ES-2065
65-Mil Broadcast System

DATA SHEET

DESCRIPTION:
ES-2065 Broadcast System is a 65-mil multi-product system that includes a 100% solids semi-rigid epoxy receiver coat, a 100% solids top coat, a 4-mil aliphatic urethane finish coat and aggregate layered together to form a 65-mil broadcast flooring system. This system exhibits very good chemical, wear and chip resistance.

A total of 16 different standard colors can be achieved by mixing the clear epoxy coating in the ES-2065 Broadcast System and the clear chemical resistant urethane finish coat with one of 16 "specialty" urethane/epoxy Colorants in the field.

RECOMMENDED USES:
The ES-2065 Broadcast Coating System is designed for use on concrete areas found in apparatus bays and other service area floors that are subjected to moderate to heavy traffic and chemical spillage. This system is also used in auto and truck service area floors.

PACKAGING:
The liquid components of the 65-mil Solid Color Broadcast System are available in semi-bulk and bulk liquid units. The silica flour is available in 50-lb. bags, while the "special" broadcast aggregate is available in 100-lb.bags.

COVERAGE:
The "semi-rigid" 2200 Epoxy Receiver Coat (with the silica flour) is applied at the rate of 30-mils (53.3 sq. ft./gal) and the aggregate is broadcast at the rate of 0.67-lbs. per sq. ft. per application layer. The 3150 Epoxy Top Coat is applied at the rate of 80-90 sq. ft. per gallon depending on the final surface texture desired. The VOC-Chemical Resistant Urethane finish coat is applied at 300 sq. ft./gal.

FEATURES:
- 16 Standard UV Stable Colors
- Good Chemical Resistance-Resists Brake Fluid, Battery Acid, Skydrol 500B
- Good Abrasion Resistance
- VOC Compliant products
- Gloss Finish; Final floor requires less maintenance and upkeep.
- Will give your facility a bright, clean and professional appearance.
- Full Range of textures; provides a safe surface on which to work.
- Can Be Installed With an Integral Cove Base to Create a Monolithic Floor

SURFACE PREPARATION:
In general, 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 65-mil Broadcast System.

1. If the floor has an existing paint or coating to be removed, grind the entire area using a self-contained, dust controlled, 480 volt 30-amp, "Diamond Grinder" (Photo #1).
2. Using a 15", 480-volt "Shot Blast" unit (Photo #2), profile the bare concrete floor surface to affect an approximate 80-grit sand paper finish to achieve a sound mechanical bonding surface for the squeegee applied, 100% solids epoxy.
3. Power sand and/or hand grind (using vacuumized diamond grinders) all edges, perimeter areas, etc. that are inaccessible to the shot blast equipment. If necessary, clean out ALL expansion, isolation and control joints using a concrete saw.
4. Power sweep and/or vacuum the surface to remove all laitance, dust and excess shot.

Photo #1

Photo #2

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

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FOR OPTIMUM RESULTS:

- New Concrete Must Cure For at Least 30 Days @ 70°F and tested for moisture content.
- DO NOT Reduce the Epoxy components … with ANY thinner.
- DO NOT Use when Humidity Exceeds 75% Indoors.
- DO NOT Apply to Structurally Unsound Surfaces.
- Allow Each Coat to Dry Tack-Free Before Recoating.
- Apply subsequent coats within 24 Hours of Previous Coat.
- Test Compatibility with Existing Coatings Prior to Application of This System

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

General Properties:	Data
Shelf Life	2 Years
Application Temp & Humidity	55°F to 85°F @ less than 75% R.H.
Induction	None
Mixing Ratio: (A to B)	Receiver Coat & Top Coat: 1 to 2 ratio; CRU 1 to 2 ratio
Colors	Variety with Urethane/Epoxy Colorants
Working Time @ 75 °F	Receiver Coat: 25 minutes; Top Coat: 18-20 minutes.
Application Methods	Receiver Coat: Notched Squeegee & High quality 3/8" nap roller; Top Coat: Flat Squeegee & High quality 3/8" nap roller.
Cure Rate @ 75 °F	
Recoat	10 hrs.
Foot Traffic	14 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	100.0
Flash Point	Pensky-Martens CC	>200°F
UV Light Resistance	Q-U-V Accelerated Weather Tester	Good
Hardness-Shore D	ASTM D-2240	84+
VOC	EPA Method 24	0.12 lbs./gal
Gloss (60°)	BYK-Gardner Tri-Gloss	90+
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	31*
Flammability	ASTM D-635	Self-Extinguishing
Dry Heat Resistance		140 °F Constant 200 °F Intermittent
Compression Strength (psi)	ASTM D-695	13,100
Tensile Strength (psi)	ASTM D-638	7,100
Flexural Strength (psi)	ASTM D-790	8,250
Water Absorption (%)	ASTM C-413	0.18%
Coefficient of Friction(COF)	James Friction Tester	0.50- .0.57**

Notes: *Abrasion Resistance results based on total epoxy/urethane system.
**Coefficient of Friction varies depending on the Top Coat used. See application Step-7

MIXING:

Avoid mixing and application of these products 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.

If Colorants are to be used with the 65-Mil Broadcast Coating System, the appropriate quantity of Colorant is added to the Part-B Resin and mixed in uniformly before the Part-A Hardener is added.

Blend the Part-A and Part-B components 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.

APPLICATION:

1. Pre-patch all large holes, divots, cracks, etc., using an epoxy paste made of Econo Surf 3150 Epoxy and Cab-O-Sil TS-720 or Garamite 1958.
2. Notch squeegee apply a coat of 100% solids epoxy (Econo Surf 2200 Receiver Coat) filled with Sil-Co-Sil 125 at the rate of 30-mils or 53.3 sq. ft./gal and back roll to level using a 3/8" nap, 18" wide, roller sleeve.
3. Seed (broadcast) to excess (rejection) with a specially blended silica aggregate at the rate of 0.67 lbs. per sq. ft.
4. Sweep and /or vacuum to remove all excess silica aggregate.
5. Saw cut all moving joints as required and fill them with a flexible epoxy joint material.
6. Sweep and /or vacuum to remove dust, debris, contamination etc. resulting from the sanding/cutting process.
7. Notched or flat squeegee apply 20-mils (80 sq. ft./gal) of clear, 100% solids epoxy (Econo Surf 3150 Epoxy) and back roll to level using a 3/8" or 1/2" nap (depending on the desired finished texture), 18" roller sleeve.
8. Roller apply one (1) finish coat of a pigmented, V.O.C. compliant, chemical resistant aliphatic urethane (Econo Surf 5322 CRU) using a 1/2" nap, 18" wide, mohair roller at approximately 5-mils (300 sq. ft./gallon).

POT LIFE:

Based on 75°F and 50% R.H., the Receiver Coat has a pot life of 22-25 minutes while the Epoxy Top Coat has a pot life of 18-20 minutes. Using any product beyond this time will yield variable results and therefore any mixed product beyond the pot life should be discarded. Only the amount of urethane that can be applied within 30 minutes should be mixed at one time.

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 1-302-322-4290.

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