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Fireproofing Systems



MUHTAWA
For Contracting

1 Fireproofing Systems



We specialize in the design, supply, and application of advanced passive fire protection systems for steel structures and industrial facilities. These systems serve as the first line of defense to protect lives, maintain operational continuity, and prevent structural failure during fire events.

Intumescent Fireproofing System

This system is the ideal solution when aesthetics or weight reduction is a priority, offering high fire resistance with a smooth architectural finish.

How It Works

When exposed to temperatures between 200–250°C, the coating expands to form a thick, insulating carbonaceous layer up to 50 times its original thickness. This protective layer acts as a thermal barrier, preventing the steel from reaching its critical temperature of 550°C, at which point structural integrity is compromised.



Integrated System Components

1 Primer Layer

A corrosion-protection layer applied to steel surfaces. We use high-performance epoxy primers fully compatible with intumescent systems to ensure long-term adhesion and stability.

2 Intumescent Basecoat

The primary functional layer that provides fire resistance. It is applied in multiple coats to achieve the required Dry Film Thickness (DFT) as per engineering design, offering protection levels of 60, 90, 120 minutes, or more.

3 Topcoat

An optional but highly recommended layer that provides UV protection and enhances durability and appearance especially important for exterior environments or areas exposed to moisture.



Critical Application Sectors

- Structural steel frameworks in commercial and public buildings
- Oil, gas, and petrochemical platforms and equipment
- Marine facilities (ships and offshore platforms)
- Power plants and essential infrastructure
- Road and transportation tunnels



Application Methodology & Quality Assurance

We adhere to the highest performance standards by implementing a carefully engineered process that ensures durability and long-term fire protection:

• Surface Preparation

Steel substrates are prepared according to SSPC-SP10 / ISO Sa 2.5 to remove rust and contaminants and achieve optimal adhesion.

• Application Technique

Intumescent coatings are applied using airless spray technology to ensure uniform coverage and precise film thickness, even in complex geometries.

• Quality Control

Dry Film Thickness (DFT) is measured for each layer using calibrated instruments, ensuring full compliance with manufacturer specifications.

• Environmental Condition Management

Temperature and humidity levels are controlled throughout application and curing to guarantee proper film formation and long-term performance.



We don't just sell a coating we deliver a guaranteed engineering solution, supported by certified calculations, testing, and performance validation to achieve the required fire resistance rating and protect your strategic assets from one of the most severe risks.