



# RAINBOW

## RAINBOPRIME 973

High Build Epoxy Coating

PRODUCT NUMBER	RAINBOPRIME 973
TYPE	A two-component paint formulated with epoxy resin and special polyurethane resin, combined with anti-corrosive pigments and fillers.
CHARACTERISTICS	<ol style="list-style-type: none"><li>1.General-purpose epoxy primer.</li><li>2.Good adhesion to steel substrates and their galvanized surfaces.</li><li>3.Curing temperature can be as low as 5°C.</li><li>4.Excellent water resistance and anti-corrosive properties.</li><li>5.Good wetting and leveling properties.</li><li>6.Suitable for repairing weld seams and areas damaged by epoxy coatings.</li><li>7.Applicable to surfaces treated with wet sandblasting (both wet and dry).</li></ol>
COLOR	Brown, gray, and specified colors.
VOC CONTENT	Maximum value: 220 g/L
VOLUME SOLID CONTENT	80±2%
OPTIMUM FILM THICKNESS	Wet film 183µm Dry film 150µm
THEORETICAL COVERAGE	5.4 m <sup>2</sup> /L at a dry film thickness of 150 µm.
SPECIFIC GRAVITY	≥ 1.4 kg/L
THINNER	No.1005 ( SP-12 )
THINNER USAGE AMOUNT	The main agent and hardener must be mixed at temperatures above 15°C; otherwise, additional solvent must be added to achieve the required viscosity for application. Excessive solvent may cause sagging. After mixing, thinner can be added as follows: 0–5% for brushing or rolling, 0–10% for air spraying, and 0–5% for airless spraying.
MIXING RATIO	Main agent : Hardener = 84.7 : 15.3 (by weight) or 4 : 1 (by volume).
POT LIFE	1 hour (at 25°C).
APPLICATION METHOD	Brushing, rolling, air spraying Airless spraying operation: <ul style="list-style-type: none"><li>• Nozzle diameter: 0.53–0.73 mm (0.017–0.025 in)</li><li>• Nozzle pressure: 150 MPa (2130 psi)</li></ul>
DRYING TIME	Under a dry film thickness of 150 µm and in a well-ventilated environment: <ul style="list-style-type: none"><li>• 5°C: Touch dry in 24 hours, hard dry in 36 hours, fully cured in 14 days</li><li>• 15°C: Touch dry in 12 hours, hard dry in 24 hours, fully cured in 9 days</li><li>• 25°C: Touch dry in 8 hours, hard dry in 12 hours, fully cured in 7 days</li><li>• 40°C: Touch dry in 6 hours, hard dry in 10 hours, fully cured in 5 days</li></ul>
RECOAT INTERVAL	For an epoxy system with a dry film thickness of 150 µm, the surface must be dry and free of contamination: <ul style="list-style-type: none"><li>• 5°C: Minimum 24 hours, maximum 28 days</li><li>• 15°C: Minimum 18 hours, maximum 14 days</li><li>• 25°C: Minimum 8 hours, maximum 10 days</li></ul>
STORAGE SHELF LIFE	Under normal conditions, at least one year.
PRECAUTIONS	<ol style="list-style-type: none"><li>1.For underwater submerged areas:<ul style="list-style-type: none"><li>• Bare steel or steel surfaces coated with unapproved inorganic zinc silicate workshop primer: Cleaned by sandblasting (dry or wet), achieving an international standard of ISO-Sa2½ level, with a roughness of 30–75 microns.</li><li>• Steel plate surfaces with existing coatings: Cleaned by high-pressure water jetting to SSPC standard VIS WJ2L level (roughness of 30–75 microns).</li></ul></li></ol>

EPDM3030973X V1.0

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## 2. IMO-MSA.215(82) Ballast Tank Requirements:

- Bare steel: Structural preparation to meet ISO 8501-3:2006 standard, P2 level, with edges ground to a radius of at least 2 millimeters or three times of cutting and grinding.
- For damaged inorganic zinc silicate workshop primer and weld seams: The surface should be treated to Sa 2½. If the coating is not part of an IMO PSC-compatible main system, at least 70% of the inorganic zinc silicate workshop primer must be removed to Sa 2. If the coating is part of an IMO PSC-compatible main system, the inorganic zinc silicate workshop primer can be retained. The retained primer can be cleaned by sweep blasting, high-pressure water jetting, or equivalent methods.
- For welded areas: The welds should be treated to at least St 3 or Sa 2½. For minor damage covering less than 2% of the total area, treat with St 3. If there is continuous damage over 25 m<sup>2</sup> or if the damage exceeds 2% of the total area, treat with Sa 2½. The coating seams should be smoothed, with a roughness of 30–75 microns.
- Surface cleanliness: Should meet ISO 8502-3:1992 standard, level 1 (only large particles of dust of sizes 3, 4, or 5, but any visible small particles of dust must also be thoroughly removed).
- After blasting/grinding: Soluble salt levels must not exceed 50 mg/m<sup>2</sup> of NaCl.
- NDFT 320 µm: Must comply with the 90/10 rule. At least two coats of touch-up and two coats of spray application are required. However, if the thickness is proven to be adequate, the second touch-up coat on weld seams can be omitted to avoid excessive coating thickness.
- Pre-coating: Should be applied by brushing or rolling. Rolling is used for areas such as drain holes and weep holes.

## 3. For atmospheric exposure conditions:

- Bare steel: Sandblasting should achieve an international standard of ISO-Sa2½, with a roughness of 30–75 microns, or meet the ISO-St3 level.

4. During application and curing: The substrate temperature must be above 5°C and at least 3°C higher than the dew point.

5. Relative humidity: The maximum relative humidity during application and curing should be 85%.

6. Permitted flash rust grade after water jet rust removal : Light(L)