



**SHERWIN-WILLIAMS®**  
*Protective & Marine Coatings*

**FIRETEX®**

# FIRETEX® FX-5090

SOLVENT-FREE WATER BASED INTUMESCENT  
COATINGS WITH INOVATIVE BENEFITS FOR  
PROTECTION OF STRUCTURAL STEEL





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## EVOLUTION OF WATER BASED INTUMESCENT

Architects and engineers today are reaching new heights and creative form in building construction. Sherwin-Williams's **FIRETEX® FX-5090** high quality water based intumescent coatings provides a visually pleasing, smooth and hard finish that allows flexibility and creative exposure of structural steel surfaces in building design, whilst providing essential fire protection to the structural steelworks.

Whether you specify **FIRETEX® FX-5090** alone or in conjunction with our exceptional primers and topcoats, you can be assured that you are selecting a passive fire protection system that has been researched, developed and tested to the highest International Standards approvals.

During the past 25-30 years, millions of tons of steelwork have been successfully fire protected with water based intumescent coatings and many contractors, engineers, architects and building owners had realised the benefits of using **FIRETEX® FX-5090** intumescent coatings.





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## TO PROTECT AGAINST FIRE, REACH FOR THE WATER-BASED

Sherwin-Williams's water based resin technology, whilst offering essential long term service and critical fire protection to steelwork for up to 120 minutes, meet the fire-resistance requirements of best-in-class products. Today [FIRETEX® FX-5090](#) water based intumescent coatings have long since overtaken their solvent based predecessors, and now dominate the sector. With a wide range of environmental accreditations, including third party environmental declarations (EPD) the [FIRETEX® FX-5090](#) contribute to green building programmes such as LEED/Green benefits.

### BENEFITS AT A GLANCE

- Safer to use - no hydrocarbon solvents hence enable usage in confined spaces
- Solvent free - no solvent entrapment, a contributor to Sick Building Syndrome
- No solvent build up in confined spaces - reduce health hazard during application
- Rapid evaporation - faster drying time for over coatings and earlier job completion
- Higher build capability - number of coats are reduced thus saving construction time
- No trapping of any water in the film - no bubbling and blistering
- No formation of skin surface - achieve 'through drying' much faster
- No adhesion loss - moisture do not form an incompatible layer
- Excellent protection durability - strong resistance to humidity
- All weather-ability - withstanding to C5 environmental conditions
- High life expectancy and sustainability up to 25 years
- Low emissions of Volatile Organic Compounds (VOC)
- Environmentally friendly - non-hazardous classification for waste disposal purposes





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# FAST DRYING WITHOUT COMPROMISE

Faster drying speed up  
overcoating & inspection





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**FIRETEX®**

**FAST - TOUGH - SUSTAINABLE  
PROTECTION YOU CAN TRUST**





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# INTERNATIONAL STANDARDS APPROVALS

FIRETEX® FX-5090 intumescent coatings has been independently 3rd party tested and assessed to the most stringent International Fire Testing Standards in order to provide our customers with unique and compliant fire protection solutions. In addition, our expanded portfolio of high-performance coatings and systems is also engineered to defend assets against corrosion, chemical attack, wear, or high temperatures. With world-class industry subject matter expertise, unparalleled technical and specification service and unmatched regional commercial team support to our customers around the globe, we offer high-performance coating systems to help customers achieve smarter, time-tested asset protection.

## APPROVALS:

- ETA-15/0486
- BS 476-21: 1987
- Certifire Certificate CF5188
- CE Mark No: 1121-CPR-GA5024
- Tested and Assessed to EN16623
- Tested and Assessed to EN1338-8 & 9
- UL 263, UL CDXA and UL CDYD Certified
- SETSCO (Singapore) COC: FSP-2024-1488
- Reaction To Fire: EN 13501-1: Class D-s1-d0
- Resistance To Fire: EN 13501-2: Class B-s1-d0
- Durable coating can be specified for use in external up to C5 environment as defined in ISO 12944-2



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# LIFE EXPECTANCY AND SUSTAINABILITY

## LIFE EXPECTANCY:

The FIRETEX® FX-5090 systems have been fire tested after ageing and weathering without any significant change in intumescent char production or insulating properties. Under normal internal conditions the systems are expected to provide protection for the life of the project with minimal aesthetic maintenance:

FIRETEX® FX-5090 is mechanically tough and resilient to reduce risk of damage, with enhanced durability to provide C1 to C5 environment protection with life durability to 1st major maintenance:

- For C1 – Life of building
- For C2 – Life of building with topcoat, up to 20 years without
- For C3 & C4 – Over 25 years
- For C5 – Up to 25 years
- With 3rd party accredited performance to ISO 12944:2018 approved:  
C1 to C5 corrosivity categories up to very high durability (>25 years)

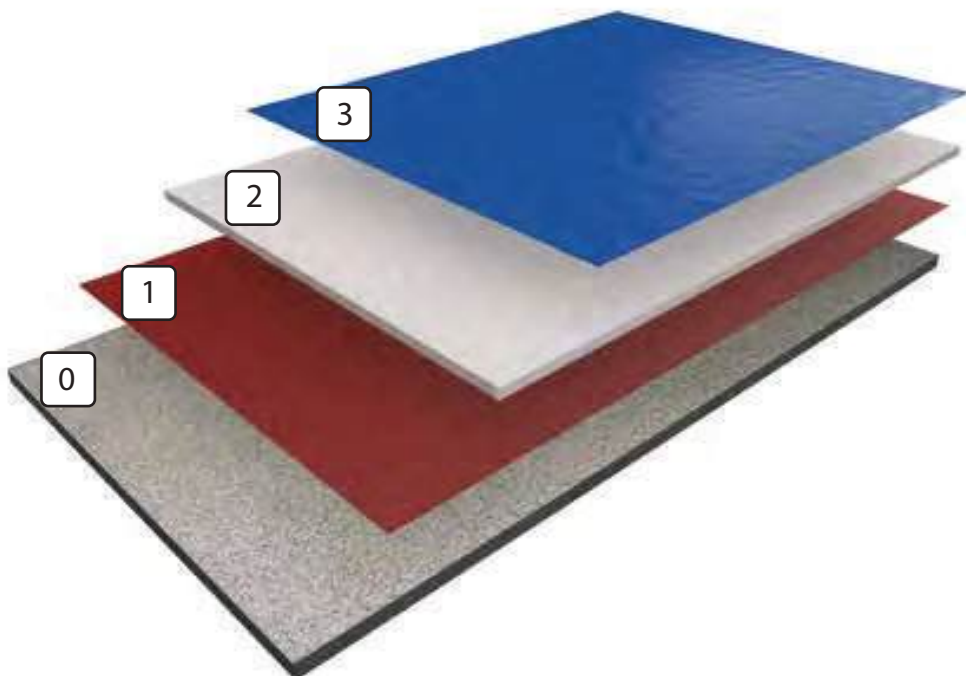


LEED v4 & v4.1 certified,  
& 3rd party EPD generated

## EXCELLENT PROTECTION DURABILITY



- 3 Topcoat:  
Acrolon 7300
- 2 Intumescent:  
FIRETEX FX-5090
- 1 Primer:  
FIRETEX Zinc Clad IV
- 0 Carbon Steel:  
Blast clean to Sa2½  
BS EN ISO 8501-1:2007





## CELLULOSIC PASSIVE FIRE PROTECTION

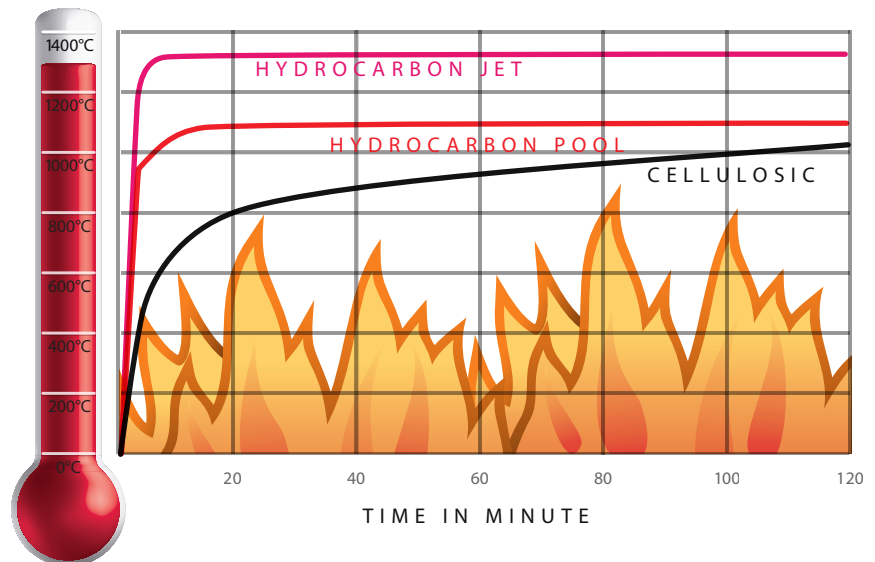
There are 3 main types of fire, and the location of the fire will determine the speed and heat of the blaze. Cellulosic fires fuel sources are cellulose, e.g. wood, cardboard, paper, cotton, etc. They take longer to reach their peak heat than a hydrocarbon fire, and will not burn as hot. Hydrocarbon fires are those that burn because of a combustible liquid or accelerant like petrol or chemicals. They burn hot and extremely fast. Jet fires is a special type of hydrocarbon fire and rapid rise fires, e.g. tunnels, nuclear fires, etc.

### Cellulosic Fires:

- Occur when burning wood, textiles, paper, etc.
- Civil construction industry
- Fire protection Rating @ 2 hours
- Passive Fire Protection - Category 1 - tall buildings, factories, warehouses, stadiums, bridges, etc.

### Hydrocarbon Fires:

- Occur when burning oil or gas
- Oil and gas or petrochemical industry
- Fire protection rating @ 4 hours
- Passive Fire Protection Category 2 - oil & gas, refineries, petrochemical plants, etc.



## SHERWIN-WILLIAMS FIREENGINEERING AND ESTIMATION TEAM

Sherwin-Williams's Fire Engineering and Estimating Team (FEET) carried out structural analysis of the steelwork under fire loading. FEET's unique blend of experience and expertise means it can offer fire engineering information and solutions as early as the concept stage.

By using Sherwin-Williams' FIRETEX® Design Estimator (FDE) software, complex fire calculations can be made for both cellulosic and hydrocarbon fire preparedness, to calculate thicknesses across multiple fire rating time frames against our extensive product range to provide the most economical, cost effective and fire-safe solution for the project. This also includes advanced structural fire engineered approaches. The team design for both cellulosic and hydrocarbon fire scenarios. Data can be seamlessly shared back to the 3D BIM model for future building maintenance and fire management.





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## FIRETEX® INTUMESCENT FINISH STANDARDS

For fire protection on exposed and expressed architectural structural steel, understanding the requirements of finish are critical to ensuring satisfaction with the finished project. Various finishes may be achieved using the FIRETEX® range of products to maximize aesthetic satisfaction and minimize unnecessary cost. A variety of finish standards can be achieved depending on the look desired and the available budget. Naturally a higher level of finish is going to be more labour and material intensive and will therefore cost more. The level of finish, however, has no bearing on the achieved FRL.

### STANDARD FINISH

### COMMERCIAL FINISH

### ARCHITECTURAL FINISH



Area of use: non-visible areas covered by ceilings

Area of use: visible areas distant from foot traffic

Area of use: visible areas in front of foot traffic





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## BRING HOME THE BACON FOR DANISH CROWN

Sherwin-Williams, the leading global manufacturer of paints and coatings, has announced that its innovative solutions are being employed at Danish Crown's new £100m bacon production plant in Rochdale. Set to produce more than 900 tonnes of bacon and gammon a week to UK welfare and food safety standards, the 30,500m<sup>2</sup> facility will use highly automated manufacturing equipment and the latest processing technology.

The cutting-edge facility is being constructed using 1,500 tonnes of internal prefabricated structural steelwork produced by Cambridgeshire based SDM Fabrication. The company's managing director, Richard Melton, commented, "In addition to the design, fabrication, painting, and on-site installation of the steelwork at the Danish Crown plant, we are also responsible for making sure that its integrity is maintained in the event of a fire. Already aware of the company's market leading range of intumescent coatings, I contacted Sherwin-Williams to assist in meeting the project's fire protection requirements."

The majority of the steelwork coating is being applied off-site, some if it is being carried out while the bare metal is in-situ. For this purpose, and to avoid exposure to VOCs, Sherwin-Williams recommended its [FIRETEX® FX-5090](#) water based intumescent coating. As it enters the final stages of construction, the new Danish Crown facility is due to begin production in late 2023 and will create around 300 specialised jobs once fully operational. Richard Melton of SDM Fabrication concluded, "Any food production environment must be built to the highest possible specifications to ensure the safety of those working in it. Sherwin-Williams has offered us a great deal of valuable advice and support in making sure that the building is protected from the potentially devastating effects of fire. As well as offering the highest levels of passive fire protection, [FIRETEX® FX-5090](#) is hardwearing, easy to apply and quick drying – qualities that make it a pleasure to use and ideal for this project."





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## OUR COMPETENCE WITH FIRETEX® PLATINUM-120 A SOLVENT-FREE EPOXY INTUMESCENT COATINGS





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## OTHER AREAS OF EXPERTISE IN FIRE PROTECTION

FOR WOOD

FOR CONCRETE



### THE SHERWIN-WILLIAMS DIFFERENCE

Sherwin-Williams Protective & Marine delivers world-class industry subject matter expertise, unparalleled technical and specification service, and unmatched regional commercial team support to our customers around the globe. Our broad portfolio of high-performance coatings and systems - including protective liquid and powder, fire protection and resinous flooring - excel at combating corrosion and help customers achieve smarter, time-tested asset protection. We serve a wide array of markets across our rapidly growing international distribution footprint, including Bridge & Highway, Energy, High Value Infrastructure, Manufacturing & Processing, Marine, Rail, Power and Water & Wastewater.

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