

# 3M™ Scotchkote™ Epoxy Ceramic Surfacer CR 511 (N)

Updated  
Supersedes

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## Data Sheet and Application Guide

### Product Description

Scotchkote Epoxy Ceramic CR 511 (N) has been specifically developed as a 100% solids coating for resurfacing and lining to improve the efficiency of equipment in fluid flow environments.

### Not For Use with Potable Water Applications.

### Product Features

- Combines good application characteristics with good erosion and corrosion resistance.
- Designed for application by brush.
- Provides a low friction surface improving flow rates in pumps etc.
- Designed for resurfacing and lining metal components.

### General Application Steps

1. Remove oil, grease and loosely adhering deposits.
2. Abrasive blast clean steel surfaces to NACE No. 2/SSPC-SP10 Near White Metal, ISO 8501:1, Grade SA2½ .
3. Apply Scotchkote Epoxy Ceramic CR511 (N) to the required thickness.
4. Allow to cure.
5. Visually inspect the system for defects.
6. Repair any defects.

### Properties

Property	Value
Colour	Light Grey, Blue and Red
Ratio	3:1 By volume 5:1 By weight

#### Drying & Cure times at 20°C (68°F)

Useable life	40 mins
Touch Dry	5 hours
Minimum Overcoating	5 hours
Maximum Overcoating	48 hours
Full Cure	7 days
Volume Solids	100%
Film Thickness (Typical)	250 microns (10 mils).

**Note:** Normally applied as a two coat system to achieve a nominal dry film thickness of 500 microns.

Detailed applied instructions in the form of system recommendations are available on request.

Coverage Rate	2.5m²/kilo at 250 microns (29.5ft²/kilo at 10 mils)
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#### Performance Data

Tensile Shear Adhesion	13.6Mpa (2000 psi) (ASTM D1002)
Flexural Strength	56Mpa (8100 psi) (ASTM D790)
Abrasion Resistance	106mgm (0.08ml) loss per 1000 cycles, 1kg load, CS17 Wheel (ASTM D4060)
Shore D Hardness	85
Corrosion Resistance	5000 hours exposure (ASTM B117)
Heat Distortion Temperature	48°C (118°F) (ASTM D648)
Impact Resistance	41 Joules (35 ins lbs)
Maximum Operating Temperature	120°C (248°F) - Dry 60°C (140°F) - Wet



# Application Procedures for Scotchkote Epoxy Ceramic CR 511 (N)

## Surface Preparation

Surfaces should first be degreased using 3M™ Scotchkote™ 020 Cleaner.

Surfaces should then be abrasive blast cleaned to a minimum NACE No 2/SSPC-SPC10, Near White Metal, ISO 8501:1, Grade Sa2½ or equivalent with a blast profile of 75 microns (3 mil) to give medium blast profile.

Equipment which has become salt impregnated due to service conditions should first be wet blasted then dry abrasive blasted and checked for presence of salts. This process should be repeated until the salts are removed. Alternatively the surface should be sweated using a blow torch or heat gun to bring salts up to the surface. The surface should once again be blast cleaned. This procedure should be repeated until no further impregnated salts are present.

Care should be taken on pitted surfaces to ensure that all contamination is removed from the bottom of all pits.

## Product Mixing

Scotchkote Epoxy Ceramic CR 511 (N) is a two component product supplied as a Part A (Base) component and a Part B (Activator) component which must be mixed together immediately prior to use. Stir the contents of the Part A (Base) component, continue stirring and gradually add the total contents of the Part B (Activator) container, stir the combined mix until completely homogeneous. The mixed material must be used within 45 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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## 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.

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## Application Procedures

Application should not be carried out when air and substrate temperatures are below 7°C nor when relative humidity exceeds 85% or when the surface to be coated is less than 3°C above the dew point.

Scotchkote Epoxy Ceramic CR 511 (N) can be applied by brush or roller, with brush application being preferred for the first coat of a two coat application. Good quality brushes or short to medium pile roller should be used. The product should be worked into the surface to ensure complete wetting of the surface. On deeply pitted surfaces, care should be taken to avoid air entrapment in the pitted areas.

Best application results are obtained with a minimum substrate temperature of 15°C with 20°C being the ideal temperature.

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

Note: Scotchkote Epoxy Ceramic CR 511 (N) is normally applied as a two coat system to achieved a total dry film thickness of 500 microns.

## Packaging and Storage

Supplied in 1 and 3 kilo 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.

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