Modern Chemical Industries, S.A.E.
Paints · Coatings | Corniche Embaba, Al Warraq, Giza, Egypt | Established 1978

SOLID FRR

Water-Based Fire-Retardant Coating for Walls, Wood and Concrete — Solid Special-Products Line

PRODUCT DESCRIPTION

Solid FRR is a quick-drying, single-component, water-based fire-retardant coating for the protection of walls, wood, and concrete surfaces. It chars under flame rather than propagating it, limiting flame spread across the coated surface.

KEY FEATURES

- Single-component system, quick-drying and easy to apply
- Water-based, environmentally friendly (solvent-free)
- Strong adhesion to metal, concrete, and wooden surfaces
- High flexibility and elasticity once cured
- Provides protection on concrete up to 2 hours at 2000-micron dry film thickness

RECOMMENDED USES

- Protection of concrete structural work
- Concrete beams and columns, up to 4 hours' protection
- Concrete and cementitious surfaces
- Fabrication shop application, owing to fast drying and rapid recoat ability

SURFACE PREPARATION

The surface to be coated must be thoroughly cleaned. On new surfaces, good mechanical cleaning or washing is enough to remove dust, dirt, and oil. The quantities and thickness will depend on the required fire protection class and profile section factor.

TECHNICAL & PHYSICAL PROPERTIES

Property	Value
Colour, Dry Film	White, or according to MCI color catalog
Finish, Dry Film	Smooth / Matt
Solids Content by Volume	54% ± 2% (ASTM D2697)
Solids Content by Weight	66% ± 2%
Specific Gravity	1.42 ± 0.02 g/cm³
Theoretical Spreading Rate	1.80 - 2.70 m²/L
Dry Film Thickness	200 - 300 microns/coat
Wet Film Thickness	370 - 555 microns/coat
Shelf Life	18 months in the original sealed container, away from direct sunlight and heat

APPLICATION GUIDELINES

Parameter	Recommendation
Application Method	Airless spray, brush, or roller
Thinning / Cleaning	Water
Thinning	Ready to use when spray-applied; thin up to 10% with water if necessary
Conventional Spray	Possible
Airless Spray Pressure	120 - 150 bar (1700 - 2125 psi)
Nozzle Size	0.018" - 0.021"
Mixing Ratio (by Volume)	One-pack — no mixing required

DRYING TIME

Stage	Value
Touch Dry	1 - 2 hours
Dry to Recoat	2 - 4 hours
Hard Dry / Full Cure	8 hours

Drying time @ 30°C. Temperature, humidity, air movement, film thickness, and number of coats all affect drying time. A scratch test is recommended on any surface after 1 week.

RECOMMENDED PAINT SYSTEM

- Trix Wall Sealer — 1 coat on the prepared surface
- Solid 707 Putty — 2 coats, applied with a putty knife
- Solid FRR — number of coats according to the required fire-resistance duration, with 3 hours between coats

TEST CERTIFICATE

Test certificate provided by an explosion-testing laboratory in Egypt, certifying fire resistance up to 2 hours.

STORAGE

Store the paint in proper storage conditions as per local regulations. Keep the container sealed under shed, away from direct sunlight and extreme temperatures. Do not stock near ignition sources. Do not return unused material to its original container, to avoid contamination. Handle with care and stir well before use.

HEALTH & SAFETY

- Observe all warning and precautionary labels displayed on the container.
- Ensure application takes place in a well-ventilated area.
- Avoid skin and eye contact. Wear overalls, gloves, and goggles where appropriate.
- In case of eye contact, flush immediately with plenty of clean running water and seek prompt medical attention.
- Keep out of reach of children.
- Do not empty into drains or watercourses. Dispose of waste in accordance with local regulations.
- A Safety Data Sheet is available for this product and should be consulted for full handling and disposal information.

The information in this data sheet is given to the best of our knowledge, based on laboratory testing and practical experience. However, as the product is often used under conditions beyond our control, we cannot guarantee anything but the quality of the product itself. We reserve the right to change the given data without notice.