EnviroLux

ENERGY SYSTEMS · CANTON, TEXAS

AeroShield™ Coating System

TWO-COAT EPOXY / POLYSILOXANE CORROSION PROTECTION

Proven in the salt air at Kennedy Space Center. Now available for your facility.

AeroShield is the two-coat corrosion protection system EnviroLux developed with its coatings partner to meet NASA-STD-5008B for luminaires we supply to NASA Kennedy Space Center — one of the most corrosive coastal environments in North America. The same system is now available from EnviroLux for structural steel, aluminum, mezzanines, railings, and equipment in ports, terminals, and processing plants.

5,000 hr	3,360 hr	3,494 psi	C5-M / CX	2 Coats
SALT FOG — ASTM B117	CYCLIC UV / SALT — ASTM D5894	ADHESION — ASTM D4541	ISO 12944 CORROSIVITY CLASS	FULL SYSTEM · BRUSH, ROLL OR SPRAY

THE SYSTEM

COAT 1 · BASE / BARRIER COAT

AeroShield EP — High-Build Epoxy

Two-component, 72% volume solids, high-build polyamide epoxy. Applied at 5–10 mils dry in a single coat, it wraps sharp edges, corners, and welds and can go directly over hand- or power-tool-cleaned steel — no abrasive blast required for atmospheric service. Simple 1:1 mix. Dry to handle in 8 hours at 77°F.

COAT 2 · FINISH / WEATHERING COAT

AeroShield PS — Polysiloxane Topcoat

Two-component epoxy-siloxane hybrid, 90% volume solids, under 100 g/L VOC, isocyanate-free. Delivers the gloss and color retention of a urethane with the chemical resistance of an epoxy, without the urethane's health and handling issues. Applied at 4–6 mils dry. Fast-cure hardener available for application down to 20°F.

WHY IT FITS PORT & POTASH OPERATIONS

- **Chloride attack on two fronts.** Potash is a chloride salt; it is hygroscopic and, with marine air, keeps steel surfaces wet with brine. AeroShield was selected and proven where salt-laden air is constant — the Atlantic coast of Florida.
- **Field or shop application.** Brush, roll, conventional, airless, or plural-component spray. Broad recoat windows (up to one year) make phased maintenance painting practical.
- **Long service life, less downtime.** Rated for ISO 12944 C5-M / CX exposures — the highest corrosivity categories, covering offshore, coastal, and industrial-chemical atmospheres.

TYPICAL APPLICATIONS

- Mezzanines, stair towers, handrails, guardrails, and platforms
- Conveyor supports, gallery steel, ship-loader and tower structures
- Storage-building structural steel, purlins, door frames, and cladding supports
- Equipment guards, motor bases, pipe supports, and skids
- Light fixtures, poles, brackets, and enclosures (steel or aluminum)
- Tank exteriors, hoppers, and chutes (atmospheric service)
- Concrete and masonry curbs, pits, and walls

PERFORMANCE (FULL SYSTEM ON STEEL)

PROPERTY	METHOD	RESULT
Salt fog, 5,000 hr	ASTM B117	**Blistering 10 (none) · Rusting 7**
Cyclic weathering, 3,360 hr	ASTM D5894	**Blistering 10 · Rusting 10**
Adhesion	ASTM D4541	**3,494 psi (cohesive)**
Abrasion, CS-17, 1 kg, 1,000 cyc	ASTM D4060	**119 mg loss**
Direct impact	ASTM D2794	**56 in-lb**
Flexibility, 1/8" mandrel	ASTM D522	**Passes**
Pencil hardness	ASTM D3363	**5H**
Dry heat, 300°F	ASTM D2485	**No cracking or discoloration**

Ratings per ASTM D714 (blistering) and ASTM D610 (rusting), 10 = no defects. Performance data reflects laboratory testing of the formulated products supplied by EnviroLux, applied per the specifications on page 2. Field results depend on surface preparation, film thickness, and exposure. NASA-STD-5008B is a NASA protective-coating standard; no NASA endorsement is implied.

Kits from 1 to 5 gallons, mixed.

Ask EnviroLux for system pricing and a spec package.

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PRODUCT DATA

PROPERTY	AEROSHIELD EP — EPOXY BASE COAT	AEROSHIELD PS — POLYSILOXANE TOPCOAT
Generic type	Two-component polyamide epoxy mastic, high solids, high build	Two-component polysiloxane (epoxy-siloxane hybrid), isocyanate-free
Finish / colors	Semi-gloss · White, black, wide tint range	Gloss or semi-gloss · Wide tint range
Volume solids (mixed)	72% ± 2%	90% ± 3%
VOC (mixed)	<250 g/L (2.08 lb/gal)	<100 g/L (0.77 lb/gal)
Mix ratio (A:B by volume)	1 : 1	4 : 1
Recommended DFT per coat	5.0–10.0 mils (3.0–10.0 as intermediate)	4.0–6.0 mils
Practical coverage	115–230 sq ft/gal	240–360 sq ft/gal
Dry times @ 77°F, 50% RH	Touch 2 hr · Handle 8 hr · Recoat 8 hr min / 1 yr max · Cure 7 days	Touch 3 hr · Handle 6 hr · Recoat 7 hr min / 1 yr max · Cure 7 days
Pot life @ 77°F	4 hr (30 min sweat-in)	4 hr gloss / 2 hr semi-gloss (no sweat-in)
Application temperature	Air 35–120°F · Surface 35–250°F · 85% RH max · 5°F above dew point	Std. hardener 50–120°F · Fast-cure hardener 20–77°F · 5°F above dew point
Flash point (mixed)	91°F TCC	145°F PMCC (std) · 154°F (fast cure)
Shelf life (unopened)	36 months · Store 40–110°F	Part A 12–24 months · Part B 36 months · Store 40–100°F
Reduction / clean-up	Up to 10% with approved reducer; confirm local VOC rules	Up to 10% with approved reducer; Part B is moisture-sensitive — open only when ready to mix
Packaging (mixed)	Two-can 1:1 kits	1 gal, 1.25 gal, and 5 gal kits

RECOMMENDED SYSTEMS

SERVICE	COATS	DFT (MILS)
Steel or aluminum, atmospheric Standard AeroShield system — as used on EnviroLux fixtures at KSC	1 ct. AeroShield EP	5.0–10.0
	1–2 cts. AeroShield PS	4.0–6.0
Steel, severe / coastal-industrial Add zinc-rich primer for maximum life	1 ct. zinc-rich primer	3.0–5.0
	1 ct. AeroShield EP	3.0–10.0
	1–2 cts. AeroShield PS	4.0–6.0
Steel, immersion (fresh, salt, raw water)	2 cts. AeroShield EP	5.0–10.0 each
	1 ct. AeroShield PS (optional)	4.0–6.0

Stripe-coat welds, edges, bolts, and crevices before each full coat. If the recoat window is exceeded, abrade before recoating. Not a tank lining.

MIXING & APPLICATION

- **EP:** 1 A : 1 B by volume, power-mix, 30-min sweat-in, re-stir. **PS:** 4 A : 1 B by volume, Jiffy-mix, no sweat-in. Never mix catalyzed material with fresh; do not tint Part B.
- Brush, roll, conventional, airless, or plural-component spray. Airless tips: EP .017–.023" @ 2,800–3,000 psi; PS .015–.019" @ 2,000 psi min.

SURFACE PREPARATION

Surfaces must be clean, dry, and sound. Remove oil, grease, dust, loose rust, mill scale, and salts. Coat bare steel the same day it is cleaned.

SUBSTRATE	MINIMUM PREPARATION
Steel, atmospheric	SSPC-SP2/SP3 hand or power tool (SSPC-SP6 commercial blast, 2–3 mil profile, for best life)
Steel, immersion	SSPC-SP10 / NACE 2 near-white blast, 2–3 mil profile
Aluminum	SSPC-SP1 solvent clean; if not weathered 6+ months, add SSPC-SP16 brush-blast, 1–2 mil profile
Galvanized steel	SSPC-SP1; SSPC-SP16 if not weathered 6+ months
Stainless steel	SSPC-SP16, 1–1.5 mil profile
Concrete / masonry	SSPC-SP13 / NACE 6 or ICRI CSP 1–3; 28-day cure

STANDARDS & LISTINGS

- Selected to meet NASA-STD-5008B coating requirements for EnviroLux luminaires at Kennedy Space Center
- ISO 12944:2018 — base coat qualified C2 through CX; topcoat DTM system meets ISO 12944-6 C5-M
- Suitable for USDA-inspected facilities; topcoat meets USDA incidental-contact requirements
- Topcoat qualified to MIL-PRF-24635 Type V/VI, Class 1/2, Grade A/B
- Base coat meets AWWA D102 OCS #5 and MPI #108; NSF-certified EPD available on request

Safety: read the Safety Data Sheet for each component before use. SDS and full application bulletins are provided with every EnviroLux AeroShield order. Published data is subject to change without notice; contact EnviroLux for the current revision. EnviroLux warrants products against manufacturing defects; liability is limited to replacement of defective product or refund of the purchase price. No other warranty, expressed or implied, including merchantability or fitness for a particular purpose, is made. AeroShield is a trademark of EnviroLux Energy Systems LLC.