



Let the world never fade

Waterborne Polyurethane Topcoat (Two-Component)(SX-JAZ-7000) Technical Data Sheet (TDS)

**Waterborne Polyurethane Topcoat (Two-Component)
Number: SX-JAZ-7000**

Product Type: Waterborne Eco-Friendly Topcoat

1. Product Description

This product is a high-performance waterborne two-component polyurethane topcoat, formulated with waterborne hydroxy acrylic resin and a hydrophilic aliphatic isocyanate curing agent as the film-forming materials, combined with eco-friendly additives and weather-resistant pigments. Thinned with water, it has low application odor, fast drying, and offers excellent weather resistance, gloss and color retention, chemical resistance, and decorative appearance. It is an ideal topcoat for high-end heavy-duty anti-corrosion coating systems.

2. Main Applications

- Suitable as a protective and decorative topcoat for exterior metal surfaces of special containers, shipping containers, steel structures, and machinery equipment.
- Suitable as a weather-resistant topcoat in general industrial applications, such as tank exteriors, pipelines, and bridges.
- Can be used in combination with waterborne epoxy primers, waterborne epoxy micaceous iron oxide intermediate coats, and similar systems.

3. Key Performance Features

- **Excellent Weather Resistance:** The coating exhibits outstanding UV aging resistance; long-term outdoor use resists fading and chalking, with excellent gloss and color retention.
- **High Gloss:** Forms a full, smooth film with high gloss, providing excellent decorative appearance.
- **Chemical Resistance:** Provides good resistance to oils, solvents, mild acids, and mild alkalis.
- **Fast Air Drying:** Dries quickly at room temperature; can cure by physical drying or be accelerated with low-temperature baking.
- **Low Odor & Eco-Friendly:** Thinned with water, very low VOC content, minimal odor during application and drying.
- **Easy Application:** Viscosity can be adjusted with water; tools are easy to clean.

Technical Parameters:

Item	Specification	Test Standard /Method
Color	Various (adjustable)	Visual comparison
Gloss (60°)	≥85 GU	ASTM D523
Volume Solids	50% ± 2%	ISO 3233
Density (mixed)	Approx. 1.20 kg/L	ASTM D1475
Mixing Ratio (by weight)	Base: Curing agent = 5:1	Internal method
Typical Dry Film Thickness	40–60 μm	–
Theoretical Coverage (based on 50 μm dry film)	Approx. 8.3 m ² /kg	–
VOC Content	≤50 g/L	EPA Method 24
Flash Point	Not applicable (water-based)	–
Drying Time (25°C, 50% RH)	Surface dry: ≤1 h; Through dry: ≤24 h; Full cure: 7 days	ASTM D1640

4. Application Instructions

- **Primer:** Waterborne epoxy zinc-rich primer (SX-HY0560) / Waterborne general-purpose epoxy primer (SX-HY6003) (optional)
- **Intermediate Coat (Optional):** Waterborne epoxy micaceous iron oxide intermediate coat (SX-HY1010)
- **Topcoat:** This product SX-JAZ-7000, waterborne polyurethane topcoat
- **Typical Film Thickness System:** Primer 60–80 µm + Intermediate coat 80–120 µm + Topcoat 50–70 µm (two coats)

5. Surface Preparation

Item	Specific Requirements
Degreasing	Use a dedicated cleaning agent or solvent to thoroughly remove oil, grease, and dust from the substrate surface, then rinse with clean water.
Rust Removal	Abrasive blasting to Sa2.5 (ISO 8501-1), or mechanical tool cleaning to St3.
Surface Roughness	30–75 µm
Surface Condition	Clean, dry, free of oil, loose rust, dust, and salts.

6. Application Guidelines

Item	Specific Requirements
Mixing	Stir the base component (Part A) evenly using a mechanical mixer, then add the curing agent (Part B) according to the specified ratio. Mix thoroughly until uniform, and let it mature for 5–10 minutes before use.
Pot Life (25°C)	2 hours
Thinner	Clean water
Thinning Ratio (by volume of mixed paint)	Airless spray: 5–10%; Conventional spray: 10–15%; Brush/Roll: 0–5%
Airless Spray	Nozzle size: 0.33–0.43 mm; Pressure: 12–15 MPa
Conventional Spray	Nozzle size: 1.0–1.5 mm; Pressure: 0.3–0.5 MPa
Brush/Roll	Suitable for small area repairs and edges. Ensure uniform application and avoid missed spots.

7. Safety and Precautions

- This product is water-based and non-flammable; however, it is still recommended to store it away from fire sources.
- Ensure good ventilation during application, and it is recommended to wear protective gloves, safety goggles, and a dust mask.
- Avoid direct contact with skin; in case of contact, rinse thoroughly with plenty of clean water.
- Do not mix with organic solvents; strictly prohibit mixing with oil-based paints.
- Application is not recommended when ambient temperature is below 5°C or relative humidity exceeds 85%.
- Use the mixed paint within its pot life.
- Clean tools and equipment immediately with clean water after use.

8. Packaging, Storage and Shelf Life

- **Packaging:**
Base (Part A): 20 kg per drum (approx. 16.7 L); Curing agent (Part B): 4 kg per drum (approx. 3.3 L) (based on a density of 1.20 kg/L, maintaining a 5:1 ratio)
Base (Part A): 200 kg per drum (approx. 166.7 L); Curing agent (Part B): 40 kg per drum (approx. 33.3 L) (based on a density of 1.20 kg/L, maintaining a 5:1 ratio)
- **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)
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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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