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Waterborne General-Purpose Epoxy Primer (Two-Component) (SX-HY60031) Technical Data Sheet（TDS）

Waterborne General-Purpose Epoxy Primer (Two-Component)

Product Number：(SX-HY60031)

Product Type：High-Performance Waterborne Two-Component Epoxy Primer

1.Product Description

This product is a high-performance waterborne two-component epoxy primer, formulated with waterborne epoxy resin and an environmentally friendly curing agent as the film-forming components, combined with anti-corrosion pigments and additives. Water is used as the thinner, resulting in low odor during application. Once cured, the coating exhibits strong adhesion and excellent corrosion resistance, making it an eco-friendly alternative to solvent-based epoxy primers.

2. Main Applications

- Suitable for industrial coating applications on ship compartments, special containers, shipping containers, vehicles, and truck bodies.
- Applicable as an anti-corrosion primer on steel surfaces such as steel structures, bridges, storage tanks, pipelines, and machinery equipment.
- Can be used in combination with waterborne epoxy intermediate coats and waterborne polyurethane topcoats.

3.Key Performance Features

- **Low Odor & Environmentally Friendly**: Uses water as the thinner, with very low VOC content, resulting in minimal odor during application and drying.
- **Excellent Adhesion**: Provides strong adhesion to substrates such as steel, aluminum, and galvanized steel.
- **Anti-Rust & Corrosion Resistant**: Contains highly effective anti-corrosion pigments, offering superior primer protection.
- **Good Water Resistance**: Once cured, the coating exhibits excellent water and salt spray resistance.
- **Easy Application**: Viscosity can be adjusted with water, and tools are easy to clean.

Technical Parameters：

Item	Specification	Test Standard / Method
Color	Gray, Red Oxide (adjustable)	Visual color comparison
Gloss (60°)	≤ 30 GU	ASTM D523
Volume Solids	60% ± 2%	ISO 3233
Density (mixed)	Approx. 1.25 kg/L	ASTM D1475
Mixing Ratio (by weight)	Base: Curing agent = 6.6:1	Internal method
Typical Dry Film Thickness	60–80 μm	—
Theoretical Coverage (based on 70 μm DFT)	Approx. 6.9 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
Recoat Interval (25°C)	Minimum: 4 h; Maximum: 7 days	—

4.Application Instructions

- **Primer**: This product, SX-HY6003 Waterborne General-Purpose Epoxy Primer
- **Intermediate Coat**: Waterborne Epoxy Red Oxide Intermediate Coat (optional)
- **Topcoat**: Waterborne Polyurethane Topcoat / Waterborne Acrylic Topcoat
- **Typical Film Thickness Scheme**: Primer 60–80 μm + Topcoat 60–80 μm (two coats)

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	30–70 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 let 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: 0.33–0.43 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.

7.Safety an 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. 16.0 L); Curing Agent: 3 kg/drum (approx. 2.4 L) (calculated based on a density of 1.25 kg/L, mixing ratio approximately 6.67:1, close to 6.6:1).
- **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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