FIRETEX® Epoxy Passive Fire Protection Systems
Steelwork, New Construction and Maintenance

World class epoxy passive fire protection solutions

With a solid 20 year track record the FIRETEX® M90 Series is blast resistant and formulated to protect structures from hydrocarbon pool fires, jet fires and cryogenic spills. The range of epoxy resin based intumescent and insulating coatings cover an industry leading range of steel sizes and offer improved char strength and greatly reduced dry film thickness (DFT).

A name you can trust

The FIRETEX® brand has been used on hundreds of projects around the world, protecting assets for over 20 years. Used on offshore platforms, FPSOs, refineries, petrochemical plants, LNG terminals and storage facilities globally, FIRETEX® has become the first choice for the oil, gas and petrochemical industry.

Offering you a complete system the products within the FIRETEX® M90 Series are supported by high performing primers and top coats, are designed, manufactured and distributed entirely by Sherwin-Williams to give you a reliable, quality assured, single source of supply.
Designed to react in the most extreme fire scenarios the FIRETEX® coatings swell to many times the original thickness to produce a tough and resilient protective and insulating char. This char reduces the rate of temperature rise in the steel for up to four hours, thus extending the time to reach structural failure.

**Fire Curve Graph**

Hydrocarbon pool fire test showing the difference between unprotected steel and the same steel element protected with FIRETEX®.

Whether working independently or as part of a composite system the products in this range can be specified and tailored to meet both offshore and onshore requirements. When FIRETEX® is used in a duplex system with our thermal barrier products, assets are protected from cryogenic spill, hydrocarbon pool and jet fires as well as from corrosion that occurs under other types of insulation and fire protection.
Protect structures from hydrocarbon pool fires, jet fires & cryogenic spills
Fully certified and tested to the highest international standards.

All FIRETEX® materials are independently tested, verified and certified to the most stringent and up to date international standards, with full type approval from class organisations such as ABS, Lloyd’s Register and DNV.

Independently tested on structural steel, divisions and vessels, the FIRETEX® M90 Series has been subjected to BS476 Part 20, Appendix D (hydrocarbon pool fire), UL1709 (Rapid Rise Fire Test), and IMO A754(18) (decks and bulkheads). The FIRETEX® M90 Series is put through the most stringent of tests to give you peace of mind including the latest jet fire standard ISO 22899 for up to 3.5 hours fire protection. The FIRETEX® M90 Series is explosion tested in excess of 2 bar over pressure and tested to IMO 61(67), with Class 1 surface spread of flame to BS476 Part 7.

Highly durable

FIRETEX® is fully compliant with NORSOK M501 System 5A, with pull-off adhesion values in excess of 3Mpa when tested to ISO 20340; ensuring the integrity and durability of the range, to give you total confidence in its performance.

We have also tested against the affects of salt water immersion. Steel members coated with the FIRETEX® M90 Series system were immersed in salt water for 15 years, before being tested to the hydrocarbon fire curve, with no loss of fire resistance.

Cryogenic spill protection

As a fully tested, fully compatible insulating layer, FIRETEX® M89/02 can be used in conjunction with the FIRETEX® M90 Series to provide insulation and protection against the brittle fracture of steel in a cryogenic spill.

The system has gone through rigorous spill simulation tests, where steel sections are coated in our duplex system and then immersed in liquid nitrogen for up to 120 minutes, before being immediately exposed to a 60 minute hydrocarbon fire test to UL1709. Tests also include freeze-thaw cycling, impact resistance, flexibility, compressive strength and adhesion at extreme temperatures.
Protection Systems

FIRETEX® M90/02
Epoxy Intumescent Coating

Key Usage: Durable, solvent free and fast curing, with up to three hours hydrocarbon fire protection for structural steel, decks & bulkheads.

Approvals: Lloyd’s Register, Det Norske Veritas and American Bureau of Shipping type approval for hydrocarbon pool and jet fire protection of structural steel and divisions; NORSOK M-501 rev. 6, System 5a; UL1709; BS EN 13501-2; ETA13/0676; ASTM E84

FIRETEX® M93/02
Epoxy Intumescent Coating

Key Usage: Designed with the onshore market in mind, FIRETEX M93/02 is a solvent free thick film epoxy intumescent coating, which offers durable, fast curing, fire protection for up to two hours.

Approvals: UL1709; ASTM E84

FIRETEX® M89/02
Thermal Barrier/Cryogenic Spill Protection

Key Usage: A seamless, 100% solids, epoxy resin based insulation product that can be used at operating temperatures as low as -75°C (-103°F) to +150°C (+302°F). As a fully tested, fully compatible insulating layer, FIRETEX M89/02 can be used in conjunction with M90/02 & M93/02 to provide protection against hydrocarbon fire, jet fire and cryogenic spillage.

Approvals: NORSOK M-501 rev.6 System 5a (with FIRETEX M90/02)

Characteristics

<table>
<thead>
<tr>
<th>Solids volume %</th>
<th>FIRETEX® M90/02</th>
<th>FIRETEX® M93/02</th>
<th>FIRETEX® M89/02</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFT range per coat (mm)</td>
<td>0.5-7</td>
<td>0.5-7</td>
<td>0.5-20</td>
</tr>
<tr>
<td>Service temperature dry (max °C)</td>
<td>80</td>
<td>80</td>
<td>150</td>
</tr>
<tr>
<td>Service temperature water (max °C)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Service temperature crude (max °C)</td>
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<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Atmospheric</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Immersion</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Under insulation &gt; 60°C</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Under epoxy PFP</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>High temperature</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Substrates

| Carbon steel | ✓ | ✓ | ✓ |
| Stainless steel | ✓ | ✓ | ✓ |
| Non-ferrous | - | - | - |
| Concrete | - | - | - |
| Primer | - | - | - |
| Sealer / tie coat | - | - | - |
| Intermediate or lining | ✓ | ✓ | ✓ |
| Top coat (atmospheric) | - | - | - |

World class support and service

With nearly 150 years experience in the coatings industry, we understand how critical it is that your investment gives you a quality, long term fire protection system that performs in the most demanding of environments. But we also know that providing you with more than just product is what makes Sherwin-Williams different.

Our dedicated Fire Engineering and Estimation team’s unique blend of structural engineering experience and fire expertise, allow them assist you with fire engineering solutions as early as concept stage. As fully qualified structural engineers, the team can provide complex fire protection calculations, for both cellulosic and hydrocarbon fires, promptly.
SW Oil & Gas App allows you to explore the best Sherwin-Williams coating for each area of an oil refinery, shale drilling or offshore site. From tanks to piping, cooling towers to rail tank cars, Sherwin-Williams has your coatings needs covered. With comprehensive coating specifications for every aspect of your equipment, the SW Oil & Gas App is interactive, fast and easy-to-use.

A COMPLETE LINE OF PRODUCTS.
MARKET EXPERTISE.
ON-TIME DISTRIBUTION.

What else would you expect from a world leader in protective coatings, linings, and fire protection?

It starts with a complete line of time-tested, high-performance products and some of the most innovative and greenest technologies in the coatings industry. But we know that it takes more than product alone to be a world leader in protective coatings and linings, and so do the customers that rely on us every day as we help them protect their business.

That’s where nearly 150 years of coatings industry experience comes in. Add to that a NACE-trained workforce with a combined 3,700 years of experience in corrosion control. And the market-specific knowledge that our experts provide to evaluate, recommend and deliver the highest-performance coatings and linings that protect our customers’ assets.


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