



# Protective & Marine Coatings

# FIRETEX<sup>®</sup> M93/02 EPOXY INTUMESCENT

PART A  
PART B

B59-530  
B59LV530

SERIES  
BLUE ADDITIVE

Revised 03/2016 Issue 3

## PRODUCT INFORMATION

### PRODUCT DESCRIPTION

A two pack, solvent free, thick film epoxy intumescent coating that provides passive hydrocarbon fire protection for up to 2 hours on structural steel, FIRETEX M93/02 is an exterior durable coating that is tested and approved for pool fire situations.

### RECOMMENDED USES

M93/02 is recommended for use on onshore structures. It has been extensively tested and approved for durability under NORSOK M501 and UL1709. Typical examples of use are:

- Structural steel support members
- Pipe racks
- Vessel skirts and saddles

FIRETEX M93/02 is also recommended for use in LNG and cryogenic applications when applied as a duplex system using FIRETEX M89/02.

### ENDORSEMENTS

NORSOK M501 Rev 5 System 5A  
UL1709 Design number XR630

### RECOMMENDED APPLICATION METHODS

Reducer/Clean up: FIRETEX Thinner No9

### PRODUCT CHARACTERISTICS

<b>Flash Point:</b>	Above 131°F (55°C)
<b>Colour:</b>	Pale Blue (white base plus blue additive)
<b>Volume Solids:</b>	100%, mixed
<b>VOC:</b>	0.0 g/L; 0.0 lb/gal
<b>Mix Ratio:</b>	2:1 by volume 2.66:1 by weight
<b>Applied Density:</b>	1.12g/cm <sup>3</sup> (9.27lb/gal) Independently tested (see additional notes)

### PRACTICAL APPLICATION RATES - MICRONS PER COAT

	Plural Component Spray	
<b>Wet mils (mm)</b>	<b>120 (3)</b>	<b>472 (11.8)</b>
<b>Dry mils (mm)</b>	<b>120 (3)</b>	<b>472 (11.8)</b>
<b>~Coverage sq ft/gal (m<sup>2</sup>/L)</b>	<b>14.7 (0.3)</b>	<b>4.16 (0.085)</b>
Maximum sag tolerance with overlap typically 275.0 mils (7000 microns) dry by plural component spray.		

### AVERAGE DRYING TIMES

	@ 50°F/10°C	@ 60°F/15°C	@ 73°F/23°C
<b>To touch:</b>	5 hours	4 hours	2 hours
<b>To handle:</b>	30 hours	16 hours	12 hours
<b>To recoat:</b>	5 hours	4 hours	2 hours

*Drying time is temperature, humidity, and film thickness dependent.*

**Pot Life:** 90 minutes\* 60 minutes\*

\*Trowel Application: At 95°F (35°C), pot life is 30 minutes. For working time under Plural Application, see FIRETEX M93/02 Application manual.

**Sweat-in-time:** None

### PHYSICAL PROPERTIES

The test results below have been determined in third party testing

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060	Wear Index 251
Tensile Strength	ISO 527	11.1 MPa
Coefficient Thermal Expansion	ASTM E831	68.9 µm/m°C
Hardness	ASTM D2240	68 Shore D

### APPLICATION EQUIPMENT

#### Plural Component Spray

A comprehensive application manual is available and will be provided to contractors. All application equipment needs to be approved by Sherwin-Williams.

The application of Epoxy Intumescent materials requires equipment with specific performance characteristics. Please refer to the manual for a list of equipment that has been tested for these types of applications.

#### Trowel and Preformed Castings

The material may be applied by trowel. It is also suitable for the manufacture of preformed castings.

#### Typical Thickness:

Material can be specified from 120 mils (3mm) to 472 mils (11.8mm). Please refer to FIRETEX M93/02 thickness tables for specific details.

### PACKAGE

A two component material supplied in separate containers to be mixed prior to use.

**Pack Size:** 60kg (132.2 lbs), 20kg (44.09 lbs) units when mixed.

**Shelf Life:** 24 months



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### RECOMMENDED SYSTEMS

The following typical systems are recommended for application on to suitably prepared carbon steel:

	DFT (mils)	DFT (microns)
Macropoxy 646	2-5	50-125
FIRETEX M93/02 As per requirement of project		
Hi-Solids Polyurethane	3	75
or		
Macropoxy L425	3	75
FIRETEX M93/02 As per requirement of project		
Acrolon C137V2	2.5	60

Note: FIRETEX SC1 reinforcement cloth must be installed into the M93/02 in accordance with M93/02 application manual. Further primers and topcoats have been approved by Sherwin-Williams. Please refer to Sherwin-Williams Primer and Topcoat Approval Lists for details of approved materials.

### ADDITIONAL NOTES

Overcoating should take place within seven days of application of the previous coat of FIRETEX M93/02. If seven days is exceeded, mechanical abrading of the FIRETEX surface is required to ensure proper adhesion.

Drying times, curing times and pot life should be considered as a guide only.

The curing reaction of epoxies begins immediately when the two components are mixed, and since the reaction is dependent on temperature, the curing time and pot life will be approximately halved by a 10°C (20°F) increase in temperature and doubled by a 10°C (20°F) decrease in temperature.

Galvanized surfaces must be prepared according to SSPC SP-16 with minimum surface profile of 1.0 mils followed by priming with Macropoxy 646 series at 2-5mils (50-125 microns) DFT.

Alternative primers are approved: Please contact your Sherwin-Williams representative for details.

Numerical values quoted for physical data may vary slightly from batch to batch.

Normal in service temperature range for FIRETEX M93/02 is between -15°C (5°F) and 80°C (176°F). Please refer to Sherwin-Williams Technical Advice document TAD0040 for temperatures below this range.

Where substrate operating temperatures fall in the 80°C (176°F) to 150°C (302°F) range a layer of FIRETEX M89/02 syntactic insulation is required to preserve the long term fire performance of the material.

There may be slight variations in color from batch to batch. Any variations in color, when using plural component spray, may indicate a fault with the spray equipment and this should be checked to ensure the correct ratio of base and additive are being delivered.

Applied Density is dependant on many variables such as temperature, test method and application method and as such will always fall within a range.

### CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with Thinner No. 9. Clean tools immediately after use with Thinner No. 9. Follow manufacturer's safety recommendations when using any solvent.

### SURFACE PREPARATION

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

FIRETEX M93/02 is designed for use over a suitably prepared and primed substrate.

It is possible to apply FIRETEX M93/02 to bare steel. Refer to FIRETEX M93/02 application manual for detailed surface preparation information.

Minimum recommended surface preparation:

Steel SPC-SP10 (Sa 2.5), 2-3 mils (50-75 microns) profile

Galvanising SSPC-SP16, 1-2 mils (25-50 microns) profile

### APPLICATION CONDITIONS

Temperature: 10°C (50°F) minimum, 55°C (131°F) maximum (air)  
Minimum 3°C above dew point, 75°C maximum (substrate)

Relative Humidity: 85% maximum

Refer to FIRETEX M93/02 application manual for detailed information.

In order to achieve optimum water and chemical resistance, temperature needs to be maintained above 10° (50°F) during curing.

### SAFETY PRECAUTIONS

Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

### WARRANTY

Any person or company using the product without first making further enquiries as to the suitability of the product for the intended purpose does so at their own risk, and Sherwin-Williams can accept no liability for the performance of the product, or for any loss or damage arising out of such use.

The information detailed in this Data Sheet is liable to modification from time to time in the light of experience and of normal product development, and before using, customers are advised to check with Sherwin-Williams, quoting the reference number, to ensure that they possess the latest issue.