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Waterborne Epoxy Red Oxide Intermediate Coat (Two-Component) (SX-HY1010) Technical Data Sheet（TDS）

Waterborne Epoxy Red Oxide Intermediate Coat (Two-Component)

Product Number：SX-HY1010

Product Type：Waterborne Two-Component Epoxy Red Oxide Intermediate Coat

1.Product Description

This product is a high-performance waterborne two-component epoxy red oxide intermediate coat, formulated with waterborne epoxy resin, micaceous iron oxide, and an environmentally friendly curing agent, combined with special anti-corrosion additives. Water is used as the thinner, resulting in low odor during application. Once cured, the coating provides excellent barrier properties, adhesion, and corrosion resistance, making it an ideal intermediate layer in heavy-duty anti-corrosion coating systems.

2. Main Applications

· Suitable as an intermediate coat in heavy-duty anti-corrosion coating systems, including special containers, shipping containers, storage tanks, bridges, pipelines, and offshore structures.

· Can be used in combination with waterborne epoxy zinc-rich primers and waterborne polyurethane topcoats.

3.Key Performance Features

· **Excellent Barrier Properties:** The plate-like structure of micaceous iron oxide effectively blocks moisture and corrosive substances.

· **Outstanding Adhesion:** Strong intercoat adhesion between the primer and topcoat layers.

· **Good Corrosion Resistance:** The cured coating is dense, enhancing the overall corrosion protection and service life of the coating system.

· **Low Odor & Environmentally Friendly:** Uses water as the thinner, with very low VOC content, resulting in minimal odor during application and drying.

· **Easy Application:** Viscosity can be adjusted with water, and tools are easy to clean.

Technical Parameters：

Item	Specification	Test Standard / Method
Color	Gray, Reddish-brown	Visual color comparison
Gloss (60°)	Matte (≤10 GU)	ASTM D523
Volume Solids	65% ± 2%	ISO 3233
Density	Approx. 1.3 kg/L	ASTM D1475
Mixing Ratio (by weight)	Base : Curing Agent = 5:1	Internal method
Typical Dry Film Thickness	80–120 μm	—
Theoretical Coverage (based on 100 μm DFT)	Approx. 5.4 m²/kg	—
VOC Content	≤ 50 g/L	EPA Method 24
Flash Point	Not applicable (waterborne)	—
Drying Time (25°C, 50% RH)	Surface dry: ≤1 h; Hard dry: ≤24 h; Full cure: 7 days	ASTM D1640
Recoating Interval (25°C)	Minimum: 4 h; Maximum: 7 days	—

4.Application Instructions

· Primer: Waterborne Epoxy Zinc-Rich Primer (SX-HY0560) / Waterborne General-Purpose Epoxy Primer (SX-HY6003)
· Intermediate Coat: This product, SX-HY1010 Waterborne Epoxy Red Oxide Intermediate Coat
· Topcoat: Waterborne Polyurethane Topcoat / Waterborne Acrylic Topcoat / Waterborne Truck Body Topcoat
· Typical Film Thickness Scheme: Primer 60–80 μm + Intermediate Coat 80–120 μm + Topcoat 60–80 μm

5.Surface Preparation

Item	Requirement
Degreasing / Oil Removal	Use a dedicated cleaning agent or solvent to thoroughly remove oil, grease, and dust from the substrate surface, then rinse clean with water.
Rust Removal	Abrasive blasting to Sa2.5 grade (ISO 8501-1), or power tool cleaning to St3 grade.
Surface Roughness	30–75 μm
Surface Condition	Clean, dry, free of oil, loose rust, dust, and salts.

6.Application Guidelines

Item	Requirement
Mixing	Stir the base component (Component A) thoroughly with a power mixer, then add the curing agent (Component B) according to the specified ratio. Mix thoroughly and allow to mature for 5–10 minutes before use.
Pot Life (25°C)	2 hours
Thinner	Clean water
Thinning Ratio (of mixed paint by volume)	Airless spray: 0–10%; Air spray: 10–20%; Brush/Roller: 0–5%
Airless Spray	Nozzle diameter: 0.38–0.48 mm; Pressure: 12–15 MPa
Air Spray	Nozzle diameter: 1.0–1.5 mm; Pressure: 0.3–0.5 MPa
Brush/Roller	Suitable for small area repairs and corners. Ensure uniform application to avoid missed spots.
80°C Baking	30 minutes at 80°C; suitable for assembly line operations in container manufacturing.

7.Safety and Precautions

- This product is a waterborne coating and is non-flammable, but it is still recommended to store it away from sources of ignition.
- Ensure good ventilation during application, and it is recommended to wear protective gloves, safety goggles, and a dust mask.
- Avoid direct skin contact. In case of contact, rinse immediately with plenty of water.
- Do not mix with organic solvents, and never mix with oil-based paints.
- Do not apply if the ambient temperature is below 5°C or relative humidity exceeds 85%.
- Use the mixed coating within its pot life.
- Clean tools and equipment immediately with water after use.

8.Packaging, Storage and Shelf Life

- **Packaging**: Main paint: 20 kg/drum (approx. 17.4 L, calculated based on a density of 1.15 kg/L).
- **Storage Conditions**: Store in a cool, dry, and well-ventilated place, away from sources of ignition. Avoid high temperatures 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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