



# FIRETEX M93

## PRODUCT TECHNICAL DATA

<b>FULL DESCRIPTION</b>	FIRETEX M93 EPOXY INTUMESCENT COATING			
<b>MATERIAL TYPE</b>	A solvent free thick film epoxy intumescent coating.			
<b>RECOMMENDED USE</b>	As a thick film exterior durable intumescent coating for the treatment of offshore structures, LPG storage tanks and other steelwork requiring fire protection especially to hydrocarbon fires.			
<b>ENDORSEMENTS</b>	<p>Approved by Underwriters Laboratory - UL1709 (Design No XR628)</p> <p>Approved by Lloyds Register of Shipping.</p> <p>Approved by Det Norske Veritas.</p> <p>BS476 Part 20 and 21 Appendix D</p> <p>Approved by Bureau Veritas.</p> <p>Norsok M501 Rev 5.</p> <p>Approved by ABS.</p>			
<b>RECOMMENDED APPLICATION METHODS</b>	Twin component spray Trowel			
<b>COLOUR AVAILABILITY</b>	Pale Blue ( White base plus blue additive ).			
<b>FLASH POINT</b>	Base : Above 55°C Additive : Above 55°C			
<b>% SOLIDS BY VOLUME</b>	100%			
<b>V.O.C.</b>	None			
<b>TYPICAL THICKNESS</b>	See Fire Rating Tables			
<b>PRACTICAL APPLICATION RATES – microns per coat</b>	<b>Twin Component Spray</b>			
	Dry	6000*		
	Wet	6000		
	<i>*Maximum sag tolerance with overlap typically 8000µm dry by twin component spray.</i>			
<b>AVERAGE DRYING TIMES</b>	<b>At 5°C</b>	<b>At 10°C</b>	<b>At 15°C</b>	<b>At 23°C</b>
<b>To touch</b>	6 hours	5 hours	4 hours	2 hours
<b>To recoat</b>	6 hours	5 hours	4 hours	2 hours
<b>To handle</b>	36 hours	30 hours	16 hours	12 hours
	<i>These figures are given as a guide only. Factors such as air movement and humidity must also be considered.</i>			
<b>RECOMMENDED THINNER</b>	Cleanser/Thinner No.9 (for cleaning)			
<b>RESISTANCE TO</b>	Moisture – Excellent		Aliphatic solvents - Good	
	Acid spillage – Good		Abrasion - Excellent	
	Alkalispillage – Good		Weather – Excellent (subject to chalking)	
	Petroleum solvents - Good			
<b>RECOMMENDED PRIMERS</b>	<p>The primer used must be approved by Sherwin-Williams. Consult Sherwin-Williams for details of the approved primers list and the qualification protocol. See additional notes overleaf.</p> <p>An extensive range of primers has been approved including Metagard L574 Blast Primer, Epigrip L425 Zinc Phosphate Primer, Epigrip J984 Zinc Rich Primer/Epigrip M330 Sealercoat, Epigrip M111 Wet Blast Primer and Epigrip M902 Winterfast Hi-Build Brushing Aluminium.</p>			
<b>RECOMMENDED TOPCOATS</b>	<p>Indefinitely overcoatable with high performance systems provided the surfaces to be coated are free from all contaminants. Where a high degree of gloss and colour retention is required overcoat with Resistex C137V2 or Resistex K651 within 7 days at a minimum d.f.t of 50 microns or in the case of C750V2 overcoat within 4 days. These overcoating times refer to achievement of optimum adhesion at 23°C and will vary with temperature.</p> <p>FIRETEX M93 is indefinitely overcoatable with itself.</p>			
<b>POT LIFE</b>	30 minutes at 15°C	15 minutes at 23°C	5 minutes at 60°C	
<b>PACKAGE</b>	A two component material supplied in separate containers to be mixed prior to use.			
<b>Pack Size</b>	60kg and 20kg units when mixed			
<b>Mixing Ratio</b>	2 parts base to 1 part additive by weight (2 parts base to 1 part additive by volume)			
<b>Weight</b>	1.0g/cm <sup>3</sup> Independently verified.			
<b>Shelf Life</b>	2 years from date of manufacture or “Use By” date where specified.			

**SURFACE PREPARATION:**

FIRETEX M93 is designed for use over a suitably prepared and primed substrate. Ensure surfaces to be coated are clean, dry and free from all surface contamination.

**SCRIM REINFORCEMENT**

For details of reinforcement see FIRETEX M93 application manual.

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**APPLICATION EQUIPMENT:****Twin Component Spray**

Nozzle Size : 0.79-0.89mm (31-35 thou)  
Fan Angle : 40°  
Operating Pressure : 210kg/cm<sup>2</sup> (3000 psi)

The details of twin 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 atomisation in some circumstances. In general, the operating pressure should be the lowest possible consistent with satisfactory atomisation.

Material is to be applied using twin component airless spray equipment which utilises a minimum 10" King or air motor. Both base and additive need pre-heating to 45-55°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.

**NB** 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 Cleanser/Thinner No. 9 is recommended.

**Trowel and Preformed Castings**

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

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**APPLICATION CONDITIONS AND OVERCOATING:**

The material should preferably be applied at temperatures in excess of 10°C. In conditions of high relative humidity, ie 80-85% good ventilation conditions are essential. Substrate temperature should be at least 3°C above the dew point and always above 0°C.

At application temperatures below 10°C, drying and curing times will be significantly extended. Application at ambient air temperatures below 5°C is not recommended.

In order to achieve optimum water and chemical resistance, temperature needs to be maintained above 10°C during curing. If it is desired to overcoat outside the times stated on the data sheet, please seek advice of Sherwin-Williams.

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**ADDITIONAL NOTES:**

Drying times, curing times and pot life should be considered as a guide only.

The curing reaction of epoxies commences immediately 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 increase in temperature and doubled by a 10°C decrease in temperature.

There may be slight variations in colour from batch to batch. Larger variations in colour, when using twin 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 maintain 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.

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

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**HEALTH AND SAFETY:**

Consult Product Health and Safety Data Sheet for information on safe storage, handling and application of this product.

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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.