



Protective
&
Marine
Coatings



FIRETEX® M90/03 EPOXY INTUMESCENT COATING

PART A
PART B
MESH

B59W9003
B59LV9003
B59J9003

WHITE
BLUE ADDITIVE

Revised: April 6, 2020

PRODUCT INFORMATION

PRODUCT DESCRIPTION

FIRETEX M90/03 Epoxy Intumescent Coating is a highly reinforced, borate free, 100% solids, anticorrosive epoxy fireproofing designed to thermally insulate both carbon steel and galvanized steel during a hydrocarbon pool fire. With superior application characteristics and certified performance properties, FIRETEX M90/03 is ideal for both onsite and offsite application, such as in shops and in modular yards.

PRODUCT CHARACTERISTICS

Color:	Pale Blue (white base plus blue additive)
Volume Solids:	100%, mixed
VOC:	0 lb/gal ; 0 g/L
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		Single Leg Spray*	
	Min.	Max.	Min.	Max.
Wet mils (mm)	120 (3)	275 (7)	80 (2)	200 (5)
Dry mils (mm)	120 (3)	275 (7)	80 (2)	200 (5)
~Coverage sq ft/gal (m²/L)	6 (0.1)	13 (0.3)	8 (0.2)	20 (0.5)

*Thinned equal to or less than 3% by volume

Maximum sag tolerance with overlap typically 280.0 mils (7 mm) dry by plural component spray.

Refer to the 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:	20 hours	8 hours	4 hours	2 hours

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:	24 months
Flash Point:	Above 131°F (55°C)
Clean Up*:	Thinner No. 2
Reducer*:	Thinner No. 2

*Alternative clean up and reducers are available. Contact your Sherwin-Williams representative for details.

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

The typical in-service exposure temperature range for FIRETEX M90/03 is between ambient and 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
- UL 2431 Durability Testing
- NFPA 290 Hose Stream Testing
- Blast over pressure 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

Production application rate is optimum using plural PFP equipment, properly configured following the guidelines set in the FIRETEX M90/03 application manual. Equipment must meet the parameters defined in the 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 400	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.

Detailed galvanized steel preparation instructions are contained within the FIRETEX M90/03 application manual. These must be adhered to to ensure optimum in service adhesion and performance.

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

Typical in-service temperature range for FIRETEX M90/03 is between ambient and 248°F (120°C). Please refer to Sherwin-Williams Technical Advice document TAD0040 for temperatures below this range.

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 a FIRETEX Specialist 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.

CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with Thinner No. 2. Clean tools immediately after use with Thinner No. 2. 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 M90/03 may be applied directly to carbon steel prepared according to SSPC SP-10 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 SP-10 (Sa 2.5), 2-3 mils (50-75 microns) angular profile*
Galvanized Steel:	ASTM D6386-16a, 2-3 mils (50-75 microns) angular profile*

*Peak count density, per SSPC SP-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

Packaging:	A two component material supplied in separate containers to be mixed prior to use.
Pack Size:	132 lb (60kg) and 44 lb (20kg) units when mixed.

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.