

# 3M™ Scotchkote™ Epoxy Coating EA4 2217

## Data Sheet and Application Guide

### Product Description

Scotchkote Epoxy Coating EA4 2217 has been specifically developed as an internal lining of tanks and pipelines holding and transporting aviation fuel and other refined petroleum products.

### Product Features

Scotchkote Epoxy Coating EA4 2217 combines good application characteristics with excellent corrosion protection and chemical resistance. The cured coating is designed to withstand pigging operations in service and offer very significant long-term advantages in product pumping costs.

Scotchkote Epoxy Coating EA4 2217 is recognized worldwide as one of the standard coatings for aviation fuel lines.

Scotchkote Epoxy Coating EA4 2217 is approved by Air BP for coating aviation fuel lines.

- **Adhesion**—Excellent to both blast cleaned and mechanically scraped surfaces.
- **Corrosion Resistance**—Excellent even under aggressive immersion conditions.
- **Chemical Resistance**—Virtually unaffected by crude oil, mixtures, petrochemical products and most industrial chemicals.
- **Temperature Resistance**—Suitable for use up to 100°C in dry service conditions.

### 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 Coating EA4 2217 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	Red Oxide and Grey
Ratio	4:1 By volume 100:16 By weight
<b>Drying &amp; Cure times at 20°C (68°F)</b>	
Usable Life	8 hours
Touch Dry	2 hours
Hard Dry	16 hours
Full Cure	7 days
Volume Solids	55%
Specific Gravity (Average Mixed)	1.40
V.O.C. (As Supplied)	406g/litre
V.O.C. (Thinned 10%) (Typical)	446g/litre 110–150 microns dft (minimum 100 microns, maximum 200 microns) Applied either in a single coat or as a two coat system – please refer to 3M™ Scotchkote™ System Recommendation 28P for more detailed information.
Theoretical Coverage Rate	5 sq metres per litre at 110 microns dft.
<b>Standards Met</b>	Air BP Spec F2D2 Meets the requirements E1 1541 Sections 2 and 3.
<b>Performance Data</b>	
Direct Pull Adhesion	3.8N/mm <sup>2</sup> (550 psi) (Abrasive Blasted Steel) (ASTM D4541)
Bend Test	Pass 13mm (½ inch) (ASTM D522)
Buchholz Hardness	105 (1kg applied load) (DIN53 153)
Water Immersion	Pass (API 512 Table 3.5)
Gas Blistering	No Blistering (API 5L2 Appendix E)
Adhesion	No lifting or loss of adhesion (API 5L2 Appendix D)
Abrasion	Minimum 23 Coeff (ASTM 968 Method A)



# Application Procedures for 3M™ Scotchkote™ Epoxy Coating EA4 2217

## Surface Preparation

Steel surfaces should be abrasive blasted to NACE No 2/SSPC-SP10 near white metal, ISO 8501:1 Grade Sa2½. The blast profile is generally specified by the client; a typical profile is 35–75 microns.

## Mixing

The contents of the Part A (Base) container should be stirred. While stirring, the contents of the Part B (Activator) container should be added with stirring continuing until a homogenous mix is achieved.

## Application

The product can be applied by brush, roller, conventional or airless spray, with airless spray being the preferred method.

- Airless Spray Minimum 45:1 pump ratio
- Tip Size 19–27 Thou orifice;
- Tip pressure minimum 2500 psi (175 bar)

For small areas, good quality brushes and mohair rollers should be used.

## 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.

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.

Clean all equipment immediately after use with 3M™ 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 atomization should be used.

## Packaging and Storage

### Red Oxide

Supplied in either 5 and 20 litre packs or the Part A (Base) and Part B (Activator) supplied separately in 200 litre bulk containers, (4 x Part A (Base) + 1 x Part B (Activator)).

### Grey

Supplied in 5 litre packs.

Use within 2 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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