

**GranBond****Let the world never fade**

Single-component weather-resistant alkyd topcoat (CS-5000)

Technical Data Sheet (TDS)

Single-component weather-resistant alkyd topcoat**Product Number: CS-5000****Product Type: Single-component alkyd topcoat**

1. Product Description

This product is a high-performance single-component alkyd resin topcoat, specially designed to provide weather-resistant protection and decorative finish for outdoor steel structures, machinery, pipelines, tank exteriors, and general industrial facilities.

Formulated with weather-resistant alkyd resin and special additives, the coating offers excellent gloss retention, UV aging resistance, and atmospheric corrosion protection. It dries quickly and is easy to apply, making it an ideal topcoat for cost-effective anti-corrosion coating systems.

2. Main Applications

- Protective and decorative topcoat for outdoor steel structures, bridges, tank exteriors, pipelines, and machinery.
- Topcoat for general industrial buildings, vehicles, and agricultural machinery.
- Compatible with various primers, such as epoxy primers and alkyd primers.

3. Key Performance Features

- **Weather Resistance:** The coating exhibits moderate UV aging resistance; long-term exposure does not easily cause chalking, with gloss and color retention lasting approximately 1–2 years.
 - **Tough Film:** Excellent adhesion and flexibility, with good impact and abrasion resistance.
 - **Fast Drying:** Quick surface drying at ambient temperature, reducing waiting time during application.
 - **Easy Application:** Single-component; ready to use after stirring. Viscosity can be adjusted with suitable thinners.
 - **Good Compatibility:** Strong intercoat adhesion with epoxy primers, alkyd primers, and other primers.
 - **Environmentally Compliant:** Meets national environmental protection standards.
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Technical Parameters:

Item	Specification	Test Standard / Method
Color	Various colors (customizable)	Visual comparison
Gloss (60°)	≥90 GU	ASTM D523 / ISO 2813
Volume Solids	60% ± 2%	ISO 3233
Density	Approx. 1.20 kg/L	ASTM D1475
Mixing Ratio	Single-component, no mixing required	–
Typical Dry Film Thickness	40–60 µm	–
Theoretical Coverage (based on 50 µm DFT)	Approx. 8.7 m ² /kg	–
VOC Content	≤420 g/L	EPA Method 24 / ISO 11890-2
Flash Point	≥30°C	ISO 3679 / ASTM D93
Drying Time (25°C, 50% RH)	Surface dry: ≤1 h; Through dry: ≤8 h; Full cure: 24 h	ASTM D1640
Recoat Interval (25°C)	Minimum: 4 h; Maximum: unlimited (if surface is clean)	ASTM D1640

4. Recommended Coating System

- **Primer:** Anti-rust grey/white primer (FS-9109Q) / Epoxy primer for galvanized steel (HY-8002)
- **Intermediate Coat:** Epoxy micaceous iron oxide (MIO) intermediate paint (HY-01G) (*optional*)
- **Topcoat:** CS-5000 Weather-Resistant Alkyd Topcoat (this product)
- **Typical Coating System (Outdoor):**
Primer 60–80 µm + Intermediate coat 80–120 µm + Topcoat 40–60 µm (2 coats)

5. Surface Preparation

Item	Requirement
Degreasing	Use suitable cleaning agents or solvents to thoroughly remove oil, grease, and dust from the substrate surface. Rinse with clean water and ensure a continuous, unbroken water film.
Rust Removal	Abrasive blasting to Sa 2.5 (ISO 8501-1) or power tool cleaning to St 3.
Surface Roughness	30–75 µm
Surface Preparation (for existing coatings)	When applied over old coatings, the surface should be roughened or sanded to achieve a uniform roughness.
No Additional Treatment Required	No pickling or phosphating required.
Surface Condition	Clean, dry, free of oil, dust, and salts.
Note	Substrate temperature should be at least 3°C above the dew point.

6. Application Guidelines

Item	Requirement
Mixing	Stir thoroughly with a power agitator until uniform. No curing agent is required.
Pot Life	Not applicable
Thinner	Alkyd thinner (T-200 recommended)
Thinning Ratio (by volume)	Airless spray: 20 - 30%; Brush/Roller: 0 - 10%; Conventional spray: 50 - 60%
Airless Spray	Nozzle size: 0.33 - 0.43 mm; Pressure: 12 - 15 MPa
Conventional Spray	Nozzle size: 1.0 - 1.5 mm; Pressure: 0.3 - 0.5 MPa
Brush / Roller	Suitable for small areas and touch-up. Ensure even application and avoid missed spots.

7. Safety and Precautions

- This product contains organic solvents. Ensure good ventilation during application and wear appropriate personal protective equipment (PPE), including safety goggles, respirators, and protective gloves.
- If the coated surface is contaminated (oil, water, dust), remove contaminants باستخدام a stiff brush or light sanding, and clean thoroughly before recoating.
- It is recommended to conduct a small-area adhesion test before application. Proceed with full-scale application only after satisfactory results are confirmed.
- **Application Conditions:** Ambient temperature above 5°C, relative humidity below 85%, and substrate temperature at least 3°C above the dew point.
- Avoid application under high temperature, direct sunlight, or strong wind conditions, as rapid solvent evaporation may adversely affect leveling and adhesion.
- Clean tools and equipment immediately after use with the recommended thinner.

8. Packaging, Storage and Shelf Life

- **Packaging:** Base paint: 20 kg/drum (approx. 16.6 L, based on density of 1.20 kg/L)
- **Storage Conditions:** Store in a cool, dry, and well-ventilated place, away from heat sources and direct sunlight. Recommended storage temperature: 5–35°C.
- **Shelf Life:** 12 months (unopened)

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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