

3M™ Scotchkote™ Epoxy Coating 175SR

Data Sheet and Application Guide

Product Description

Scotchkote Epoxy Coating 175SR has been specifically developed as a 100% solids lining for the internals of tanks, vessels and other equipment in contact with aromatic hydrocarbon solvents, ethanol and some chlorinated solvents.

Product Features

- Combines good application characteristics with excellent corrosion protection and ultimate solvent resistance.
- Is designed for application in a single coat by plural feed hot spray. The product can also be applied by brush or squeegee.
- Is primarily intended for use on steel but can also be used on concrete surfaces with the appropriate primer.
- **Adhesion** - Excellent to currently prepared surfaces.
- **Abrasion Resistance** - Excellent resistance to abrasion and mechanical damage.
- **Chemical Resistance** - Suitable for continuous immersion in aromatic hydrocarbon solvents, ethanol and some chlorinated solvents.

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. Scarify or lightly blast concrete surfaces and seal with 3M™ Scotchkote™ Epoxy Sealer SP 810.
3. Apply Scotchkote Epoxy Coating 175SR at the specified thickness.
4. Allow to cure.
5. Visually or electrically inspect the coating for defects.
6. Repair all defects.

Properties

Property	Value
Colour	Grey
Ratio	3:1 By volume
Drying & Cure times at 20°C (68°F)	
Usable Life	30 mins
Volume Solids	100%
Specific Gravity (Average Mixed)	1.18
Film Thickness (Typical)	Wet/Dry 500 microns per coat. Note: Normally applied as a single coat system to achieve a minimum dry film thickness of 500 microns. Detailed application instructions in the form of system recommendations are available on request.
Theoretical Coverage Rate	2 sq metres per litre at 500 microns dft.
Performance Data	
Abrasion Resistance	60mgm weight loss per 1000 cycles - 1kg load-CS17 wheel - ASTM D4060
Impact Resistance	2.2 Joules (19½ in lbs) - ASTM G14
Heat Resistance	Dry - 177°C (350°F), Wet - upto 120°C (248°F) depending on chemical/solvent - ASTM D2485
Direct Pull Adhesion	>6.2 (900 psi) - steel 3.5Mpa (500 psi) - concrete (Concrete Failure) - ASTM D4541
Water Vapour Permeability	1.3gm/mm/m²/24hrs ASTM D1653
Pencil Hardness	3H - ASTM D3363
Salt Fog Resistance	Excellent, unaffected after 5,000 hours exposure - ASTM B117
Scrub Resistance	>10,000 cycles, ASTM D2486
Humidity Resistance	Unaffected 5,000 hours exposure - BS 3900 Part F2
Scratch Resistance	No Failure 2.5kg (5.5lbs) load BS 3900 Part E2
Shear Adhesion	19.5Mpa (2800 psi) - ASTM D1002



Application Procedures for 3M™ Scotchkote™ Epoxy Coating 175SR

Surface Preparation

Steel Surfaces - Steel surfaces should be abrasive blasted in accordance with NACE No 2/SSPC-SP10 Near White Metal, ISO 8501-1 grade Sa2½ or equivalent. The blast profile is generally specified by the client, a typical profile is 75-100 microns. Where blast cleaning cannot be carried out the surface should be mechanically abraded to remove all loose scale and produce a surface which is clean, dry and free from rust or dust and provide a coarse profile.

Concrete Surfaces - Surfaces should be lightly abrasive blasted or mechanically scarified, taking care not to expose the aggregate. All dust and loose residue should then be removed and surfaces then sealed using 3M™ Scotchkote™ Epoxy Sealer SP 810.

Prior to coating, the concrete should be dry and the moisture content should be checked using a proprietary surface moisture indicator such as an Elcometer 7420 Digital Moisture Meter. When tested in accordance with the manufacturers instructions the reading should be classified as 'dry'.

Application Procedures

Do not apply when the relative humidity exceeds 85% or when the surface to be coated is less than 3°C above the dew point. Minimum temperature for application is 5°C.

Plural feed hot spray

Typical set up is equipment fitted with a proportioning pump and insulated or insulated and heated Part A (Base) and Part B (Activator) feedlines with circulation facilities.

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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The spraying temperature of the material at the spray gun tip should be 55-60°C. Tip size will vary depending upon film thickness requirements and spray pattern but will be between 15-21 thou. Completely clean equipment immediately after use with 3M™ Scotchkote™ Thinners SA65.

Scotchkote Epoxy Coating 175SR should ideally be applied in a single coat, where application of additional coats is required the existing surface must be abraded prior to subsequent application.

Hand Application

If hand application is required then a two coat application should be carried out, however the first coat should be allowed to cure for a minimum of 16 hours and then must be thoroughly abraded or sweep blasted prior to application of the second coat in order to obtain maximum intercoat adhesion.

Scotchkote Epoxy Coating 175SR reacts exothermically which can generate high levels of heat when left fully mixed in containers.

Packaging and Storage

Supplied in 18 litre Part A (Base) & Part B (Activator) units. 1.8 litre 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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