



FIRECUT FM-900

SOLVENT-BASED INTUMESCENT FIRE RESISTANCE MASTIC COATING



General Description : A single pack solvent based intumescent coating that based on the excellent weatherability of pure acrylic resin along with special pigments and additives. On exposure to fire the intumescent coating softens and a chemical reaction takes place causing an expanding char to be formed. The char has excellent insulating properties and low thermal conductivity , thereby providing the steel substrate with an effective barrier against the rapid temperature rise which may cause critical failure of the steel-work

Application : Used on a wide range of steel configurations including beams and columns

Fire Rating : **FIRECUT FM-900 has been tested to achieve 2 hours fire protection of structural steel section as follow :**

- a. WFRC No. C110854 ~ For loaded I-shaped steel beam and columns sections.(30 - 60 Minutes) with WFRC No. 123992 Review of Assessment Report Referenced WFRC No. C110854**
- b. WFRC No. C125252 ~ For loaded I-shaped steel beam and columns sections.(90 - 120 Minutes)**
- c. WFRC No. C125331 ~ For hollow steel columns (rectangular and circular) (30 - 120 Minutes)**
- d. WFRC No. C115007 ~ For loaded hollow steel beams (rectangular) (30 - 120 Minutes) with WFRC No. C126749 ~ Review of Assesment Report Referenced WFRC No.C115007**

Testing Standards : FIRECUT FM-900 has been tested in accordance with
1.) BS 476:Part 21:1987 Certified by Warrington Fire Research Center (WFRC) and Loss Prevention Centre (LPC) in the United Kingdom and
2.) BS476 : Part 7 : 1997 Class one Certified by PSB Cororation

Characteristics : **1. Low reaction temperature**

FM-900 will begin to react to the rising temperature, when it reaches 200°C and gradually forms a cake-liked char layer approximately hundred fold of initial volume. The char layer can insulate conduction of heat so as to slow down the time that steel to reach limited temperature thus achieves the purpose of protecting steel structure.

2. Contain no asbestos

Comprises no asbestos and other fibers tested and proven by Union Chemical Laboratory of Industrial Technology Research Institute.

3. Excellent performance in fire resistance

Minimum dry film at 3.76mm can meet the article of 2 hours fire resistance rating on 4-sided beam (HP/A up to 130 m⁻¹) proven by Warrington Fire Research Centre in accordance with BS 476 : Part21 : 1987

4. Smooth and pleasant appearance

Excellent level surface after application in complete coating system, and compatible with various colors of topcoat. It serves the function of fire resistance and decoration as well.

5. Suitable to spray-on and easy to apply

Non-sagging wet film can reach 1mm; fast to dry and shorter re-coating interval.

Application Methods : Airless Spray, Brush
Color Availability : Grayish White
Finish : Flat
Flash Point : Above 23°C
Specific Gravity : 1.35 +/- 0.05 kg/L
Solid Content : Solid by weight : (73 +/- 3)%
Solid by volume : (70 +/- 3)%
Drying Time : 30 minutes by touch
Overcoating Intervals Airless Spray : at least 4 hrs
Brush : at least 1 hr

Preceding Coats :

Epoxy Zinc Rich Primer,
Epoxy Zinc Phosphate Primer,
Inorganic Zinc Rich Primer + Epoxy M.I.O. Primer,
Epoxy Zinc Rich Primer + Epoxy M.I.O. Primer,
Epoxy Zinc Phosphate Primer + Epoxy M.I.O. Primer,
Epoxy Alloy Primer + Epoxy M.I.O. Primer

Subsequent Coats :

RF51~56 Rainbow Chlor Rubber Finish,
EP-04 Epoxy Topcoat,
UP-04 Polyurethane Coating
EP-1060 Epoxy Middle Coat
EP-1030 Water-based Catalyzed Epoxy Topcoat

Theoretical Coverage : (BS 476:Part:21:1987)

1. The amount of each basecoat, Wet Film Thickness (WFT) and Dry Film Thickness (DFT)

<u>Typical Properties :</u>	<u>Weight per unit area (g/m²)</u>	<u>Wet Film Thickness(mm)</u>	<u>Dry Film Thickness(mm)</u>
g/m ² / Coat-Brush	800	0.59	0.41
g/m ² / Coat-Spray	1,600	1.19	0.83

2. Inter-relationship between Weight per unit area/ Wet Film Thickness/ Dry Film Thickness

(g/m ²)	WFT (mm)	DFT (mm)	(g/m ²)	WFT (mm)	DFT (mm)	(g/m ²)	WFT (mm)	DFT (mm)
500	0.37	0.26	4500	3.33	2.33	8500	6.29	4.40
1000	0.74	0.52	5000	3.7	2.59	9000	6.66	4.66
1500	1.11	0.78	5500	4.07	2.85	9500	7.03	4.92
2000	1.48	1.04	6000	4.44	3.11	10000	7.4	5.18
2500	1.85	1.30	6500	4.81	3.37	10500	7.77	5.44
3000	2.22	1.55	7000	5.18	3.63	11000	8.14	5.70
3500	2.59	1.81	7500	5.55	3.89	11500	8.51	5.96
4000	2.96	2.07	8000	5.92	4.14	12000	8.88	6.22

Storage Shelf Life : one year under normal storage conditions

For Airless Spray : Tip Size : 0.023" ~ 0.027", Air Pressure : 50~80 psi, Pump Ratio : 45 : 1 or greater

Note : 1. Within 24 hrs the maximum 2 times of spray or 4 times of brush
2. Moisture, grease, sludge, old paint and rust must be thoroughly removed from substrate.
3. Avoid applying the paint in rainy or humid weather, particularly, a wet surface must be thoroughly dried.



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