



Protective & Marine Coatings
FIRETEX M93/02
EPOXY INTUMESCENT COATING

PART A **B59-530** **SERIES**
PART B **B59LV530** **BLUE ADDITIVE**

Revised 10/2015 Issue 2

PRODUCT INFORMATION

PRODUCT DESCRIPTION	RECOMMENDED USES																							
<p>FIRETEX M93/02 is 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. It has resistance to the following:</p> <ul style="list-style-type: none"> • Moisture • Alkali spillage • Aliphatic solvents • Weather • Acid spillage • Petroleum solvents • Abrasion 	<p>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:</p> <ul style="list-style-type: none"> • Structural steel support members • Pipe racks • Vessel skirts and saddles <p>FIRETEX M93/02 is also recommended for use in LNG and cryogenic applications when applied as a duplex system using FIRETEX M89/02.</p>																							
PRODUCT CHARACTERISTICS	ENDORSEMENTS																							
<p>Colour: Pale Blue (white base plus blue additive)</p> <p>Volume Solids: 100%, mixed</p> <p>VOC: 0.0 g/L; 0.0 lb/gal</p> <p>Mix Ratio: 2:1 by volume 2.66:1 by weight</p> <p>Applied Density: 1.12g/cm³ (9.27lb/gal) Independently tested (see additional notes)</p> <p>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.</p>	<p>NORSOK M501 Rev 5 System 5A UL1709 Design number XR630</p>																							
Recommended Spreading Rate per coat:	PHYSICAL PROPERTIES																							
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">Plural Component Spray</th> </tr> </thead> <tbody> <tr> <td>Wet mils (mm)</td> <td style="text-align: center;">120 (3) 472 (11.8)</td> </tr> <tr> <td>Dry mils (mm)</td> <td style="text-align: center;">120 (3) 472 (11.8)</td> </tr> <tr> <td>~Coverage sq ft/gal (m²/L)</td> <td style="text-align: center;">14.7 (0.3) 4.16 (0.085)</td> </tr> </tbody> </table> <p>Maximum sag tolerance with overlap typically 275.0 mils (7000 microns) dry by plural component spray.</p>	Plural Component Spray		Wet mils (mm)	120 (3) 472 (11.8)	Dry mils (mm)	120 (3) 472 (11.8)	~Coverage sq ft/gal (m²/L)	14.7 (0.3) 4.16 (0.085)	<p>The test results below have been determined in third party testing</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Test Name</th> <th style="text-align: left;">Test Method</th> <th style="text-align: left;">Results</th> </tr> </thead> <tbody> <tr> <td>Abrasion Resistance</td> <td>ASTM D4060</td> <td>Wear Index 251</td> </tr> <tr> <td>Tensile Strength</td> <td>ISO 527</td> <td>11.1 MPa</td> </tr> <tr> <td>Coefficient Thermal Expansion</td> <td>ASTM E831</td> <td>68.9 µm/m°C</td> </tr> <tr> <td>Hardness</td> <td>ASTM D2240</td> <td>68 Shore D</td> </tr> </tbody> </table>	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
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<p>Shelf Life: 24 months</p> <p>Flash Point: Above 131°F (55°C)</p> <p>Reducer/Clean Up: FIRETEX Thinner No. 9</p>																								



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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		
Epigrip L425	3	75
FIRETEX M93/02	As per requirement of project	
Resistex 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.

ORDERING INFORMATION

Packaging: 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.

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.