CITADEL®
POLY-2 ULTRA

DESCRIPTION AND USES

Polyurea-2 Ultra is a single component, 100% solids, VOC Compliant, Aliphatic Polyurea that was developed for high gloss UV-stable floor topcoats. This coating provides reliable performance in a wide range of temperatures and climate conditions. Polyurea-2 Ultra has excellent resistance to UV rays, excellent abrasion resistance, and resistance to many of today's harshest chemicals.

Ideal for interior, exterior horizontal and vertical use, Including:

- Heavy traffic areas
- Maintenance facilities
- Offshore platforms
- Industrial shop floors
- Commercial kitchens
- Bathrooms and Lavatories
- Chemical manufacturing plants
- Wastewater treatment applications

PRODUCT FEATURES AND BENEFITS

- Displays excellent adhesion to a variety of properly prepared concrete and coatings.
- 24 hour pot life increases the workability of the coating, providing uniform topcoat applications.
- Provides a glossy smooth finish when cured.
- Excellent chemical and abrasion resistance.
- Emits virtually no odors and can be applied indoors with minimal disturbance to surrounding activities.
- 100% UV-Stable Aliphatic Chemistry
- Versatile, crystal clear topcoat for use on both horizontal and vertical applications.
- Can be used for immersion and non-immersion service. Single component means no possible mixing errors, thus eliminating the human error factor.
- Extended cure time delivers great self-leveling properties and glass-smooth finishes.

PRODUCT

DESCRIPTION	SKU
Clear 2 Gallon Kit	10550

PACKAGING

5 gallon bucket containing two - 1 gallon pouches and two stabilizer shots.

RECOMMENDED PRIMERS

- EP-55
- Hard Surface Primer
- Ultra-Hydro Stop
- Ultra-Hydro Stop H2O
- SLE-100
- Polyurea-350

PRODUCT APPLICATION

READ ALL INSTRUCTIONS CAREFULLY BEFORE STARTING PROJECT

CONCRETE REPAIR

All spalls and cracks must be chased out and repaired to ICRI standards using an appropriate patching material.

SURFACE PREPARATION

The concrete surface must be free of all dirt, grease, oil, fats, and other contamination. Remove surface contamination by cleaning with Krud Kutter® Original Cleaner Degreaser, detergent, or other suitable cleaner. Rinse thoroughly with clean, fresh water and allowed to dry.

NOTE: The substrate must be completely dry prior to application of Polyurea-2 Ultra. Urethane coatings are sensitive to moisture and can affect proper curing of the coating.

NEW, UNCOATED CONCRETE: New concrete must be allowed to cure for a minimum of 30 days before application. In addition to the aforementioned cleaning, the concrete must be further prepared by mechanical grinding or acid etch to remove all laitance and produce a suitable surface profile.

PREVIOUSLY COATED CONCRETE: Previously coated concrete must be in good sound condition with the existing coating tightly adhering to the concrete. In addition to the aforementioned cleaning the existing coating must be sanded to dull the finish and produce a slight surface profile. Remove all sanding dust by vacuum. Do not wipe the floor with denatured alcohol or other solvent. If wiping is necessary, use only urethane grade Methyl Ethyl Ketone (MEK).

MIXING

Both components and environment should be pre conditioned to a minimum of 50º F (10º C) prior to use. Be sure the air and surface temperatures are at least 5º above the dew point. Polyurea-2 Ultra is moisture sensitive, so be sure the outside of the containers are dry and free of condensation.

Shake the container of Stabilized for one full minute before combining with the Polyurea-2 Ultra. The components can be mixed in a separate container or mixed in the gallon pouch. After combining the components, power mix at 500-700 rpm for 2-3 minutes. Use an appropriate size mixer and use care to not entrain air into the coating while mixing. Use within 24 hours after adding stabilizer shot.

Form: ARJ-2139
Rev.: 102220

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PRODUCT APPLICATION (cont.)

EQUIPMENT RECOMMENDATIONS

ROLLER: Use a high quality 3/8 or 1/4 inch lint-free roller with a phenolic core.

BRUSH: Use a disposable natural fiber chip brush, 2-4 inch wide for cut in work.

APPLICATION

Apply only when air, material and floor temperatures are between 50-90°F (10-32°C) and the surface temperature is at least 5°F (3°C) above the dew point. The relative humidity should not be greater than 85%. Do not apply in direct sunlight or when temperature is rising. Be sure the substrate is completely dry.

Pour out only the amount of material to be used into a roller pan. Unused material can be saved in the mixing container for up to 6 months provided it is properly sealed. Do not return unused material from the roller pan to the mixing container.

Use a 3/8 or 1/4 inch, lint free roller with a phenolic core to roll out the coating. Begin with rolling out a W or M pattern, then cross roll to fill in and smooth out the coating.

NOTE: Do not exceed recommended coverage rate, as film defects are possible.

THINNING

Not recommended

CLEAN-UP

Methyl Ethyl Ketone (MEK)

PERFORMANCE CHARACTERISTICS

TEAR STRENGTH (PLI)
METHOD: ASTM 2240
RESULT: 800

ABRASION RESISTANCE
METHOD: ASTM D4060, CS 17 Wheel, 1,000 g load, 1,000 cycles
RESULT: 28 mg loss

FLEXIBILITY, 1/8" MANDERAL
METHOD: ASTM D1737
RESULT: Pass

HARDNESS, SHORE D
METHOD: ASTM D2240
RESULT: 84

IMPACT RESISTANCE
METHOD: ASTM D2794
RESULT: Direct 70 in./lb./ft., Reverse 160

GLOSS
METHOD:ASTM 523 @ 60°
RESULT: 91+

PERMEABILITY- .038 WVT

CHEMICAL RESISTANCE

CHEMICAL	RESULT (77°F/25°C)
Acetic Acid 100%	RC
Acetone	R
Ammonium Hydroxide 50%	RC
Benzene	RC
Brake Fluid	RC
Brine saturated H2O	R
Chlorinated H2O	R
Clorox (10%) H2O	R
Diesel fuel	RC
Gasoline	R
Gasoline/5% MTBE	R
Gasoline/5% Methanol	R
Hydrochloric Acid 20%	R
Hydrofluoric Acid 10%	RC
Hydraulic fluid (oil)	RC
Isopropyl Alcohol	R
Jet Fuel (JP-4)	R
Lactic Acid	RC
MEK	NR
Methanol	R
Methylene Chloride	C
Mineral Spirits	R
Motor Oil	R
MTBE	C
Muriatic Acid 10%	R
NaCl/H2O 10%	R
Nitric Acid 20%	R
Phosphoric Acid 10%	RC
Phosphoric Acid 50%	NR
Potassium Hydroxide 10%	R
Potassium Hydroxide 20%	R, Dis
Propylene Carbonate	RC
Skydrol	RC
Sodium Hydroxide 25%	R
Sodium Hydroxide 50%	R, Dis
Sodium Hypchlorite 10%	RC
Sodium Bicarbonate	R
Stearic Acid	R
Sugar/H20	R
Sulfuric Acid 10%	R
Sulfuric Acid >50%	R
Toluene	R
1, 1,1-Trichlorethane	C
Trisodium Phosphate	R
Vinegar/H2O 5%	R
H2O 14 days @ 82°	R
Xylene	NR

Chemical Resistance: Chart Key

R=recommended/little or no visible damage
RC=recommended conditional/some effect, swelling or discoloration
C=Conditional/Cracking-wash within one hour of spillage to avoid affects
NR=Not recommended
Dis=discolorative

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PHYSICAL PROPERTIES

		POLY-2 ULTRA
Resin Type		Aliphatic Urethane
Weight*	**Per Gallon**	9.7 lbs.
	Per Liter	1.16 kg
Solids By Volume		100%
Volatile Organic Compounds*		<1 g/l*
Practical Coverage Rate		300-400 sq.ft./gal. Coverage rate can vary depending on the texture and porosity of the concrete
Dry Times at 72°F (22ºC) and 50% Relative Humidity†	**Recoat****	4-12 hours***
	Light Traffic	4-6 hours
	Full Traffic	48 hours
Shelf Life		24 months unopened 24 hours once the Stabilizer/Tint has been added
Flash Point		>200°F (93°C)
Safety Information		See SDS

Calculated values are shown and may vary slightly from the actual manufactured material.
† Dry times will be increase if temperatures are less than 65º F (18ºC) and /or Relative Humidity is less than 50%.
* Calculated applied VOC
** As temperature, humidity, and dew points rise, re-coat windows are drastically shortened. Please contact Tech Service for recommended installation practices.
*** If 12 hour recoat time has elapsed, the coating must be sanded prior to recoating.