Starcoat -1800

One-component, waterborne acrylic intumescent fire protection coating

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1. Product Description

Starcoat-1800 is a one-component, waterborne acrylic intumescent coating designed for fire protection of structural steel exposed to cellulosic fire. It is suitable for use as a mid or finish coat in atmospheric environments and must be applied over approved primers on carbon steel substrates.

Purpose of Load Bearing Test:
Load-bearing test for intumescent coatings assesses the coating's ability to help a structure maintain its load-bearing capacity during a fire. The test measures how long a coated steel member can withstand a specified load under fire exposure, simulating real-world conditions. This helps ensure the structure remains stable long enough for safe evacuation and firefighting efforts.
Intumescent coatings are designed to protect structural steel from fire. When exposed to heat, they expand to form a char layer that insulates the steel, slowing down its temperature rise and preventing premature failure.

Here's a more detailed explanation:
Loadbearing Capacity:
A key function of these coatings is to maintain the steel's load-bearing capacity during a fire. This is crucial for preventing structural collapse and ensuring building safety.

Testing Process:
Load-bearing tests involve subjecting coated steel members to a fire while simultaneously applying a load. The test measures how long the member can support the load before it fails.

Key Factors:
The duration of the test (fire duration) is a critical factor, often ranging from 30 to 240 minutes, depending on the specific requirements. The test also assesses the coating's thermal protection and adhesion to the steel.

Benefits:
Load-bearing tests on intumescent coatings help ensure that the coating performs as expected in a fire, providing sufficient time for evacuation and allowing fire-fighters to control the blaze. They also contribute to overall building safety and minimize potential damage.

Application Area:

- Structural Steel
- Concrete Surface
- Wood & Timber
- Plastics & Composites

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2. Key Features

- Fire protection for structural steel (cellulosic fire)
- For both **indoor and outdoor** applications
- CE marked – ETA-22/0351
- Water-based formulation with **low VOC**
- Compatible with approved primers and topcoats

3. Approvals and Certifications

- **BS 476 Part 20/21**: Up to 240 minutes fire resistance including load-bearing tests
- **Integrity** -240 minutes
- **Insulation** -240 minutes
- **The test was performed under load bearing conditions.**

4. Application Details

- **Application Methods**:
  - Airless spray (preferred)
  - Brush (for small areas and stripe coating)
- **Minimum Application Temperature**: 5 °C (optimum >10 °C)
- **Thinner / Cleaning**: Fresh water
- **Dry Film Thickness (DFT)**: 2200–2500 microns
  (Max DFT up to 3500 microns depending on section type)
- **Recommended Nozzle Size**: 19–23 thou
- **Spray Pressure**: Minimum 200 bar (2900 psi)

5. Drying and Overcoating Times

(Measured at 23 °C, 2500 microns WFT)

- Touch Dry: 2 hours
- Dry to Handle: 6 hours
- Overcoat (self): 6 hours
- Overcoat (topcoat): Minimum 24 hours

6. Product Data

Property	Value
Solids by Volume	70%
Density	1.4 kg/l
VOC Content	0–66 g/l (regional)
Colour	White
Shelf Life	12 months (@ 5–25 °C)

7. Packaging

- Supplied in **20 kg pails**
  Note: Packaging sizes may vary by region.

8. System Compatibility

- **Primer**: Starcoat 1700
- **Topcoat**: Starcoat 1900
  for optimum fire performance, use only approved primers and topcoats.

9. Additional Information

For detailed coating specifications, fire rating requirements, or system design support, please contact your local **PPCPL** representative or visit:
🌐 www.ppcplindia.in