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Epoxy Micaceous Iron Oxide Intermediate Paint (HY-01G)

Technical Data Sheet（TDS）

Epoxy Micaceous Iron Oxide Intermediate Paint
Product Number：HY-01G
Product Type：Two-Component Epoxy Resin Coating

1. Product Description

This product is a two-component, high-solids epoxy micaceous iron oxide intermediate coating. It is formulated with epoxy resin, lamellar micaceous iron oxide, anti-corrosive pigments, additives, and curing agent. The coating contains a large number of directionally aligned micaceous iron oxide flakes, forming an excellent “scale-like” barrier layer that effectively prevents the penetration of moisture and oxygen.

2. Main Applications

· Used as an intermediate sealing coat over epoxy zinc-rich primers or inorganic zinc-rich primers to build long-term heavy-duty anti-corrosion systems.
· Suitable as an intermediate coat or supporting primer for industrial facilities such as special containers, energy storage containers, ships, offshore structures, bridges, pipelines, storage tanks, and port machinery.
· Significantly enhances the barrier protection and cathodic disbondment resistance of the entire coating system.

3. Key Performance Features

· **Excellent Barrier Protection:** The micaceous iron oxide flakes are arranged in parallel, greatly extending the penetration path of corrosive media.
· **Good Adhesion:** Provides excellent intercoat adhesion to epoxy primers and subsequent topcoats such as polyurethane, fluorocarbon, and acrylic coatings.
· **High Solids Content:** Allows higher film thickness in a single application, reducing the number of coating passes.
· **Abrasion and Permeation Resistance:** The coating is tough and resistant to mechanical damage while effectively blocking moisture and chloride ion penetration.
· **Good Compatibility:** Compatible with a variety of high-performance topcoats.
· **Ultra-Fine Particle Size and Excellent Smoothness:** Paint fineness ≤ 15 μm, producing a smooth and even coating surface that enhances overall appearance and the decorative effect of subsequent topcoats.

Technical Parameters：

Item	Specification	Test Standard / Method
Color	Grey, reddish brown (MIO color)	Visual comparison (internal method)
Gloss	Matte	GB/T 9754
Volume Solids	80% ± 2%	ISO 3233 / GB/T 9272
Density	Approx. 1.45 kg/L	ASTM D1475 / GB/T 6750
Mixing Ratio (by weight)	Base : Hardener = 6.25 : 1	Internal method
Typical Dry Film Thickness	80–150 μm	—
Theoretical Coverage	Approx. 5.9 m²/kg (based on 100 μm DFT)	—
VOC Content	≤ 350 g/L	EPA Method 24 / ISO 11890-2
Flash Point	> 25°C	ISO 3679 Method A / ASTM D93
Drying Time (25°C, 50% RH)	Surface dry: ≤ 1 h; Hard dry: ≤ 24 h; Full cure: 7 days	ASTM D1640 / GB/T 1728

4.Recommended Coating System

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

5.Surface Preparation

- **Previous Coating:**

Ensure the epoxy zinc-rich primer or other primer is fully cured, and that the surface is clean, dry, free from oil contamination, and free from zinc salts. If the recoating interval exceeds the maximum allowable time, surface roughening is required.

- **Direct Application on Steel (without zinc-rich primer):**

Abrasive blasting to Sa 2½ grade is required, with a surface profile of 40–75 μm.

6.Application Guidelines

Item	Requirements
Mixing	Stir the base component thoroughly using a power mixer. Add the hardener according to the mixing ratio (Base : Hardener = 6.25 : 1 by weight) and mix thoroughly until uniform.
Pot Life (25°C)	4 hours (do not use after gelation)
Thinner	Epoxy thinner (recommended: YH-301Y)
Thinning Ratio	Airless spraying: 10–20%; Brush/Roller: 0–10%
Airless Spraying	Nozzle size: 0.38–0.53 mm; Pressure: 15–20 MPa
Brush / Roller	Suitable for small-area touch-up; ensure uniform film thickness

7.Safety and Precautions

· Ensure thorough mixing before use to avoid uneven distribution of the hardener, which may result in incomplete curing.
· Application is strictly prohibited before the primer is fully cured or when the surface is damp or has condensation.
· Application conditions: temperature above 5°C, relative humidity below 85%, and substrate temperature at least 3°C above the dew point.
· Before the maximum recoating interval is exceeded, the coating surface should be roughened to ensure proper intercoat adhesion.
· Avoid outdoor application in rainy, snowy, foggy, or strong wind conditions.
· This product contains organic solvents; ensure adequate ventilation and wear appropriate protective equipment during application.

8.Packaging, Storage and Shelf Life

- **Packaging:**
  Base (Main Paint): 25 kg/drum (approx. 17.2 L)
  Hardener: 4 kg/drum (approx. 2.9 L)
- **Storage Conditions:**
  Store in a cool, dry, and well-ventilated place. Keep away from fire sources.
- **Shelf Life:**
  12 months (unopened, stored in original packaging at 5–35°C)
- **Note:**
  Volume conversion is based on a density of 1.40 kg/L.
  Base: 25 kg ÷ 1.40 ≈ 17.9 L; Hardener: 4 kg ÷ 1.40 ≈ 2.9 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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