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Waterborne Epoxy Zinc-Rich Primer 60 (Two-Component) (SX-HY0560) Technical Data Sheet（TDS）

Waterborne Epoxy Zinc-Rich Primer 60 (Two-Component)

Product Number：SX-HY0560

Product Type：Waterborne Two-Component Epoxy Zinc-Rich Primer

1.Product Description

This product is a high-performance waterborne two-component epoxy zinc-rich primer, formulated with waterborne epoxy resin, zinc powder, 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 cathodic protection and corrosion resistance, making it an eco-friendly alternative to solvent-based epoxy zinc-rich primers.

2. Main Applications

· Suitable as a primer for heavy-duty anti-corrosion coating systems, including special containers, shipping containers, storage tanks, bridges, pipelines, and offshore structures.
· Applicable as a long-lasting anti-corrosion primer on steel surfaces such as truck bodies, steel structures, and machinery equipment.
· Can be used in combination with waterborne epoxy red oxide intermediate coats and waterborne polyurethane topcoats.

3.Key Performance Features

· **Cathodic Protection:** High zinc content provides excellent cathodic protection for steel substrates.
· **Excellent Adhesion:** Once cured, the coating bonds strongly to metal substrates.
· **Good Corrosion Resistance:** The cured coating is dense, offering effective barrier protection against salt spray and chemical agents.
· **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	Visual color comparison
Gloss (60°)	Matte (≤10 GU)	ASTM D523
Volume Solids	70% ± 2%	ISO 3233
Density	Approx. 2.0 kg/L	ASTM D1475
Mixing Ratio (by weight)	Base : Curing Agent = 10:1	Internal method
Typical Dry Film Thickness	60–80 μm	—
Theoretical Coverage (based on 70 μm DFT)	Approx. 5.0 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

4.Application Instructions

- **Primer**: This product, SX-HY0560 Waterborne Epoxy Zinc-Rich Primer 60
- **Intermediate Coat**: Waterborne Epoxy Red Oxide Intermediate Coat (optional)
- **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.
Note	Substrate temperature must be at least 3°C above the dew point and not lower than 5°C.

6.Application Guidelines

Item	Requirement
Mixing	Stir the base (Component A) thoroughly using a power mixer. Add the curing agent (Component B) according to the specified ratio, mix thoroughly until uniform, and allow to mature for 5–10 minutes before use.
Pot Life (25°C)	2 hours
Thinner	Clean water
Thinning Ratio (by mixed paint volume)	Airless spray: 0–10%; Air spray: 10–20%; Brush/Roller: 0–5%
Airless Spraying	Nozzle size: 0.38–0.48 mm; Pressure: 12–15 MPa
Air Spraying	Nozzle size: 1.0–1.5 mm; Pressure: 0.3–0.5 MPa
Brush/Roller Application	Suitable for small-area repairs and edges/corners. Ensure even coating and avoid missed spots.
80°C Baking	Bake at 80°C for 30 minutes, 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.
- Application is not recommended when the ambient temperature is below 5°C or relative humidity exceeds 85%.
- Use the mixed paint within its pot life.
- Clean tools and equipment immediately after use with water.

8.Packaging, Storage and Shelf Life

- **Packaging**:
  - Base: 20 kg/drum (approx. 10.0 L); Curing Agent: 2 kg/drum (approx. 1.0 L) (calculated based on a density of 2.0, matching the 10:1 ratio)
  - Base: 250 kg/drum (approx. 125.0 L); Curing Agent: 25 kg/drum (approx. 12.5 L) (calculated based on a density of 2.0, matching the 10:1 ratio)

- **Storage Conditions**: Store in a cool, dry, and well-ventilated place, away from direct sunlight. Storage temperature: 5–35°C. Protect from freezing.
- **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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