Protective & Marine Coatings

FIRETEX M90/02
EPOXY INTUMESCENT COATING

PART A	B59W550	WHITE
PART B	B59LV550	BLUE ADDITIVE
MESH	B59J220 (LARGE) / B59JS220 (SMALL)	

Revised: January 26, 2024

PRODUCT INFORMATION

PRODUCT DESCRIPTION

FIRETEX M90/02 is a durable, anticorrosive, 100% solids two-component epoxy intumescent coating, that is fully tested and certified to mitigate hydrocarbon fire threats especially where a pressurized, or jet-fire, potential exists. FIRETEX M90/02 is certified to global industry hydrocarbon fire testing standards for up to four hours on both carbon steel and galvanized steel. It has also been tested for cryogenic spill protection, to prevent boiling liquid, expanding vapor explosions (BLEVE) and for blast overpressure resistance. FIRETEX M90/02 durability testing proves resistance against mechanical damage, moderate chemical exposure, and corrosion. It is suitable 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:	<150 g/L ; <1.25 lb/gal
Mix Ratio:	2:1 by volume 2.40:1 by weight
Applied Density:	8.35 lb/gal (1.00 g/cm^3) Independently tested (see Additional Notes)

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)

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

Drying Schedule:

	@ 50°F/10°C	@ 73°F/23°C	@ 104°F/40°C
To touch:	8 hours	3 hours	90 mins
To handle:	18 hours	9 hours	4 hours
To recoat:			
minimum:	8 hours	3 hours	90 mins
maximum:	7 days	7 days	7 days

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

Drying times quoted refer to unthinned application.

Pot Life: 60 minutes*

*Trowel Application: At 73°F (23°C), pot life is 60 minutes and at 95°F (35°C), pot life is 30 minutes. For working time under Plural Application, consult your Sherwin-Williams Fire Protection Representative regarding the FIRETEX M90/02 Application Manual.

Sweat-in-time: None

Shelf Life:	36 months
Flash Point:	Above 131°F (55°C)
Clean Up*:	Cleanser/Thinner No 9 ; For US & Canada VOC Restricted Areas (≤25 g/L, or ≤3%): use High Solids Compliant Thinner #1 - Fast (R7K111).
Reducer:	Cleanser/Thinner No 9 ; For US & Canada: Xylene optionally including MEK ≤10% by volume.

*Other US & Canada areas (>25 g/L, or >3%): use High Solids Compliant Thinner #1 - Fast (R7K111) or Xylene optionally including MEK ≤10% 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 M90/02 has type approvals and listings from numerous Classification Societies and Authorities, and is recommended for use on both onshore and offshore structures. It has been extensively tested and approved for durability under NORSOK M501 and UL1709. Typical examples of use are:

- Decks and bulkheads
- Structural steel support members
- Pipe racks
- Vessel skirts and saddles
- Tanks
- Vessels
- Steel structures exposed to potential blast

FIRETEX M90/02 is recommended to mitigate cryogenic spills within LNG processing plants and terminals.

ENDORSEMENTS

- BS476 Part 20 and 21 Appendix D – Hydrocarbon Pool Fire Testing
- ISO 22899-1 Jet Fire Resistance
- High Heat Flux (350kW/m²) Jet Fire Resistance
- ISO 20088-1 and ISO 20088-3 cryogenic testing
- Type Approved by Lloyds Register of Shipping
- Type Approved by Det Norsk Veritas
- Type Approved by American Bureau of Shipping
- Approved by Underwriters Laboratory to UL1709 (design number XR632 and XR638)
- BAM vessel test reference 3.2/8945
- Resistant to blast overpressure
- NORSOK M501 Revision 6 System 5A
- NFPA 58 Annex H Hose Stream Test
- IMO Resolution MSC61 (67) Annex 1, Part 2 – Toxicity Test
- Tested and assessed to EN13381-8
- European Technical Approval ETA 20-1225

PHYSICAL PROPERTIES

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

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060	Wear Index 182
Tensile Strength	ISO 527	15.5 MPa
Coefficient Thermal Expansion	ASTM E831	81 µm/m°C
Hardness	ASTM D2240	73 Shore D

APPLICATION EQUIPMENT

Plural Component Spray
A comprehensive, FIRETEX M90/02 Application Manual is available and will be provided to contractors by your Sherwin-Williams Fire Protection Representative. 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 FIRETEX M90/02 Application Manual for a list of equipment that has been tested for these types of applications.

Airless Spray
Consult your Sherwin-Williams Fire Protection Representative regarding the FIRETEX M90/02 Application Manual for details on single leg airless spray application.

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

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RECOMMENDED SYSTEMS

		Dry Film Thickness / ct. Mils	(Microns)
1 ct.	Macropoxy 4600	3.0-5.0	(75-125)
	FIRETEX M90/02 - 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.

Note: FIRETEX J220 reinforcement cloth must be installed into the FIRETEX M90/02 in accordance with the FIRETEX M90/02 Application Manual. Other approved primers and finish coats are available. Please contact your Sherwin-Williams FIRETEX representative for assistance.

ADDITIONAL NOTES

Overcoating should take place within seven days of application of the previous coat of FIRETEX M90/02. 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 20°F (10°C) increase in temperature and doubled by a 20°F (10°C) decrease in temperature.

Normal in service temperature range for FIRETEX M90/02 is between -4°F (-20°C) and 176°F (80°C). Consult your Sherwin-Williams Fire Protection Representative regarding the TAD0040 Technical Advice document for temperatures below this range.

Where substrate operating temperatures fall in the 176°F (80°C) to 302°F (150°C) 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 dependent on many variables, such as amount of solvent reduction, temperature, method of application, and finishing pressure applied onto the wet film.

DISCLAIMER

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 M90/02 is designed for use over a suitably prepared and primed substrate.

It is possible to apply FIRETEX M90/02 to bare steel. Consult your Sherwin-Williams Fire Protection Representative regarding the FIRETEX M90/02 Application Manual for detailed surface preparation information.

Minimum recommended surface preparation:

Steel:	SSPC-SP10 (Sa 2.5), 2-3 mils (50-75 microns) profile
Galvanizing:	SSPC-SP16, 2-3 mils (50-75 microns) angular profile

APPLICATION CONDITIONS

Temperature:	50°F (10°C) minimum, 131°F (55°C) maximum (air) Minimum 5°F (3°C) above dew point, 167°F (75°C) maximum (substrate)
Relative Humidity:	85% maximum

Consult your Sherwin-Williams Fire Protection Representative regarding the FIRETEX M90/02 Application Manual for detailed information.

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

ORDERING INFORMATION

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

Small Kits – 44lbs (4 USGal); 20kg (15l)
1 pail Part A to 1 pail Part B
Part A: ~31lbs (~2.6 USGal); 14kg (10l); 5 USGal Pail
Part B: ~13lbs (~1.3 USGal); 6kg (5l); 3 USGal Pail

Large Kits – 132lbs (~12 USGal); 60kg (45l)
2 pails Part A to 1 pail Part B
Part A: ~46lbs (~4 USGal); 21kg (15l); 5 USGal Pail
Part B: ~40lbs (~4 USGal); 18kg (15l); 5 USGal Pail

FIRETEX J220 Mesh
Small Roll (B59JS220): ~82' x ~4' = 344ft²; 25m x 1.27m = 32m²
Large Roll (B59J220): ~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.