Protective & Marine Coatings

FIRETEX M90/02
EPOXY INTUMESCENT COATING

PART A	B59W550	WHITE
PART B	B59LV550	BLUE ADDITIVE
SCRIM	B59J220	

Revised: October 11, 2013

PRODUCT INFORMATION

PRODUCT DESCRIPTION

FIRETEX M90/02 is a solvent free thick film epoxy intumescent coating. It offers durable, epoxy fire protection products that are solvent free and fast curing, with fire protection for up to 4 hours on structural steel, decks and bulkheads. FIRETEX M90/02 is also tested for jet fire situations. It has resistance to the following:

- Moisture
- Alkali spillage
- Aliphatic solvents
- Weather
- Acid spillage
- Petroleum solvents
- Abrasion

PRODUCT CHARACTERISTICS

Color:	Pale Blue (white base plus blue additive)
Volume Solids:	100%, mixed
VOC:	0.0 g/L; 0.0 lb/gal
Mix Ratio:	2:1 by volume
Typical Thickness:	See Fire Rating Tables
Recommended Application Methods:	Plural component spray, airless spray, and trowel

Recommended Spreading Rate per coat:

	Plural Component Spray
Wet mils (microns)	**200.0** (5000)
Dry mils (microns)	**200.0** (5000)
~Coverage sq ft/gal (m^2/L)	

Theoretical coverage **sq ft/gal** (m^2/L) @ 1 mil / 25 microns dft

Maximum sag tolerance with overlap typically 275.0 mils (7000 microns) dry by plural component spray.

Drying Schedule:

	@ 40°F/5.0°C	@ 50°F/10°C	@ 60°F/15°C	@ 75°F/24°C
To touch:	12 hours	8 hours	6 hours	3 hours
To handle:	48 hours	36 hours	24 hours	16 hours
To recoat:				
minimum:	12 hours	8 hours	6 hours	3 hours
maximum:	no maximum recoat time			

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

Pot Life: 90 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, see FIRETEX M90/02 Application manual.

Sweat-in-time: None

Shelf Life:	24 months
Flash Point:	Above 131°F (55°C)
Reducer/Clean Up:	Firetex Thinner No. 9

RECOMMENDED USES

A very durable, corrosion resistant, epoxy intumescent coating providing pool and jet fire protection to steel structures potentially exposed to onshore and offshore hydrocarbon fires. Examples:

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

Recommended for LNG and cryogenic applications when applied as a duplex system using FIRETEX M89/02.

ENDORSEMENTS

1998 COMPLIANT - 1990 EPA-PG6/23(97) Clause 20(d) - **Industrial**
BS476 Part 7 - Surface Spread of Flame Material - for details of substrate/scheme, contact your Sherwin-Williams representative.
Approved by Lloyds Register of Shipping
Approved by Det Norske Veritas
Approved by American Bureau of Shipping BS476 Part 20 and 21
BS476 Part 20 and 21 Appendix D – Hydrocarbon Pool Fire Testing
ISO 22899-1 Jetfire Resistance
IMO Resoultion MSC 61 (67): Annex 1, Part 2 – Toxicity Test
NORSOK M501 Rev 5
UL 1709

APPLICATION EQUIPMENT

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

Plural Component Spray

Nozzle Size: .....31-43 mils (0.79 – 1.09mm)
Fan Angle: .....40°
Operating Pressure: .....3000 psi (210 kg/cm^2)

The details of plural component spray tip orifice size, fan angle and pressure are given as a guide only. The fan angle given is for work on large flat surfaces. Smaller fan angles should be used where the size of the work to be sprayed makes this appropriate. It may be found that slight variation in tip orifice size or pressure will provide optimum atomization in some circumstances. In general, the operating pressure should be the lowest possible to achieve satisfactory atomization. Material is to be applied using plural component airless spray equipment which utilizes a minimum 10" King or air motor. Both base and additive need pre-heating to a minimum temperature of 113°F (45°C) while re-circulating through the unit, so that satisfactory spray application properties are obtained. Suitable insulated and heated lines should be used to maintain temperature prior to spraying. Contact your Sherwin-Williams representative for further details of recommended application equipment and methods.

Hot water can be used effectively for flushing out lines and equipment. Care should be taken as water will not dissolve epoxy resin based materials. If a true solvent is desirable for equipment maintenance then the use of Firetex Thinner No. 9 is recommended.

Airless Spray

Firetex M90/02 can be applied thinned at temperatures ranging from 73-95°F (23-35°C). Maximum length of fluid line is 100 ft (30 m). All equipment and lines must be flushed out using Firetex Thinner No. 9. Contact your Sherwin-Williams representative for further details of recommended application equipment and methods.

Trowel and Preformed Castings

The material may be applied by trowel. It is also suitable for the manufacture of preformed castings. Contact your Sherwin-Williams representative for further details of recommended application equipment and methods.

If specific application equipment is not listed above, equivalent equipment may be substituted.

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SCRIM	B59J220	

PRODUCT INFORMATION

RECOMMENDED PRIMERS

The primer used must be approved by Sherwin-Williams. Contact your Sherwin-Williams representative for details of the complete approved primers list and the qualification protocol.

RECOMMENDED TOPCOATS

The topcoat used must be approved by Sherwin-Williams. Contact your Sherwin-Williams representative for details of the approved topcoat list and the qualification protocol.

Firetex M90/02 is indefinitely overcoatable with itself.

ADDITIONAL NOTES

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.

There may be slight variations in color from batch to batch. Larger 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.

Sherwin-Williams maintains an extensive approved primer list. Details of the protocols for approving primer approvals can be supplied on request. Primer approvals are given on a project by project basis and may vary due to factors such as operating conditions, overcoating interval etc.

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

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

CLEAN UP INSTRUCTIONS

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

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.

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.

Minimum recommended surface preparation: SSPC-SP10/NACE 2

SCRIM REINFORCEMENT - J220 Scrim
For details of reinforcement using Firetex J220 scrim cloth, see Firetex M90/02 Application Manual.

APPLICATION CONDITIONS

The material should be applied at temperatures in excess of 50°F (10°C). In conditions of high relative humidity, ie above 80% good ventilation conditions are essential. Substrate temperature should be at least 5.5°F (3°C) above the dew point and always above 32°F (0°C).

At application temperatures below 50°F (10°C), drying and curing times will be significantly extended. In order to achieve optimum water and chemical resistance, temperature needs to be maintained above 50°F (10°C) during curing. Application at ambient air temperatures below 40°F (5°C) is not recommended.

If it is desired to overcoat outside the times stated on the data sheet, please seek advice of your Sherwin-Williams representative.

ORDERING INFORMATION

Order Quantity:

132 lbs (60 kg) mix: 2 units of Part A for every 1 unit of Part B
44 lbs (20 kg) mix: 1 unit of Part A for every 1 unit of Part B

	132 lbs (60 kg) mix:	44 lbs (20 kg) mix:
Part A:	B59W550-19 (~47 lbs / ~21 kg)	B59W550-30 (~31 lbs / 14 kg)
Part B:	B59LV550-19 (~39 lbs / ~18 kg)	B59LV550-36 (~13 lbs / 6 kg)
Scrim:	B59J220-99 (672.7 sq/ft/roll)	B59J220-99 (672.7 sq/ft/roll)

Applied Weight: Independently tested: 8.35 lb/gal (1.00 g/cm^3) (see Additional Notes)

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.

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.