



**CITADEL® PLE-100 FC  
100% SOLIDS FAST CURE EPOXY**

**DESCRIPTION AND USES**

Citadel® PLE-100 FC is a fast-cure general purpose epoxy that provides outstanding customer value. Its great value, fast dry time, and low odor formulation makes PLE-100 FC ideal for decorative chip and quartz broadcast applications that can be completed in one day.

**PRODUCT FEATURES AND BENEFITS**

- Versatile - Direct to Concrete
- Fast recoat
- Low odor 100% solids
- Moisture tolerant
- Chemical resistant
- Compliant nationwide with near zero VOC

**PRODUCTS**

SKU	DESCRIPTION
393811	Light Gray 3-Gallon Kit
393812	Armor Gray 3-Gallon Kit
393913	Dunes Tan 3-Gallon Kit
393814	Clear 3-Gallon Kit
393815	Custom 3-Gallon Kit*
393838	Clear 15-Gallon Kit*
393839	Light Gray 15-Gallon Kit*
393840	Armor Gray 15-Gallon Kit*
393841	Dunes Tan 15-Gallon Kit*
393842	Custom 15-Gallon Kit*

\*Made-to-Order only. Contact Rust-Oleum Customer Service for details.

**PRODUCT APPLICATION**

**READ ALL INSTRUCTIONS CAREFULLY BEFORE STARTING PROJECT**

**SURFACE PREPARATION**

**NEW CONCRETE:** Laitance must be removed by diamond for a minimum of 28 days. The concrete must be structurally sound, dry, and free of grease, oils, dust, curing compounds and other coatings or contaminants. Surface laitance must be removed. The preferred method of surface preparation is to mechanically abrade the floor by diamond grinding or shotblasting to achieve a final CSP-3 according to ICRI. If patching is required, use Fortification Formula concrete repair.

**PRODUCT APPLICATION (cont.)**

**SURFACE PREPARATION (cont.)**

**MOISTURE VAPOR BARRIER:** A suitable moisture barrier must be in place for concrete slabs on-grade. If a moisture barrier is not in place, seasonal variations in ground moisture can cause excessive moisture vapor transmission (MVT) regardless of results measured prior to coating application. For 16 mils of PLE-100 FC, the MVT rate must not exceed 10 pounds per 1,000 square feet per 24 hours, as directed by ASTM F1869. The relative humidity (RH) of the slab must not exceed 80%, as directed by ASTM F2170. If there is a moisture situation in excess of the above rate, the use of Citadel Ultra Hydro Stop Moisture Vapor Barrier Primer may be required. Consult a Citadel Representative for details.

**PREVIOUSLY COATED:** Previously coated surfaces must be sound and in good condition. Smooth, hard, or glossy finishes should be scarified by sanding or sweep blasting to create a surface profile. PLE-100 FC is compatible with most coatings, but a test patch is suggested.

**NOTE:** Concrete must be visibly dry at time of application.

**MIXING EQUIPMENT**

Low speed drill and spiral mixing wand. Must pre-mix prior to use.

**Important:** Hand mixing will produce inconsistent results and is not an approved method.

**Note:** 3-gallon kits are packaged in Citadel's new and exclusive All-In-One packaging. Both A and B components are shipped together inside an outer 5-gallon pail that can be used for combining both components at the application site. For best results use narrow spiral paint mixer (SKU:388011) to premix individual components within the 3-gallon kits.

**MIXING**

**Note:** Before starting, ensure that the material, concrete surface, and the ambient air are all at 40-90°F. Mixing ratio is 2 parts by volume of Part A to 1 part by volume of part B.

Pre-mix both A and B sides prior to combining.

Add part "A" to the mixing container.

Add part "B" to the mixing container and mix for 3 minutes.



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**PRODUCT APPLICATION (cont.)**

**TINTING (Clear)**

Pre-mix Universal Tint Packs prior to adding into floor coatings. Add Universal Tint Packs at 8 oz. per gallon of mixed floor coating material and combine thoroughly via power mix to achieve uniform colorant dispersal.

**Note:** Some colors, including safety colors, may require additional coats if desired coverage is not achieved in the first application.

**\*NOT FOR USE IN WATER BASED COATINGS\***

**APPLICATION EQUIPMENT**

24" notched squeegee  
18" short nap lint free roller

**APPLICATION**

Mix only what you can squeegee and back roll within 15 minutes (approximately 1 gallon of mixed material per crew of two applicators wearing spiked shoes). Do not aerate the mix.

Before starting, ensure that the material, concrete surface, and the ambient air are all at 40-90°F. Do not apply in direct sunlight or when temperature is rising. Wearing spiked shoes, immediately pour mixed PLE-100 FC on the floor in ribbons. Spread using a squeegee and then back roll using a short nap lint-free roller.

If priming is required, PLE-100 FC can be thinned up to 10% by volume with xylene and squeegeed tight to help fill small voids. Refer to recoat window below for best practice when abrading and/or applying subsequent coats.

**CLEAN UP**

Clean Tools and application equipment immediately after use with active solvent like xylene (in SCAQMD use acetone only). Clean spills or drips while still wet with solvent. Dried product will require mechanical abrasion for removal.

**LIMITATIONS**

Do not apply if water or ice is present. Lower temperatures will slow cure time. Do not store PLE-100 FC at temperatures below 40°F or above 90°F. PLE-100 FC will yellow upon prolonged exposure to sunlight or high intensity artificial lights.

**PERFORMANCE CHARACTERISTICS**

**COMPRESSIVE STRENGTH**

METHOD: ASTM C695  
RESULT: 7,500 psi @ 24 hours and 9,800 psi @ 7 days

**TENSILE STRENGTH**

METHOD: ASTM D412  
RESULT: 4500-5200 psi

**BOND STRENGTH TO CONCRETE**

METHOD: ASTM D4541  
RESULT: >600 psi

**TABER ABRASION**

METHOD: ASTM 4060, CS 17  
RESULT: Loss/1000 cycles = 36 mg.

**FLAMMABILITY**

METHOD: ASTM D635  
RESULT: Self-extinguishing

**WATER ABSORPTION (24 HOURS)**

METHOD: ASTM D570  
RESULT: <0.5%

**KONIG HARDNESS**

METHOD: ASTM D4366  
RESULT: 120

**TENSILE ELONGATION %**

METHOD: ASTM D638  
RESULT: 20-30%

**MONOLITHIC SURFACING**

METHOD: ASTM C722  
RESULT: Pass

**IMPACT RESISTANCE**

METHOD: ASTM D2794  
RESULT: Pass



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**CHEMICAL RESISTANCE**

<b>CHEMICAL</b>	<b>RESULT</b>
Acetic Acid 100%	Y
Acetone	N
Ammonium 30%	Y
Ammonium Hydroxide 30%	Y
Animal Urine	S
Antifreeze	Y
Benzyl Alcohol	S
Brake Fluid	Y
Calcium Hypochlorite (Chlorine)	Y
Chromic Acid 10%	Y
Citric Acid 10%	Y
Clorox	Y
Ethyl Acetate	N
Gasoline	Y
Glycol Ether	N
Hydraulic Fluids	N
Hydrochloric Acid 35%	Y
Hydrofluoric Acid 40%	N
Hydrogen Peroxide 30%	S
Iodine 2%	Y
MEK	N
Methanol	N
Methyl Cellosolve	N
Methylene Chloride	N
Mineral Spirits	S
Motor Oil	Y
Mustard	N
Nitric Acid 20%	S
Nitric Acid 40%	N
Orange Juice	Y
Phosphoric Acid 10%	Y
Phosphoric Acid 30%	S
Phosphoric Acid 50%	S
PM Solvent	Y
Silver Nitrate 20%	Y
Skydrol	S
Sodium Hydroxide 50% (Caustic Soda)	Y
Sodium Hypochlorite 15% (Bleach)	Y
Sodium Hypochlorite 50% (Bleach)	N
Sulfuric Acid 10% (Battery Acid)	Y
Sulfuric Acid 50% (Battery Acid)	Y
Toluene	N
Trichloroethylene (1, 1,1)	S
Trichloroethylene	N
Windshield Wiper Fluid	Y
Xylene	S

**Chemical Resistance: Chart Key**

Y= Resistant  
S= Splash & Spill  
N=Not recommended



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**PHYSICAL PROPERTIES**

		PLE-100 FC 100% SOLIDS FAST CURE EPOXY
<b>Resin Type</b>		Amine cured Epoxy
<b>Pigment Type</b>		Varies depending on color
<b>Weight</b>	<b>Per Gallon</b>	8.4-10.4 lbs.
	<b>Per Liter</b>	1.0-1.3 kg
<b>Solids</b>	<b>By Weight</b>	100%
	<b>By Volume</b>	100%
<b>Volatile Organic Compounds*</b>		<50 g/l
<b>Recommended Dry Film Thickness (DFT) Per Coat</b>		8-16 mils
<b>Recommended Wet Film Thickness (WFT) Per Coat</b>		8-16 mils
<b>Practical Coverage (assume 15% material loss)</b>		100-200 sq. ft./gal. Coverage rates will vary based on application method.
<b>Mixing Ratio</b>		2A: 1B
<b>Working Time</b>		15 minutes (Mix and empty bucket immediately)
<b>Re-Coat Window (Min./Max)</b>		3 hours/8 hours, scuff sand after 8 hours
<b>Dry Times at 77°F (25°C) and 50% Relative Humidity</b>	<b>Tack Free/Recoat</b>	3 hours
	<b>Vehicle Traffic</b>	24 hours
	<b>Full Cure**</b>	7 days
<b>Shelf Life</b>		2 years
<b>Flash Point</b>		>200°F (93°C)
<b>Safety Information</b>		<b>PROTECT FROM FREEZING</b> For additional information, see SDS

\*EPA Method 24 Floor Category

\*\*Coating achieves its full physical and chemical resistant properties.

Calculated values are shown and may vary from the actual manufactured material.

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