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Epoxy Zinc-Rich Primer 60(YH-8002) Technical Data Sheet (TDS)

Epoxy Zinc-Rich Primer 60

Product Number: YH-8002

Product Type: Two-Component Epoxy Zinc-Rich Primer

1. Product Description

This product is a two-component, high-solids epoxy zinc-rich primer, formulated with epoxy resin as the base and high-purity zinc powder. After curing, it forms a hard, abrasion-resistant, and cathodic-protective anticorrosive coating, providing long-term corrosion protection for steel substrates in highly corrosive environments.

2. Main Applications

- Anticorrosive primer for steel substrates in highly corrosive environments such as special containers, bridges, ships, offshore platforms, storage tanks, pipelines, and shipping containers.
- Serves as the primer layer in heavy-duty anticorrosive coating systems, compatible with epoxy micaceous intermediate coatings and polyurethane/fluorocarbon topcoats.
- Suitable for steel structures requiring long-term cathodic protection.

3. Key Performance Features

- High Solids: High volume solids reduce VOC emissions and allow larger coverage per coat.
- Excellent Salt Spray Resistance: Provides long-term anticorrosive protection.
- Zinc Powder Cathodic Protection: Effectively inhibits corrosion propagation at scratches.
- Good Adhesion: Forms strong bonding with steel substrates.
- Wide Temperature Applicability: Suitable for application over a broad temperature range.
- Compatibility: Works well with various intermediate coatings and topcoats.

Technical Parameters:

Property	Specification	Test Standard / Method
Color	Gray-black	Visual Comparison (Internal Method)
Gloss	Matte	GB/T 9754
Volume Solids	85% ± 2%	ISO 3233 / GB/T 9272
Density	Approx. 2.20 kg/L	ASTM D1475 / GB/T 6750
Mixing Ratio (by weight)	Base : Hardener = 9:1	Internal Method
Typical Dry Film Thickness	50–80 μm	—
Theoretical Coverage	Approx. 5.5 m ² /kg (based on 60 μm DFT)	—
VOC Content	≤ 300 g/L	EPA Method 24 / ISO 11890-2
Flash Point	> 25°C	ISO 3679 Method A / ASTM D93
Drying Time (25°C, 50% RH)	Touch dry: ≤ 30 min; Hard dry: ≤ 24 h; Full cure: 7 days	ASTM D1640 / GB/T 1728
Overcoating Interval (25°C)	Minimum: 12 h; Maximum: 7 days	ASTM D1640

4. Application Instructions

- **Primer:** Epoxy Zinc-Rich Primer 60 (YH-8002)
- **Intermediate Coat:** Epoxy Micaceous Iron Oxide Intermediate Coating (HY-01G)
- **Topcoat:** Acrylic Polyurethane / Fluorocarbon / Epoxy Topcoat
- **Recommended Total Dry Film Thickness:** Primer: 50–80 µm Intermediate+ Coat: 100–150 µm + Topcoat: 50–80 µm

5. Surface Preparation

- **Steel Substrate:** Blast clean to Sa 2½ standard, with a surface profile of 40–75 µm.
- **Previous Coating:** Ensure the primer is fully cured, and the surface is clean, dry, free of oil, and free of zinc salts.

6. Application Guidelines

Item	Requirements
Mixing	Stir the base coating thoroughly using a mechanical mixer. Add the hardener at a weight ratio of Base : Hardener = 9:1 and mix thoroughly until uniform.
Pot Life (25°C)	4 hours. Do not use the mixture after this period as it may gel.
Thinner	Epoxy-specific thinner (recommended: YH-301Y).
Thinning Ratio	Airless Spray: 10–20%; Brush/Roller: 0–10%.
Airless Spray	Nozzle diameter: 0.38–0.53 mm; Pressure: 15–20 MPa.
Brush/Roller	Suitable for small area touch-ups. Ensure even film thickness.

7. Safety and Precautions

- Thoroughly mix the product before use to ensure uniform distribution of the hardener, preventing incomplete curing.
- Application Environment: Temperature above 5°C, relative humidity below 85%, and substrate temperature at least 3°C above the dew point.
- Avoid outdoor application during rain, snow, heavy fog, or strong winds.
- This product contains organic solvents. Ensure adequate ventilation during application and wear appropriate personal protective equipment (PPE).

8. Packaging, Storage and Shelf Life

- Packaging:
- Base (Component A): 27 kg per drum (approx. 12.3 L)
- Hardener (Component B): 3 kg per drum (approx. 1.4 L)
- Storage Conditions: Store in a cool, dry, and well-ventilated area, away from heat sources.
- Shelf Life: 12 months when unopened and stored in the original packaging at 5–35°C.
- Note: Volume conversion is based on a density of 2.20 kg/L. Base: 27 kg ÷ 2.20 ≈ 12.3 L; Hardener: 3 kg ÷ 2.20 ≈ 1.4 L. Actual volume may vary slightly due to temperature and other factors.

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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