8/20 Mil Epoxy/Urethane Systems

DATA SHEET

DESCRIPTION:
The 8 or 20 mils Epoxy/Urethane coating system is a two (2)coat system consisting of either one application of 65% solids polyamide epoxy top coated with one application of 65% solids aliphatic urethane or one 16 mils application of 100% solids epoxy with the same top coat of chemical resistant, aliphatic urethane. These systems are specifically designed to be applied over a wet prepared (acid etched) surface.

Available in clear and colors achievable by mixing the clear ES-3144 Epoxy, ES-3150 Epoxy or clear ES-5322 CRU with one of 16 "specialty" urethane/epoxy Colorants in the field.

RECOMMENDED USES:
These thin film 18 or 20 mils systems are best suited for light duty service areas (aircraft and auto) or for aircraft and auto parking areas. They are also utilized where cost is the primary factor.

FEATURES:
- Easy Application … Roller Applied
- Easy Mixing Ratio
- 16 Standard Colors
- Can Be Installed Smooth or With Various Degrees of Non-Slip
- Thin Film but VOC Compliant
- Good Chemical Resistance-Resists Brake Fluid, Battery Acid and Skydrol 500B
- Good Abrasion Resistance
- Easily Re-Coated After a Few Years of Service

PACKAGING:
The ES-3150 Epoxy Coating is available in 15-gal and 165-gal units for easy job-site mixing and application.

The ES-5400 Chemical Resistant Urethane is available in 2.5-gal units or semi-bulk units.

COVERAGE:

ES-3144 Epoxy	250 sq.ft./gal.
ES-3150 Epoxy	100 sq.ft./gal.
ES-5322 Urethane	300 sq.ft./gal.

As with all coatings, coverage is dependent on the smoothness and porosity of the surface.

SURFACE PREPARATION:
Best results are achieved when diamond grinding and/or chemical preparation processes are utilized. Shot blasting is not recommended unless aesthetics are no concern. Attempting to install these systems over a shot blasted surface stands a 95% chance that the shot blast overlap lines will telegraph through the coating.

The substrate must be clean, dry and sound with new concrete cured for at least 30 days at 70°F. Remove dust, laitance, grease, curing compounds, waxes, foreign particles, disintegrated or soft base materials, and any previously applied potentially incompatible coatings. Create a surface profile on concrete by steel shot blasting. Cracks and joints should be repaired before the installation of the 8 or 20 mils Epoxy/Urethane coating system.

If the concrete surface is not prepared properly, product adhesion will fail and warranties will be voided.

FOR OPTIMUM RESULTS:
- For Interior Use Only Where Freeze/Thaw Occurs.
- New Concrete Must Cure For at Least 30 Days @ 70˚F
- DO NOT Reduce The ES-3150 Epoxy Coating with Thinner
- DO NOT Use When Relative Humidity Exceeds 75% Indoors.
- DO NOT Apply to Structurally Unsound Surfaces.
- DO NOT Apply heavier than recommended wet film thickness.
- Allow Each Coat to Dry Tack-Free Before Recoating.
- Apply Subsequent Coats Within 24 Hours of Previous Coat.
- Before Attempting to Over Coat Ensure Compatibility Over Old Paint

Review ECONO SURF's Material Safety Data Sheets (MSDS) for this product prior to mixing and applying. In addition, thoroughly review the Application Guide and product labels.

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MIXING:
Avoid mixing and application of this product if the floor temperature is below 55˚F or above 85˚F. Also, avoid application if the relative humidity is higher than 75%. The temperature of the floor, materials and air in the area of the installation all play a role in how the product will apply and cure. DO NOT change the ratio of A to B.

If Colorants are to be used with the ES-3150 Epoxy Coating- Clear, or the ES-5322 Urethane, the appropriate quantity of Colorant is first added to the Part-B Resin and mixed in uniformly before the Part-A Hardener is added.

ES-3144 Epoxy	1:1 ratio
ES-3150 Epoxy	1:2 ratio
ES-5322 Urethane	1:2 ration

Blend thoroughly for a minimum of 2 minutes with a "Jiffy" or "Spiral" mixing blade attached to a low-speed (400-600 RPM) electric drill. Take care not to induce air into the material when mixing. This will cause "bubbles" in the coating when applied.

General Properties:	Data
Shelf Life	2 Years on Epoxy; One Year on CRU
Colors	Clear & Variety with Colorants
Induction Time	None
Application Temp & Humidity	55˚F to 85˚F @ less than 75% R.H.
Cure Rate @ 75 ° F	
Recoat	5-6 hrs.
Foot Traffic	10 hrs.
Heavy Traffic	24+ hrs.
Chemical Resistance	72+ hrs.

Test	Method	Typical Values
Bond Strength (psi)	ACI COM #503 (pp. 1139-1141)	400+ w/ concrete failure
% Solids by Volume	ASTM D-1644	99.5% Epoxy 65-70% Urethane
UV Light Resistance	Q-U-V Accelerated Weather Tester	Good
Hardness-Shore D	ASTM D-2240	84+
VOC	D3960	3144 Epoxy 380 g/l 3150 Epoxy: 0 g/l 5322 CRU: 335 g/l
Gloss (60˚)	BYK-Gardner Tri-Gloss	90+ with ES-5322 CRU
Impact Resistance	ASTM D-2794	>160 in-lbs.
Indentation	MIL-D-3134F	None
Abrasion Resistance (mg) (CS-17 wheel, 1000 GM load, 1,000 cycles)	ASTM D-1044	45*
Flammability	ASTM D-635	Self-Extinguishing
Dry Heat Resistance		140 ˚F Constant 200 ˚F Intermittent
Water Absorption (%)	ASTM C-413	0.17%

*Abrasion resistance results based on total epoxy/urethane system.

APPLICATION:
Pre-patch all large holes, divots, cracks, etc., using an epoxy paste made of Econo Surf 3150 Epoxy and Cab-O-Sil TS-720.

8-Mil System

1. Roller apply one (1) base coat of a pigmented, 65% solids clear or pigmented polyamide epoxy (ES-3144 Epoxy) using a 1/2" nap, 18" wide, mohair roller at approximately 6.5 wet mils (250 sq. ft./gallon). This yields about 4.5-dry mils.
2. If requested by customer, broadcast #36 aluminum oxide non-skid at a rate of approximately one (1) lb per 1,000 square feet into the wet film of the epoxy base coat.
3. Allow to cure minimum 6 hours then roller apply one (1) finish coat of a pigmented, V.O.C. compliant, chemical resistant aliphatic urethane (ES-5322 CRU) using a 1/2" nap, 18" wide, mohair roller at approximately 5.4 wet mils (300 sq. ft./gallon). This yields about 3.5 dry mils.

20-Mil System

1. Notch or flat squeegee apply one (1) base coat of a pigmented, 100% solids clear or pigmented epoxy (ES-3150 Epoxy) and back roll using a 3/8" or 1/2" nap, 18" wide, mohair roller at approximately 16.5 mils (97 sq. ft./gallon).
4. If requested by customer, broadcast #36 aluminum oxide non-skid at a rate of approximately one (1) lb per 1,000 square feet into the wet film of the epoxy base coat.
5. Allow to cure minimum 6 hours then roller apply one (1) finish coat of a pigmented, V.O.C. compliant, chemical resistant aliphatic urethane (ES-5322 CRU) using a 1/2" nap, 18" wide, mohair roller at approximately 5.4 wet mils (300 sq. ft./gallon). This yields about 3.5 dry mils.

POT LIFE:
At 75˚F and 50% R.H., the useful pot life of each product is as follows:

ES-3144 Epoxy	2-3 hours
ES-3150 Epoxy	15-20 minutes
ES-5322 Urethane	1-2 hours

Using any product beyond this time will yield variable results and therefore any mixed product beyond the pot life should be discarded.

CLEAN UP:
Application equipment should be cleaned using soap and water or solvent where necessary. Roller covers should be discarded after use.

DISPOSAL:
Empty containers may contain product residue, including flammable or combustible vapors. Do not cut, puncture or weld near these containers. Label warnings must be observed until containers have been commercially cleaned or reconditioned. Any containers to be thrown out must be disposed in accordance with federal, state and local regulations.

CUSTOMER NOTE:
For information on application situations not covered above, contact the corporate office at 1-302-322-4920.

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