

Sino-Sina Building Materials Co., Ltd

F-3 Fluorocarbon Topcoat Technical Data Sheet

Note on Color Scheme

For the product manual design, we recommend a color scheme inspired by durability and professionalism, matching the zrete.com website's aesthetic (primarily blues and whites for trust and cleanliness, with accents of gray for technical elements). Use a primary blue (#007BFF) for headings, white background for readability, black or dark gray text, and green accents for checkmarks to highlight features.

1. Product Overview

F-3 fluorocarbon topcoat is a high-performance coating with excellent anti-corrosion, decorative, and mechanical properties, designed for long-term protection in outdoor environments. It features superior stability and strong resistance to ultraviolet (UV) radiation, providing outstanding protective effects in harsh corrosive environments or areas with high decorative requirements, such as bridge steel structures, concrete exterior walls, architectural venues, railings, port facilities, and marine equipment.

2. Application Scope

Suitable for severe industrial corrosive environments, including but not limited to:

- Steel structures, bridge projects, marine facilities, offshore platforms, port terminals, steel buildings, municipal engineering, highway railings, and concrete anti-corrosion.

3. Product Features

- **Excellent Corrosion Resistance:** Offers superior solvent resistance, resisting acids, alkalis, saltwater, gasoline, diesel, and strong corrosive solutions without dissolution.
- **Decorative Performance:** Available in various colors and metallic finishes, maintaining color stability and gloss outdoors for long-term use without fading.
- **High Weather Resistance:** Exceptional UV and weather resistance, providing up to 20 years of protective performance with reliable durability.
- **Self-Cleaning Properties:** Smooth surface reduces dirt adhesion, making it easy to clean and maintain a long-lasting fresh appearance.
- **Strong Mechanical Properties:** Meets standard requirements for adhesion, impact resistance, and flexibility, ensuring robust coating integrity.
- **Good Compatibility:** Compatible with mainstream primers and intermediate coats, such as epoxy primers, epoxy zinc-rich primers, and epoxy micaceous iron intermediate coats.

4. Technical Specifications

Test Items	Technical Requirements
1. Non-volatile Matter Content (%)	50%
2. Fineness (m)	35m
3. Tensile Strength (MPa)	10MPa
4. Elongation at Break (%)	150%
5. Low-Temperature Flexibility (-30°C)	2mm (no cracking)
6. Alkali Resistance (2% NaOH, 10 days)	No blistering, cracking, or peeling on the surface
7. UV Aging Resistance (1000h)	No visible changes

5. Application Process

5.1 Substrate Preparation

Thoroughly clean the metal surface of oil, oxidation, rust, and old coatings using shot blasting (Swedish standard Sa2.5, roughness 30-70m) or manual rust removal (Swedish standard ST3, roughness 30-70m).

Apply the coating within 4 hours after surface treatment. If the relative humidity exceeds 60%, the delay should not exceed 12 hours. Re-rust the surface if moisture condensation occurs.

5.2 Paint Mixing

Mix the main component and hardener at a ratio of 10:1, add special fluorocarbon thinner, and stir thoroughly with a power mixer. Let stand for 20 minutes for optimal integration.

5.3 Coating Application

Primer & Intermediate Coat: Apply epoxy zinc-rich primer and epoxy micaceous iron intermediate coat first. Spray 1-2 coats for the primer to ensure a solid anti-corrosion base.

Topcoat Application: Spray 1-2 coats of F-3 fluorocarbon topcoat with a recommended film thickness of 60m. Ensure no missed areas, smooth surfaces, and no bubbles or orange peel defects.

6. Precautions

Use the mixed paint within its pot life. Discard if gelled or solidified.

Do not apply in adverse weather (rain, snow, wind) or high humidity (>85%).

Substrate temperature must be 3°C above dew point to prevent condensation.

Keep tools clean and dry; avoid mixing paint with water or impurities.

The data and suggestions provided are based on testing and practical experience for reference only. The company guarantees product quality but not untested construction conditions.

7. Safety Instructions

Avoid direct skin and eye contact.

If contact occurs, rinse with warm water or mild detergent; seek medical help immediately for eye contact.

Ensure good ventilation during use.

Keep away from sparks and open flames; no smoking in the work area.

Comply with all local health and safety regulations.

8. Packaging & Storage

Packaging: AB two-component packaging; Component A: 20kg/barrel, Component B: 3kg/barrel.

Storage: Store in a cool, ventilated indoor area away from direct sunlight. Shelf life: 12 months.

Contact Information

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