GranBond

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Two-component Fluorocarbon Topcoat(FT-9000) Technical Data Sheet（TDS）

Two-component Fluorocarbon Topcoat

Number：FT-9000

Product Type：Two-component Fluorocarbon Topcoat

1.Product Description

This product is a high-performance two-component fluorocarbon topcoat, based on FEVE fluorocarbon resin, formulated with weather-resistant pigments and additives, and cured with an aliphatic isocyanate hardener. The coating offers excellent resistance to UV aging and chemicals, along with outstanding self-cleaning properties and superior gloss and color retention. It provides a long service life and is the preferred topcoat for high-end heavy-duty anti-corrosion coating systems.

2. Main Applications

- Protective and decorative topcoat for ship superstructures, hull sides, deckhouses, and other exposed areas requiring exceptional weather resistance.
- Industrial protective topcoat for long-term outdoor exposure, such as bridges, steel structures, storage tank exteriors, and power facilities.
- Coating for applications requiring high weather resistance, including special containers, shipping containers, airport facilities, and stadiums.

3.Key Performance Features

- **Outstanding Weather Resistance:** The stable fluorocarbon resin structure provides excellent resistance to UV aging. The coating resists fading and chalking during long-term outdoor exposure, with gloss and color retention lasting over 20 years.
- **Excellent Self-cleaning Properties:** Low surface energy reduces the adhesion of contaminants, allowing rainwater to effectively clean the surface.
- **Excellent Chemical Resistance:** Provides strong resistance to acid rain, salt spray, oil contamination, and various chemical media.
- **High Gloss & Decorative Finish:** Forms a full, smooth film with gloss levels up to 80 GU or higher, delivering excellent decorative performance.
- **Easy Application:** Suitable for spraying and brushing, with excellent compatibility within coating systems.

Technical Parameters：

Item	Specification	Test Standard / Method
Color	Various colors (customizable)	Visual comparison
Gloss (60°)	≥80 GU	ASTM D523
Volume Solids	55% ± 2%	ISO 3233
Density (mixed)	Approx. 1.15 kg/L	ASTM D1475
Mixing Ratio (by weight)	Base : Hardener = 5 : 1	Internal method
Typical Dry Film Thickness	40–60 μm (per coat)	—
Theoretical Coverage (at 50 μm DFT)	Approx. 9.6 m²/kg	—
VOC Content	≤450 g/L	EPA Method 24
Flash Point	≥25°C	ISO 3679 / ASTM D93
Drying Time (25°C, 50%	Surface dry: ≤1 h; Hard dry: ≤24 h;	ASTM D1640

RH)	Full cure: 7 days	
Recoat Interval (25°C)	Min: 4 h; Max: Unlimited (on clean surface)	—

4.Application Instructions

- **Primer:** Epoxy zinc-rich primer / Epoxy aluminum pigmented iron oxide anti-corrosive primer / General modified epoxy anti-corrosive primer
- **Intermediate Coat:** Epoxy micaceous iron oxide (MIO) intermediate coat (e.g., HY-01G) / Epoxy tie coat (e.g., HY-CB04)
- **Topcoat:** FT-9000 Fluorocarbon Topcoat

Typical Coating System Thickness

- Anti-corrosive primer: 80–120 μm
- Intermediate coat: 100–150 μm
- Fluorocarbon topcoat: 40–60 μm (two coats)

5.Surface Preparation

Item	Requirement
Degreasing	Use suitable cleaning agents or solvents to thoroughly remove oil, grease, and dust from the substrate surface, then rinse with clean water.
Rust Removal (new steel)	Abrasive blasting to Sa 2.5 (ISO 8501-1), with surface roughness of 30–75 μm.
Maintenance (old coatings)	Mechanically abrade intact existing coatings to create a profile; remove loose coatings and contaminants. The surface must be dry and free of oil.
Surface Condition	Clean, dry, free from oil, rust, dust, and soluble salts.

6.Application Guidelines

Item	Requirement
Mixing	Stir the base component (Component A) thoroughly using a power agitator. Add the curing agent (Component B) according to the specified ratio and mix היט thoroughly until homogeneous. Allow to induct for 5–10 minutes before use.
Pot Life (25°C)	4 hours
Thinner	Special fluorocarbon thinner (recommended: FT-T09)
Thinning Ratio (by volume of mixed paint)	Airless spray: 10–20%; Conventional spray: 15–30%; Brush/Roller: 0–10%
Airless Spraying	Nozzle size: 0.38–0.48 mm; Pressure: 13–16 MPa
Conventional Spraying	Nozzle size: 1.0–1.5 mm; Pressure: 0.3–0.5 MPa
Brush / Roller	Suitable for small areas and touch-up work. Ensure even application and avoid missed spots.

7.Safety and Precautions

- This product contains organic solvents. Ensure adequate ventilation during application and wear protective gloves, safety goggles, and a respirator.
- Avoid direct skin contact and inhalation of vapors. In case of contact, rinse thoroughly with plenty of water. Seek medical attention if necessary.
- Keep away from open flames, heat sources, and sparks during storage and use.
- Do not allow water or oily contaminants to mix into the product. Keep containers tightly closed after use.
- Application is not recommended when the ambient temperature is below 5°C or relative humidity exceeds 85%.
- The mixed paint should be used within its pot life.
- Clean tools and equipment immediately after use with the recommended thinner.

8.Packaging, Storage and Shelf Life

- **Packaging:**

Base: 20 kg/drum (approx. 17.4 L)
Hardener: 4 kg/drum (approx. 3.5 L)
(Calculated based on a density of 1.15 kg/L, corresponding to a 5:1 mixing ratio)

- **Storage Conditions:**

Store in a cool, dry, and well-ventilated place. Keep away from fire sources and oxidizing agents. Avoid direct sunlight. Recommended storage temperature: 5–35°C.

- **Shelf Life:**

12 months (unopened, in original sealed containers)

Disclaimer：
All information provided in this Technical Data Sheet is based on our typical test data and experience. Actual performance may vary depending on application conditions, substrate preparation, and application methods. It is recommended to conduct a small-scale trial or consult our technical personnel before use. We reserve the right to modify the technical data without prior notice.

Technical Data Sheet

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