

3M™ Scotchkote™ Epoxy Coating EA9

Updated August 2014
Supersedes May 2014

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, Black, 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
----------------------	---

Note: VOC outside scope for 2004/42/EC

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	5,000 hours exposure (ASTM B117)
---------------------	----------------------------------

Tensile Shear Adhesion	13.8Mpa (2000 psi) (ASTM D1002)
------------------------	---------------------------------

Humidity Resistance	1500 hours exposure (BS 3900 - F2)
---------------------	------------------------------------



Application Procedures for 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.

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

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