

3M™ Scotchkote™ Epoxy Coating EA9

Data Sheet and Application Guide

Product Description

Scotchkote Epoxy Coating EA9 is a solvent based two component material supplied in both primer and finish coats for use on a wide range of metallic and GRP surfaces.

Product Features

- Combines good application characteristics with excellent corrosion protection and chemical resistance.
- As a primer, it offers proven long term corrosion protection of ferrous and non ferrous metallic substrates.
- As the basis of a multi coat system, the primer can be overcoated with either Scotchkote Epoxy Coating EA9 or by one of a number of Scotchkote finishes.
- Systems have been extensively tested for limited fire hazard performance to various international standards.
- Widely used throughout the rail industry and in original equipment manufacture involving other forms of passenger transportation, heavy engineering fabrication and civil engineering work.
- Reaction to fire performance test data available on request.

Abrasion: Good resistance to abrasion and mechanical damage.

Adhesion: Excellent on correctly prepared surfaces.

Chemical Resistance: The fully cured coating offers outstanding resistance to aqueous solutions and a wide range of industrial chemicals.

Temperature resistance: Dry service temperature range up to 100°C.

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, abrade aluminium surfaces. Degrease galvanised/zinc surfaces.
3. Apply Scotchkote Epoxy Coating EA9 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	Primer, Red Oxide, Grey or White Finish to selected BS or RAL Colours in a range of gloss levels.
Note: Not colour stable, where a colour stable finish is required it must be overcoated with an appropriate top coat.	
Ratio	9:1 by volume
Drying & Cure times at 20°C (68°F)	
Usable Life	Approximately 8 hours
Touch Dry	2 hours
Hard Dry	4 hours (Primer) 6 hours (Finish)
Overcoating Minimum	4 hours
Maximum	3 months
Full Cure	7 days
Volume Solids (Average by Volume)	44%
Specific Gravity (Average Mixed)	1.22
V.O.C (As Supplied)	420-540gm/litre depending on colour and gloss
V.O.C. (Thinned 10%)	460-590gm/litre depending on colour and gloss
Film Thickness (Typical)	Wet 115 microns. Dry 50 microns
Theoretical Coverage Rate	8.8 sq metres per litre at 50 microns dft.
Note: The actual thickness to be applied should be agreed between the specifier and the manufacturer dependant on operational performance criteria and may be higher or lower than the quoted typical value.	
Performance Data	
Impact Resistance	Direct - 5mm Reverse - 2.5mm (BS3900 - E3)
Dry Heat Resistance	100°C (ASTM D2485)
Direct Pull Adhesion	3.8 Mpa (550 psi) (Abrasive Blasted Steel) (ASTM D4541)
Pencil Hardness	HB (ASTM D3363)
Salt Fog Resistance	Excellent, unaffected after 5,000 hours exposure (ASTM B117)
Tensile Shear Adhesion	13.8Mpa (2000 psi) (ASTM D1002)
Humidity Resistance	Unaffected 1500 hours exposure (BS 3900 - F2)



Application Procedures for 3M™ Scotchkote™ Epoxy Coating EA9

Surface Preparation

All surfaces should be thoroughly degreased.

Steel including Stainless Steel: Abrasive blast clean to NACE No. 2/SSPC-SP10 near white metal, ISO 8501:1, Sa2½ BS 7079 Part A1 1989/ISO 8501-1: 1988 - with a medium profile - 35 microns average

Aluminium: Lightly abrasive blast or abrade either mechanically abrade with 120 grade paper or Scotch-brite™ pad. For specific recommendations consult the Technical Information Centre at 3M Northallerton.

Galvanised Steel: New galvanising only requires degreasing. Weathered galvanising should be abraded to remove corrosion deposits.

Application Procedures

Mixing

Stir the contents of the Part A (Base) component. Continue stirring whilst gradually adding the total contents of the Part B (Activator) container. Continue stirring until a homogeneous mix is obtained.

Application

a) Do not apply when relative humidity exceeds 90% or when the surface to be coated is less than 3°C above the dew point, the minimum temperature for application is 7°C.

Method

Scotchkote Epoxy Coating EA9 can be applied by conventional, air assisted airless or airless spray. Scotchkote Epoxy Coating EA9 can be applied to small areas by brush.

Typical spray settings are as follows:-

Airless Spray: 30:1 pump ratio minimum

Tip Size: 13-15 Thou

Tip pressure: approx 2000 psi (145 Bar)

Pressure Pot Needle Setup: 1.1 - 1.8 mm

Scotchkote Epoxy Coating EA9 will require thinning for conventional spray application and may require thinning for airless spray application. Up to 30% 3M™ Scotchkote™ Thinners SA65 may be added by volume.

Clean all equipment immediately after use with Scotchkote Thinners SA65.

Note When airless spray is being used, excessively high tip spraying pressures should be avoided, the minimum pressure at the pump conducive with good atomisation should be used.

Packaging and Storage

Supplied in 5 litre packs or Part A (Base) and Part B (Activator) supplied individually in 20 litre Containers (9 Part A (Base) and 1 Part B (Activator)).

Use within 2 years of date of manufacture. Store in original sealed containers at temperatures between 5°C and 32°C.

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

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