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RUDRA PAINT

**PLOT NO. 60/61, PANDOL INDUSTRIAL AREA, VED ROAD, KATARGAM,
SURAT, GUJARAT -395004**

TECHNICAL DATA SHEET RP-104

FIRE RETARDANT INTUMESCENT PAINT
(water based)

PRODUCT DESCRIPTION

Fire Retardant Intumescent Coating is a single-component, high-performance, water-based fire protection coating designed for on-site application to provide passive fire protection against cellulosic fires.

When exposed to fire or elevated temperatures, the coating expands and forms an insulating carbonaceous char layer, which significantly reduces heat transfer to the substrate. This protective barrier delays structural failure and helps maintain the integrity of the coated surface during a fire incident.

The coating is suitable for interior applications on various substrates such as FRP, concrete, gypsum boards, masonry walls, false ceilings, steel structures, pvc pipes, wooden surfaces, and other construction materials requiring fire protection.

PRODUCT FEATURES

- Water-based, environmentally friendly formulation.
- Single-component and easy-to-use system.
- Provides up to 120 minutes (2 hours) of fire protection.
- Expands under fire conditions to form a highly insulating char layer.
- Excellent adhesion to a wide range of substrates.
- Low VOC and low odor during application.
- Good resistance to moisture and atmospheric exposure when properly top-coated.
- Excellent corrosion resistance properties on suitably primed metal surfaces.
- Smooth decorative finish with easy application by spray, roller, or brush.
- Suitable for new construction as well as refurbishment projects.
- Non-toxic and free from halogenated fire retardants.

PRODUCT CERTIFICATIONS

- Tested by National Test House (NTH) for 2 & 4 hour fire resistance rating.
- Manufactured under an ISO 9001:2015 Quality Management System.
- Conforms to applicable fire safety and performance standards as specified by project requirements.

RECOMMENDED USES

The coating provides up to two hours of passive fire protection for:

- FRP (Fiber Reinforced Plastic) surfaces
- PVC ((Polyvinyl Chloride) Pipes
- Concrete structures
- Cement boards
- Gypsum boards
- Masonry walls
- False ceilings
- Steel structures
- Wooden substrates
- Electrical and utility rooms
- Commercial and industrial buildings
- Warehouses and manufacturing facilities
- Public infrastructure projects

TECHNICAL PROPERTIES

Property	Value
Type	**Water-Based Intumescent Coating**
Finish	**Smooth Sheen**
Colour	**Off-White**
Specific Gravity	**1.20 – 1.40 (Approx.)**
Solids Content	**65 ± 5%**
Curing Type	**Air Drying**
Touch Dry Time	**2 – 3 Hours**
Recoat Interval	**3 – 4 Hours**
Hard Dry Time	**8 Hours**
Full Cure Time	**7 Days**
Theoretical Coverage	**4 – 5 sq.ft./kg per coat**
Recommended DFT	**500 – 1000 Microns (Depending on Fire Rating Requirement)**
Fire Resistance	**2 hrs (2mm thickness) - 4 hrs (4mm thickness)**
VOC Content	**Low**
Application Temperature	**10°C – 40°C**
Service Temperature	**Up to 80°C**

APPLICATION DATA

Application Methods

- Airless Spray
- Conventional Spray
- Roller
- Brush

Recommended Conditions

- Surface Temperature: Minimum 5°C above dew point
- Relative Humidity: Below 85%
- Adequate ventilation must be maintained during application and drying.

Thinning

- Ready for use.
- If necessary, dilute with clean water up to 5% by volume.

SURFACE PREPARATION

All surfaces must be clean, dry, and free from dust, grease, oil, loose particles, laitance, rust, or any other contaminants that may affect adhesion.

Concrete and Masonry

- Remove dust and loose particles by wire brushing or compressed air.
- Repair cracks and surface defects before coating.

Steel Surfaces

- Remove rust, mill scale, and contaminants.
- Apply a compatible anti-corrosive primer before application of the intumescent coating.

Wooden Surfaces

- Sand the surface to remove loose fibers and dust.
- Ensure moisture content is within acceptable limits.

PVC Surfaces

- Lightly sand the surface with suitable abrasive paper to remove contaminants and create adhesion.
- Ensure the surface is clean, dry, and free from dust, grease, oil, and loose particles before application.

APPLICATION PROCEDURE

Step 1 – Surface Preparation

Ensure the substrate is properly prepared and completely dry before coating application.

Step 2 – Material Mixing

Stir the material thoroughly using a mechanical paint mixer until a uniform consistency is achieved.

Step 3 – First Coat Application

Apply the first coat using an airless spray gun, roller, or brush. Ensure uniform coverage across the entire surface.

Allow the first coat to dry for approximately 3–4 hours.

Step 4 – Subsequent Coats

Apply additional coats as required to achieve the specified Dry Film Thickness (DFT) and fire rating.

Allow each coat to dry for 3–4 hours before applying the next coat.

Typically, 3–4 coats are recommended depending on the required fire protection level.

Step 5 – Final Inspection

Verify that the required DFT has been achieved using a suitable coating thickness gauge.

PACKAGING & STORAGE

Packaging

- 20 & 25 kg Packing
- Other pack sizes available upon request

Shelf Life

11 months from the date of manufacture when stored in unopened original containers.

Storage Conditions

Store in a cool, dry, and shaded area away from direct sunlight, heat sources, and freezing conditions.

Recommended storage temperature: 5°C to 35°C.

HEALTH, SAFETY & ENVIRONMENT

- Avoid contact with eyes, skin, and clothing.
- Wear appropriate PPE including gloves, safety goggles, protective clothing, and dust masks.
- Ensure adequate ventilation during application and drying.
- Do not ingest the product.
- Keep out of reach of children.
- Wash hands thoroughly after handling.
- In case of eye contact, rinse immediately with plenty of clean water and seek medical advice if irritation persists.
- Refer to the Material Safety Data Sheet (MSDS) for detailed safety information.

LIMITATIONS

- Intended primarily for interior and sheltered environments.
- Do not apply during rain or when ambient humidity exceeds recommended limits.
- Do not apply on wet or contaminated surfaces.
- Fire performance is dependent upon achieving the specified dry film thickness.
- For exterior exposure, a compatible weather-resistant topcoat is recommended.

QUALITY ASSURANCE

Manufactured under an ISO 9001:2015 certified Quality Management System and subjected to stringent quality control procedures to ensure consistent product performance and reliability.

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Mfg by **RUDRA ENTERPRISE**

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Your Safety is Our Motto

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