



Let the world never fade

Two-Component Epoxy Internal Coating(HY-02G)

Technical Data Sheet (TDS)

Two-Component Epoxy Internal Coating

Product Number: HY-02G

Product Type: Two-Component Epoxy Resin Topcoat

1. Product Description

This product is a high-performance two-component epoxy resin topcoat specifically designed for indoor environments such as the internal surfaces of storage tanks, ship compartments, industrial pipelines, special containers, energy storage containers, and steel structures.

Formulated with premium epoxy resins and a special curing agent system, it cures to form a tough, dense, and smooth coating film with excellent resistance to oil, water, chemicals, and corrosion, effectively protecting the internal substrate from media attack.

2. Main Applications

- Protective anti-corrosion lining for the internal surfaces of storage tanks containing refined oil, crude oil, chemicals, special containers, and energy storage containers.
- Interior coating for ship engine rooms, pump rooms, dry cargo holds, ballast tanks, and other internal ship surfaces.
- Suitable for sewage treatment tanks, circulating water pipelines in power plants, and desulfurization equipment linings.
- For internal surfaces of pipelines and equipment in the petroleum, chemical, power, and metallurgical industries.
- Suitable for indoor steel structures, flooring, and other environments requiring high chemical resistance.

3. Key Performance Features

- **Excellent Chemical Resistance:** The cured coating exhibits strong resistance to crude oil, refined oil products, solvents, weak acids, weak alkalis, salt water, and other media.
 - **Tough and Dense Coating Film:** High volume solids content allows high-build application in a single coat, providing excellent permeability resistance and abrasion resistance.
 - **Good Adhesion and Compatibility:** Provides strong intercoat adhesion with epoxy primers, epoxy micaceous iron oxide intermediate coatings, and related coating systems without peeling.
 - **Excellent Corrosion Protection:** Effectively isolates corrosive media and extends the service life of equipment and facilities.
 - **Easy Application:** Suitable for spraying, brushing, or rolling, with a wide recoating interval window.
 - **Environmentally Compliant:** Meets relevant national environmental protection requirements.
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Technical Parameters:

Item	Specification	Test Standard / Method
Color	Grey, white, iron red, etc. (customizable)	Visual comparison
Gloss (60°)	Flat / Matte	ASTM D523 / ISO 2813
Volume Solids	78% ± 2%	ISO 3233
Density (mixed)	Approx. 1.40 kg/L	ASTM D1475
Mixing Ratio (by weight)	Base : Hardener = 6.25 : 1	Internal method
Typical Dry Film Thickness	80–120 µm	—
Theoretical Coverage (based on 100 µm DFT)	Approx. 5.8 m ² /kg	—
VOC Content	≤ 350 g/L	EPA Method 24 / ISO 11890-2
Flash Point	≥ 25°C	ISO 3679 / ASTM D93
Drying Time (25°C, 50% RH)	Surface dry: ≤ 2 h; Hard dry: ≤ 24 h; Full cure: 7 days	ASTM D1640
Recoating Interval (25°C)	Min: 4 h; Max: 7 days	ASTM D1640

4.Recommended Coating System

Primer: Epoxy Zinc-Rich Primer 60 (HY-8002) / Epoxy Primer for Galvanized Steel (HY-8003)

Intermediate Coat: Epoxy Micaceous Iron Oxide Intermediate Paint (such as HY-01G)

Topcoat: HY-02G Epoxy Internal Coating

Typical Film Thickness System (Indoor Use):

Primer 60–80 µm + Intermediate Coat 80–120 µm + Topcoat 80–120 µm

For Weather Resistance (Outdoor Use):

The topcoat should be overcoated with an acrylic polyurethane topcoat or fluorocarbon topcoat.

5.Surface Preparation

Step	Requirements
Degreasing	Use suitable cleaning agents or solvents to thoroughly remove oil, grease, and dust from the substrate surface, then rinse thoroughly with clean water to ensure a continuous, unbroken water film.
Rust Removal	Abrasive blasting to Sa 2½ grade (ISO 8501-1). The surface shall be free from visible oil, grease, rust, and mill scale, with only slight spot or stripe-like stains permitted.
Surface Profile	Surface roughness: 30–75 µm
Surface Abrasion (for existing coatings)	When applied over old coatings, the surface should be roughened or sanded to achieve a uniform profile.
Additional Treatment Not Required	No additional acid pickling or phosphating is required.
Surface Condition	Clean, dry, free from oil, dust, and salts.
Note	If abrasive blasting is not possible, power tool cleaning to St 3 grade is acceptable. Substrate temperature should be at least 3°C above the dew point.

6. Application Guidelines

Item	Requirements
Mixing	Stir the base component (Component A) thoroughly using a power mixer. Add the hardener (Component B) according to the weight ratio (A:B = 6.25:1), mix thoroughly until uniform, and allow to induct for 5–10 minutes.
Pot Life (25°C)	4 hours (do not use after gelation)
Thinner	Epoxy thinner (recommended: HY-301X)
Thinning Ratio (by volume of mixed paint)	Airless spraying: 10–20%; Brush/Roller: 0–10%; Conventional spraying: 15–25%
Airless Spraying	Nozzle size: 0.43–0.53 mm; Pressure: 15–17 MPa
Conventional Spraying	Nozzle size: 1.0–1.5 mm; Pressure: 0.2–0.4 MPa
Brush / Roller	Suitable for small-area touch-up and edge areas; ensure even application and avoid missed spots

7. Safety and Precautions

- This product contains organic solvents. Ensure good ventilation during application and wear appropriate personal protective equipment such as safety goggles, respirators, and protective gloves.
- If the coating surface becomes contaminated with oil, water, or dust, remove the contamination using a stiff brush or light abrasion, then clean thoroughly.
- It is recommended to conduct a small-area adhesion test before application; proceed with full-scale application only after satisfactory results are confirmed.
- Application conditions: temperature above 5°C, relative humidity below 85%, and substrate temperature at least 3°C above the dew point.
- Avoid application under high temperatures, direct sunlight, or strong wind conditions, as rapid solvent evaporation may affect leveling and adhesion.
- Before the maximum recoating interval is exceeded, the coating surface should be roughened to ensure proper intercoat adhesion.
- Clean tools and equipment immediately after use with the recommended thinner.

8. Packaging, Storage and Shelf Life

- **Packaging:**

Base (Component A): 25 kg/drum (approx. 17.8 L)

Hardener (Component B): 4 kg/drum (approx. 3.0 L)

- **Storage Conditions:**

Store in a cool, dry, and well-ventilated place. Keep away from fire sources and 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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