

CODE: FR-1200 CODE: FR-1300

**PRODUCT NAME:**

*Water Based Intumescent Coating*

**DESCRIPTION:**

FR-1300 is a water based, non toxic, intumescent fire resistant coating for the fire protection of structural steel. It is applied directly to the contour of primed H sections, to provide fire protection up to 150 minutes. When it is exposed to flames, it intumesces (swells) 30-40 times, its dry film thickness to create a protective barrier against heat.

FR-1300 is ideal for public buildings, warehouses, hospitals, nursing homes, restaurants, hotels, theaters, and military application. Among other surfaces, it can be applied to sheet rock, wood, fiber board, cement, and polyurea and foam materials.

FR-1300 is left exposed for extended periods; it must be protected from rain and high humidity or sealed with topcoat appropriate for the environmental conditions. Typically, allow a minimum of 7 days for the FR-1300 to fully cure before application of any topcoat system.

**TECHNICAL DATA:**

|  |   |
|--|---|
| Binder   | Poly vinyl Acetate                          |
| Pigment  | Suitable pigments and fillers               |
| Finish   | Flat  |
| Shade  | White, grey                                 |
| Substrate  | Primed surfaces (Epoxy primer)              |
| Volume solids (ASTM D 2697)  | 65 ± 3%                                     |
| Maximum thickness per one coat                                     | 500-6000 microns                            |
| Number of coats  | One or more, Depends on protection required |
| Specific gravity (ASTM D 1475)                                     | 1.35 ± 0.1 Kg/Lit                           |
| PH Value (ASTM D 5324)   | 7.5 to 8.5                                  |
| VOC Compliance (ASTM D 3960)                                       | ≤ 12g.l                                     |
| Theoretical spreading rate - one coat ( at 200 microns) (ISO 7254) | 3.25 M <sup>2</sup> /Lit                    |
| Application method   | Air less spray , Brush , Roller             |
| Surface Burning ( ASTM E84)  | Flame Spread : 5<br>Smoke development : 35  |
| Air Erosion Resistance (ASTM E 859)                                | 0.25±0.02 (gr/m <sup>2</sup> )              |
| Internal conductivity (ASTM C 518)                                 | 1.8 ± 0.05                                  |
| Packing  | 10 or 25 kg                                 |
| Shelf life   | 12 Months                                   |

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**Drying Time**

| Temp | Touch dry | Hard dry | Over coating |     | Full Cured for Top Coating |
|------|-----------|----------|--------------|-----|----------------------------|
|      |           |          | Min          | Max |                            |
| 15°C | 3 hours   | 6 hours  | 6 hours      | -   | 8 days                     |
| 25°C | 2 hours   | 4 hours  | 4 hours      | -   | 7 days                     |
| 40°C | 1 hours   | 2 hours  | 2 hours      | -   | 5 days                     |

**Note:** Drying times are dependent on applied film thickness; all data in this catalogue are reported at recommended DFT.

## SURFACE PREPARATION

Before applying FR-1300 to structural steel, the steel must be primed with a suitable primer, approved by pedram paint group. Primers compatible with FR-1300 are generally of the following types:

\* Epoxy Polyamide Primers \*Alkyd Primers \*Vinyl modified primers

All surfaces to be coated should be clean, dry and free from contamination. Fresh water wash or water wash with high pressure, as appropriate, and remove all oil or grease, soluble contaminants, and other detrimental foreign matter in accordance with SSPC-SP1 solvent

Cleaning.

-Surface preparation shall not take place in the following conditions:

- At temperature below 10 °C
- When the relative humidity greater than 85%
- When the metal surface temperature is less than 3 °C above the dew point
- Outside day light hours on exterior locations

### Application Method:

This material is a one component coating and should always be mixed thoroughly with a power agitator before application. Stir during application to maintain uniformity of material.

FR-1300 is supplied ready for use and should not be diluted.

### Application Equipments

|                |  |
|----------------|--|
| Air less Spray | Tip range 0.017-0.019 inch<br>Total output pressure at spray tip not less than 141Bar (2000 psi) |
| Brush          | Typically 150 mic can be achieved.   |
| Roller         | Typically 150 mic can be achieved.   |

**Flush Equipment with water before and after use.**

**Note:** Take dry film thickness reading as soon as the coating is fully cured (minimum after 7 days)

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## ENVIRONMENTAL CONDITIONS:

- To prevent moisture condensation during application, surface temperature must be at least 3 °C above the dew point.
- Never apply coatings under reverse environmental condition.
- In hot climate, material temperature should be 20 to 25 °C prior to mixing.
- For satisfactory cure, air and surface temperature must be above 10 °C
- Paint shall not be applied when wind speed is in excess of 7 m/s

|                      |             |
|----------------------|-------------|
| Air temperature      | 10 to 30 °C |
| Surface temperature  | 10 to 40 °C |
| Material temperature | 10 to 30 °C |
| Relative humidity    | Max 80 %    |

## HEALTH AND SAFETY

This product is Flammable. Keep away from heat and open flame .Keep container closed .Use with adequate ventilation. Avoid prolonged and repeated contact with skin. If used in confined areas, observe the following precautions to prevent hazards of fire or explosion or damage to the health:

- 1-Circulate adequate fresh air continuously during application and drying.
- 2-Use fresh air masks and explosion proof equipment.
- 3- Prohibit all flames, sparks, welding and smoking.

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