



FC-900 HD EPOXY MORTAR

DESCRIPTION AND USES

Citadel® FC-900 HD Epoxy Mortar floor topping is a three-component formulation of epoxy resin polymer, polyamine curative and carefully blended aggregate. An attractive, highly abrasion resistant, long lasting, and easily maintained floor used to resurface spalled concrete deteriorated by physical abuse and in new construction to prevent rapid physical deterioration of concrete floors.

FC-900 HD is a 3/16-to-1/4-inch floor topping that is easily applied. A screed box is used to place material at the desired thickness and a power or hand trowel are required to finish. FC-900 HD is designed to meet a wide variety of industrial flooring needs where abrasion and impact resistance are required and is suitable for food and beverage facilities.

This product is typically installed by factory trained contractors. Be sure you are fully aware of all application procedures and have all the required equipment available prior to beginning the installation of this product.

PRODUCT FEATURES AND BENEFITS

- Heavy load capacity: FC-900 HD has 2 to 3 times the load carrying capacity of concrete and is tough enough to resist the most severe traffic for long lasting service.
- Monolithic: It's monolithic construction provides a seamless wall-to-wall floor.
- Rapid turnaround time: At application temperatures above 65°F, FC-900 HD can support foot traffic in 6-8 hours, with full physical use in 12-24 hours, and full chemical exposure in 4 days.
- Sanitary: In combination with the Concrete Saver Floor Coatings, FC-900 HD has extremely high density that resists gritting and traffic soil, will not hold odors, will not dust and is easily mopped clean or hosed off.
- Fire resistant: FC-900 HD is a naturally fire-resistant material due to the high percentage of mineral aggregate contained in the product.
- Suitable for food and beverage facilities when coated with Citadel Epoxy Floor Coatings as a seal coat.
- Cove base: PLE-100 CB provides a continuous monolithic transition from the floor to the wall.
- Typical areas of FC-900 HD applications: Warehouse, manufacturing, laboratories, electronics plants, and spalled concrete.

PRODUCTS

Custom colors are available upon request. Refer to the Citadel color chart. Product codes listed below are 200 sq. ft. Kits. Aggregate is sold separately.

SKU	DESCRIPTION (200 sq. ft. Kit)
404409	Armor Gray
404410	Dunes Tan
404411	Light Gray
404412	Super Light Gray*
404413	Dark Gray*
404414	Navy Gray*
404415	Safety Red*
404416	Safety Yellow*
404417	Tile Red*
404418	Safety Blue*
404419	Safety Green*
404420	Silver Gray*
404421	Greige*
404422	Safety Orange*
404423	White*
404424	Black*
404425	Custom*

SKU	DESCRIPTION (37 lb. bag)
236747	FC-900 HD Aggregate

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

PACKAGING

KIT SIZE	Part A	Part B	Part C
200 sq. ft.	5 gal.	1 gal.	11 bags†

†Sold separately.

COMPANION PRODUCTS

- FC-900 HD Primer - 407882
- PLE-100 S/OP General Purpose Epoxy
- CRE-820 S Chemical Resistant Epoxy
- NVE-830 S Novolac Epoxy

TEXTURE

A variety of surface textures can be achieved by using the Citadel Floor Coatings. Contact your flooring specialists or Tech Services for more information. Refer to the FC-900 HD Application Guide for more information on textures.



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PRODUCT APPLICATION

SURFACE PREPARATION

NEW CONCRETE: Laitance must be removed by grinding or shot blasting. On concrete that has been cured with curing compounds or has had a hard steel trowelled finish, shot blasting, sandblasting or other methods of mechanical preparation will be required. New concrete should be cured for a minimum period of 10 days at 70°F prior to application.

EXISTING CONCRETE: Concrete must be clean and sound. Old coatings and toppings must be removed. Concrete must be clean and free of previous coatings, oil, wax, paint, and other contaminants. The surface of the concrete must be clean and properly profiled to enable the coating to achieve maximum bond. Water soluble contaminants can be hosed off with water. Some water insoluble materials are difficult to remove and may require sandblasting, scabbling, or other methods of removal.

For either new or existing concrete, when preparation is complete, the surface texture should be similar to 60-80 grit sandpaper or ICRI CSP #5.

Concrete must be visibly dry at time of application.

PRIMER

FC-900 Primer is applied to the prepared concrete surface using a rubber squeegee and back rolled with a 1/4- or 3/8-inch nap roller. Rate of application will vary depending on the surface texture and porosity. A typical application rate is 160 square feet per gallon. The primer should not be allowed to "set" prior to the placement of FC-900 HD. At 75°F, working time will be approximately 2 to 3 hours. If the primer sets prior to application of FC-900 HD, re-prime the area.

For more detailed information on priming, refer to CDL-XX FC-900 Primer technical data sheet.

MIXING EQUIPMENT

2.5 to 3.0 cubic foot mortar mixer.

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

MIXING

Note: Before starting, ensure that the material, concrete surface, and the ambient air are all at 65-90°F. Mixing ratios are provided on container labels and on page 4.

Part "A" preparation: Premix part A to disperse pigment to ensure consistent color. Add part "A" (resin) to the mixer. Mix only long enough to clean the mixer from the previous batch, about 30 seconds.

Add part "B" (hardener) to part "A". Mix for 45 seconds to ensure complete mixing.

Add part "C" (aggregate) to parts "A" and "B". Mix for an additional minute. The aggregate must be mixed until completely wetted out by the resin.

PRODUCT APPLICATION (cont.)

THINNING

No thinning required.

FILLING AND PATCHING

When filling or patching holes or voids in the concrete surface prior to the actual application, use the same procedures as above with the following exceptions: add part "C" directly to the mix before pouring. TurboKrete or Fortification Formula may also be used.

APPLICATION EQUIPMENT

Screed box, hand trowel or power trowel.

APPLICATION

To achieve a 1/4-inch thickness, the mortar is loosely placed at a thickness of 5/16 inch. For a 3/16-inch thickness, the mortar is loosely placed at a thickness of 1/4 inch. After screed placement, the mortar needs to be finished using a handheld steel finishing trowel or a specially designed power trowel. After a 6 to 8-hour cure, light surface grinding or sanding may be done prior to sealing to remove any rough areas or debris. FC-900 HD must be sealed with Citadel PLE-100 OP 100% Solids General Purpose Epoxy Floor Coating - Orange Peel Finish before applying any other coatings.

For more detailed information on PLE-100 OP, see CDL-XX PLE-100 OP technical data sheet or contact your flooring specialists or Tech Services.

CLEAN UP

Xylene can be used to remove material from equipment if it is cleaned before the material has started to set up. Otherwise, stronger solvents will be necessary.

SHELF LIFE

Unopened, properly stored containers: 5 years

SAFETY

FC-900 HD contains amine curing agents. Avoid skin contact by using protective clothing and gloves. In case of eye contact or ingestion, contact a physician immediately. FC-900 HD is intended for industrial use only. This product should not be used by untrained or non-professional personnel.

SAFETY DATA SHEETS

The Safety Data Sheets can be found at www.rustoleum.com. It is strongly recommended that the Safety Data Sheets be read by all persons handling FC-900 HD.



FC-900 HD EPOXY MORTAR

PERFORMANCE CHARACTERISTICS

COMPRESSIVE STRENGTH

METHOD: ASTM C579
TYPICAL VALUE: 10,000 psi

FLEXURAL STRENGTH

METHOD: ASTM C580
TYPICAL VALUE: 3,150 psi

MODULUS OF ELASTICITY

METHOD: ASTM C580
TYPICAL VALUE: 500,000 psi

TENSILE STRENGTH

METHOD: ASTM C307
TYPICAL VALUE: 2,200 psi

BOND STRENGTH TO CONCRETE

METHOD: ASTM D4541
TYPICAL VALUE: Exceeds tensile strength of concrete
(concrete fails first)

TABER ABRASION

METHOD: ASTM 4060, CS 17
TYPICAL VALUE: Loss/1000 cycles = 30 mg.

WATER ABSORPTION

METHOD: ASTM C413
TYPICAL VALUE: 0.10% maximum

LINEAR SHRINKAGE

METHOD: ASTM C531
TYPICAL VALUE: 0.05% maximum

LINEAR COEFFICIENT OF THERMAL EXPANSION

METHOD: ASTM C531
TYPICAL VALUE: 3.4×10^{-5} in./in./°F

FLAMMABILITY

METHOD: ASTM D635
TYPICAL VALUE: Self extinguishing

IMPACT RESISTANCE

METHOD: Mil-D-3134J
TYPICAL VALUE: Satisfactory per 3.15

COEFFICIENT OF FRICTION

METHOD: ASTM D2047
TYPICAL VALUE: 0.60 minimum unglazed

FILM HARDNESS, SHORE D

METHOD: ASTM D2240
TYPICAL VALUE: 85

	TECHNICAL DATA	CDL-67
 CITADEL	FC-900 HD EPOXY MORTAR	

PHYSICAL PROPERTIES

		FC-900 HD
Resin Type		Epoxy
Pigment Type		Varies depending on color
Weight*	Per Gallon	9.3 lbs.
	Per Liter	1.11 kg
Solids*	By Weight	100%
	By Volume	100%
Volatile Organic Compounds*		<25 g/l (0.2 lbs./gal.)
Recommended Dry Film Thickness (DFT) Per Coat		250 mils (1/4" thickness)
Wet Film to Achieve DFT		250 mils (1/4" thickness)
Practical Coverage at Recommended DFT		18 square feet per gallon at 1/4" thickness
Mixing Ratio		5 : 1 base to activator by volume
Induction Period		None
Pot Life @ 70-80°F (21-27°C) & 50% Relative Humidity		20 minutes
Dry Times at 70-80°F (21-27°C) and 50% Relative Humidity	Foot Traffic	6-8 hours
	Vehicle Traffic	12-24 hours
	Full Cure**	4-5 days
Shelf Life		5 years
Flash Point		>185°F (85°C)
Safety Information		SEE THE PRODUCT SAFETY DATA SHEET (SDS) AND LABEL WARNINGS FOR ADDITIONAL SAFETY INFORMATION

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

*Activated material

**Coating achieves its full physical and chemical resistant properties

The technical data and suggestions for use contained herein are correct to the best of our knowledge, and offered in good faith. The statements of this literature do not constitute a warranty, express, or implied, as to the performance of these products. As conditions and use of our materials are beyond our control, we can guarantee these products only to conform to our standards of quality, and our liability, if any, will be limited to replacement of defective materials. All technical information is subject to change without notice.