Protective & Marine Coatings

FIRETEX® M90/03
EPOXY INTUMESCENT COATING

PART A	B59W9003	WHITE
PART B	B59LV9003	BLUE ADDITIVE
MESH	B59JS9003	

Revised: February 18, 2025

PRODUCT INFORMATION

PRODUCT DESCRIPTION

FIRETEX M90/03 Epoxy Intumescent Coating is a highly reinforced, anticorrosive, borate free, 100% solids epoxy designed to provide up to four hours of hydrocarbon pool fire thermal protection to carbon steel and galvanized steel. With superior application characteristics and having a UL 1709 certified mesh-free option up to two hours, FIRETEX M90/03 is ideal for both maintenance projects applied onsite and for offsite application, such as in shops and in modular yards.

PRODUCT CHARACTERISTICS

Color:	Pale Blue (white base plus blue additive)
Volume Solids:	100%
VOC:	
Unreduced:	0 g/L ; 0.0 lb/gal, mixed
Reduced 3-5%:	<100 g/L ; 0.83 lb/gal, mixed
Mix Ratio:	2:1 by volume 2.37:1 by weight
Applied Density:	9.18 lb/gal (1.1 g/cm^3)

Recommended Spreading Rate per coat:

	Plural Component Spray Max.	Single Leg Spray* Max.
Wet mils (mm)	**275** (7)	**200** (5)
Dry mils (mm)	**275** (7)	**200** (5)
~Coverage sq ft/gal (m^2/L)	**13** (0.3)	**20** (0.5)

*Thinned equal to or less than 3% by volume

Maximum sag tolerance with overlap typically 280 mils (7 mm) dry by plural component spray.

Consult your Sherwin-Williams Fire Protection Representative regarding the FIRETEX M90/03 Application Manual for all application methods.

Drying Schedule:

	@ 41°F/5°C	@ 50°F/10°C	@ 73°F/23°C	@ 104°F/40°C
To touch:	20 hours	8 hours	4 hours	2 hours
To handle:	30 hours	20 hours	12 hours	2 hours
To recoat:				
minimum:	20 hours	8 hours	4 hours	2 hours
maximum:	7 days	7 days	7 days	7 days

Drying time is temperature, humidity, solvent reduction, and film thickness dependent.

Pot Life:	45 minutes @ 73°F (23°C)
Sweat-in-time:	None
Shelf Life:	36 months
Flash Point:	Above 220°F (104°C)
Reducer:	
Above 80°F (27°C):	Xylene, up to 5% by volume.
Below 80°F (27°C):	50/50 blend Xylene/MEK up to 5% by volume.
Clean Up*:	Xylene, MEK ; for VOC Restricted Areas (≤25 g/L, or ≤3%): use High Solids Compliant Thinner #1 - Fast (R7K111)

*Other areas (>25 g/L, or >3%): use High Solids Compliant Thinner #1 - Fast (R7K111) or Xylene/MEK blend up to 5% by volume. Choose a solvent that is compliant in your area. Confirm compliance with state and local air quality rules before use.

RECOMMENDED USES

FIRETEX M90/03 is used to protect steel structures within fire risk areas in refineries, chemical processing plants, gas plants, and power generation facilities, where steel must be protected against hydrocarbon-based fires. Typical steel structures include:

- Columns, beams, and bracing
- Pipe racks
- Support structures: skirts, legs, and saddles
- Vessels, tanks, spheres, and spheroids
- Marine docks
- Modular units

FIRETEX M90/03 may be used for in-service temperatures of up to 248°F (120°C) in ISO 12944-2 corrosivity categories up to CX. As a duplex system, using FIRETEX M89/02, FIRETEX M90/03 is suitable for protecting assets that operate continuously between 249°F (121°C) and 302°F (150°C). This duplex system is also recommended for LNG and cryogenic spill applications.

ENDORSEMENTS

- UL1709 XR664/XR665/XR666, up to 4 hour pool fire resistance
- XR664 listing requires no mesh for up to and including 2 hours
- UL 2431 Durability Testing
- ISO 20088-1 and ISO 20088-3 cryogenic testing
- NFPA 290 Hose Stream Testing
- ISO 12944 CX certification
- Blast over pressure tested up to 4 bar

PERFORMANCE CHARACTERISTICS

The test results below have been determined in third party testing:

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060	Wear Index 117
Hardness	ASTM D2240	69 Shore D
Tensile Strength	ISO 527	19.6 MPa

APPLICATION EQUIPMENT

Plural Component Spray
Consult your Sherwin-Williams Fire Protection Representative regarding the FIRETEX M90/03 Application Manual. Production application rate is optimum using plural PFP equipment, properly configured following the guidelines set in the application manual. Equipment must meet the parameters defined in the application manual and be approved by Sherwin-Williams. Such equipment includes, but not limited to:

- Wiwa Duomix 333 PFP
- Graco XM PFP Plural-Component Sprayer

Single-Leg Airless Spray
FIRETEX M90/03 is suitable to apply using single-leg airless (68:1 or greater) equipped with ram feed system. Sherwin-Williams approved equipment include:

- Wiwa Herkules 75:1
- Graco Xtreme PFP Sprayer 70:1

Trowel
FIRETEX M90/03 may be applied using various design trowels deemed to be appropriate for the structure configuration.

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RECOMMENDED SYSTEMS

		Dry Film Thickness / ct. Mils	(Microns)
1 ct.	Macropoxy 4600	3.0-5.0	(75-125)
1 ct.	FIRETEX M90/03 - dft as per requirement of project		
1 ct.	Acrolon 7300	2.0-4.0	(50-100)

The systems listed above are representative of the product's use, other systems may be appropriate.

ADDITIONAL NOTES

Overcoating should take place within seven days of application of the previous coat of FIRETEX M90/03. If seven days is exceeded, mechanical abrading of the FIRETEX surface is required to ensure proper adhesion.

The specified DFT of FIRETEX M90/03 must be verified prior to applying the finish coat.

Drying times, recoat windows, 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 20°F (10°C) increase in temperature and doubled by a 20°F (10°C) decrease in temperature.

Alternative primers are approved: consult your Sherwin-Williams Fire Protection Representative for details.

Consult your Sherwin-Williams Fire Protection Representative regarding FIRETEX system solutions for elevated temperatures, cryogenic spill protection and arctic-like exposures (TAD0040).

For steel that is exposed to continuous heat, either from the substrate and/or from radiant heat, in the range between 248°F (120°C) and 302°F (150°C), FIRETEX M89/02 Syntactic Epoxy Insulant Coating must be used in conjunction with FIRETEX M90/03. Consult your Sherwin-Williams Fire Protection Representative for complete system.

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.

FIRETEX M90/03 wets out very easily. Therefore, when reduction is necessary, reducing 3% by volume is optimum. In addition, minimal or no solvent usage during finishing is recommended.

FIRETEX M90/03 is highly reinforced. Rollers that are excessively wet with solvent may reveal the fiber reinforcement, producing areas of gray shading. This is a cosmetic matter and has no ramifications on performance or longevity. By allowing sufficient time for the applied material to tack up, dry finish rolling will reduce this effect.

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

DISCLAIMER

The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Sherwin-Williams representative to obtain the most recent Product Data Information and Application Bulletin.

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 M90/03 may be applied directly to carbon steel prepared according to SSPC-SP10 with a minimal profile of 2-3 mils (50-75 microns). When project scheduling, ambient condition, and or specification requires, the use of a primer shall be specified.

Minimum recommended surface preparation:

Carbon Steel:	SSPC-SP10 (Sa 2.5), 2-3 mils (50-75 microns) angular profile*
Galvanized Steel:	AMPP Guide 21550-2025, 2-3 mils (50-75 microns) angular profile*

*Peak count density, per SSPC-PA 17, of 90-120 peaks per linear inch (35-50 peaks per linear centimeter) required.

APPLICATION CONDITIONS

Temperature:	
Air:	50°F (10°C) minimum, 131°F (55°C) maximum
Surface:	167°F (75°C) maximum At least 5°F (3°C) above dew point
Relative humidity:	85% maximum

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

ORDERING INFORMATION

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

Small Kits – 44lbs (~3.7 USGal); 20kg (14l)
1 pail Part A to 1 pail Part B
Part A: ~31lbs (~2.4 USGal); 14kg (9.4l); 5 USGal Pail
Part B: ~13lbs (~1.2 USGal); 6kg (4.7l); 3 USGal Pail

Large Kits – 132lbs (~11 USGal); 60kg (42l)
2 pails Part A to 1 pail Part B
Part A: ~46lbs (~3.7 USGal); 21kg (14l); 5 USGal Pail
Part B: ~40lbs (~3.7 USGal); 18kg (14l); 5 USGal Pail

FIRETEX H240 Mesh
Large Roll: ~164’ x ~4’ = 688ft²; 50m x 1.27m = 64m²

SAFETY PRECAUTIONS

Refer to the SDS 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

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.