



PRODUCT DATA

20 Mil EPU System



DESCRIPTION

The 20 Mil EPU System is a combination of layers of specially formulated, pigmented 100% solids epoxy binder and pigmented aliphatic urethane top coat. The surface texture is by design a smooth finish with slight orange peel, but non-skid textures can be achieved with a variety of aggregates, most commonly an aluminum oxide power is simply added to the urethane top coat for adequate texture and added durability. Standard colors include Light Gray, Medium Gray, and Extra Hide White (two topcoats of Urethane is recommended for white).

MAIN FEATURES

- Uniform appearance
- Excellent color retention and UV Stability
- Installs and cures rapidly
- Easy to keep sanitary, non-porous, seamless, with integral cove base if specified.
- Good chemical resistance

TYPICAL USES

- Automotive Shops
- Aircraft Hangars
- Bottling Plants
- Maintenance Facilities
- Pharmaceuticals
- Commercial Areas
- Manufacturing areas
- Cosmetic Plants
- Food Processing Plants
- Shower & Locker Rooms
- Animal Shelters
- Vet Clinics

SYSTEM COMPONENTS FOR 20 MIL APPLICATION:

Primer Coat: 100% Solids Epoxy Primer (Petra BF1 or Petra WH7000) applied at 200-225 sf/gal.

Build Coat: 100% Solids Epoxy (Petra WH7000) applied at 175-200 sf/gal.

Top Coat: Petra Aliphatic Urethane applied at 350-400 sf/gal.

APPLICATION PROCEDURE AND SPREAD RATES

The 20 Mil EPU application should yield a uniform appearance and a nominal 20-22 mil thickness.

1. Prepare substrate (shot blasting or grinding recommended on concrete floors).
2. Thoroughly clean and vacuum concrete after mechanical abrasion.
3. Apply Primer Coat at approximately 200-225 sq. ft. per gallon.
4. Let cure a minimum of 8-10 hours at 70 degrees F.
5. Within 24 hours after prime coat, apply Petra WH7000 build coat at approximately 175-200 sq. ft. per gallon. (Apply thicker build coat for smoother finish).
6. Let cure a minimum of 8-10 hours at 70 degrees F.
7. Within 24 hours after build coat, apply Petra Aliphatic Urethane top coat at 350-400 sf/gal square feet per gallon. For white floors, it is recommended to apply two top coats of Petra's Aliphatic urethane (Extra Hide White) for color consistency.
8. Let cure for 24-48 hours at 70 degrees before heavy traffic.

PHYSICAL CHARACTERISTICS

Compressive Strength.....	9,300 PSI
(ASTM D-695)	
Hardness, Shore D.....	80/75
(ASTM D2240)	
Tensile Strength.....	4,800 PSI
(ASTM D638)	
Tensile Elongation.....	3.1%
(ASTM D638)	
Flexural Strength.....	5,500 PSI
(ASTM D-790)	
Gloss.....	>70
(Glossmeter)	
Bond Strength to Concrete.....	425 PSI concrete fails
(ACI-403)	
Impact Resistance.....	50 inch lbs direct
Electrical Conductivity.....	non-conductive
Abrasion Resistance Taber Abrader.....	avg. 22.0 mg. loss
(CS-17 Wheels, 2000 gm. load, 1000 cycles)	
Application Temperature.....	60-90 deg. F

COLORS:

Standard Colors include Light Gray, Medium Gray and Extra Hide White. Custom colors available, limited to Petra's Aliphatic Urethane Color Chart.

SUBSTRATE PREPARATION

Proper preparation is critical to ensure proper bonding. The substrate must be dry and free of all grease, wax, oils, dirt, loose or foreign materials and laitance. Any loose particles (laitance, unbonded cement, etc.) must be removed by abrasive shot blasting or mechanical scarification. Oil, dirt and other contaminants may be removed by scrubbing with an industrial strength detergent and rinsing with clean water. Substrate must have a sandpaper-like texture after preparation preferably to a CSP 3 - 4 surface texture, and be completely dry. New concrete should be cured for at least 28 days, and tested to ensure moisture content does not exceed 3 lbs per 1,000 sf (using calcium chloride test) or 85% using relative humidity test. If moisture levels exceed the recommended limits, a moisture mitigating primer should be used.

Abbreviated Architectural Specifications

Petra 20 Mil EPU System:

- Nominal 20 Mils
- Pigmented, two Component 100% solids Epoxy System with Aliphatic Urethane Top Coat (Resin Part A, Catalyst Part B),
 - WH7000 Mix Ratio (By volume):
 - 2.5 parts "A" Resin
 - 1 part "B" Catalyst
- Color: Light Gray, Medium Gray, or Extra-Hide White
- Three or 4 coat process.
- Cure Time: 8-10 hours @ 70° F per coat.
- Can be smooth, or non-skid texture based on using Aluminum Oxide powder in Urethane
- Coat Description:
 - 1) Squeegee mixed primer epoxy, part A & B over substrate @ 200- 225 sq. ft. per gallon and back-roll with 3/8" nap roller.
 - 2) Allow to dry 8-10 hours.
 - 3) Within 24 hours of primer application, squeegee mixed WH7000 build coat epoxy, part A & B over substrate @ 175- 200 sq. ft. per gallon and back-roll with 3/8" nap roller.
 - 4) Allow to dry 8-10 hours.
 - 5) Within 24 hours of Build coat application, apply Top Coat of Aliphatic Urethane at 350 - 400 sf/gal. Dip and roll, keeping wet edge for uniform color. Add 8-24 oz/gal of Aluminum Oxide powder for non-skid texture. Higher powder ratio will reduce the level of gloss achieved by urethane.
 - 6) Let Cure 24-48 Hours before traffic.

NOTE:

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