CITADEL

PLE-100

100% SOLIDS GENERAL PURPOSE EPOXY

DESCRIPTION AND USES

Citadel® PLE-100 General Purpose Epoxy is an epoxy-based coating system that provides outstanding customer value. Its great value, slower dry time, and low odor formulation makes PLE-100 General Purpose Epoxy ideal for larger indoor application areas.

PRODUCT FEATURES AND BENEFITS

- Versatile - Direct to Concrete
- Low odor 100% solids
- Tenacious adhesion
- Chemical resistant
- Compliant nationwide with near zero VOC

PRODUCTS

SKU	DESCRIPTION
388944	Light Gray 3-Gallon Kit
382563	Light Gray 15-Gallon Kit
388945	Armor Gray 3-Gallon Kit
382564	Armor Gray 15-Gallon Kit
388946	Dunes Tan 3-Gallon Kit
382566	Dunes Tan 15-Gallon Kit*
388947	Clear 3-Gallon Kit
382562	Clear 15-Gallon Kit*
388948	Custom 3-Gallon Kit
382565	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. Rising moisture vapor emission rate must not exceed 3 lb. per 1000 sq. ft. over a 24-hour period as measured by calcium chloride test method ASTM F-1869. The preferred method of surface preparation is to mechanically abrade the floor by diamond grinding to achieve a final #80-#120 grit finish, reference profile CSP-2 according to ICRI. If patching is required, use Fortification Formula concrete repair.

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 General Purpose Epoxy is compatible with most coatings, but a test patch is suggested.

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

PRODUCT APPLICATION (cont.)

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 50-90°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.

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 30-45 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 50-90°F. Do not apply in direct sunlight or when temperature is rising. Wearing spiked shoes, immediately pour mixed PLE-100 General Purpose Epoxy 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 General Purpose Epoxy 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.

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PRODUCT APPLICATION (cont.)

CLEANUP

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 General Purpose Epoxy at temperatures below 50°F or above 95°F. Do not apply to slabs on grade unless a heavy uninterrupted vapor barrier has been installed under the slab. Do not apply PLE-100 General Purpose Epoxy if the floor is subject to moisture vapor drive or hydrostatic pressure. PLE-100 General Purpose Epoxy 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

CHEMICAL RESISTANCE

CHEMICAL	RESULT
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

EPOXY	TECHNICAL DATA	CDL-29

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PHYSICAL PROPERTIES

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Resin Type		Epoxy Amine
Pigment Type		Varies depending on color
Weight	**Per Gallon**	8.5-10.8 lbs.
	Per Liter	1.0-1.3 kg
Solids	**By Weight**	100%
	By Volume	100%
Volatile Organic Compounds*		<10 g/l
Recommended Dry Film Thickness (DFT) Per Coat		8-16 mils
Recommended Wet Film Thickness (WFT) Per Coat		8-16 mils
Practical Coverage (assume 15% material loss)		100-200 sq. ft./gal. Coverage rates will vary based on application method.
Mixing Ratio		2A: 1B
Pot Life		30-35 minutes
Re-Coat Window (Min./Max)		12 hours/24 hours
Dry Times at 77°F (25ºC) and 50% Relative Humidity	**Touch**	4-6 hours
	Vehicle Traffic	48-72 hours
	Full Cure**	7 days
Shelf Life		5 years
Flash Point		>200°F (93°C)
Safety Information		**PROTECT FROM FREEZING** 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.