course of dealing, custom or usage or trade.

3M has no obligation under this warranty with respect to any product that has failed due to inadequate or improper storage, handling, surface preparation, application, or maintenance; failure to follow product instructions or recommendations or alteration or damage to the Product caused by accident, neglect, or misuse. OTHER THAN IN THE CASE OF DEATH OR PERSONAL INJURY CAUSED BY ITS NEGLIGENCE AND EXCEPT WHERE PROHIBITED BY LAW, IN NO EVENT SHALL 3M BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL LOSS OR DAMAGES (INCLUDING LOST PROFITS) ARISING FROM THIS PRODUCT, REGARDLESS OF THE LEGAL THEORY ASSERTED.



Electrical Markets Division (EMD)

3M United Kingdom plc
23 Standard Way Industrial Estate
Northallerton
North Yorkshire DL6 2XA
United Kingdom
Phone: +44 (0)1609 780170
www.3M.co.uk/scotchkote

Electrical Markets Division (EMD)

3M United Kingdom plc
3M Centre
Cain Road, Bracknell
Berkshire RG12 8HT
Phone: 01344 858000
Fax: 01344 857970
www.3M.co.uk

Application Procedures

Prepared surfaces 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.

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 .

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

Please recycle. Printed in UK.
© 3M 2014. All rights reserved.