



## RESTOKRETE® SUBSTRATE RESURFACER No. F-121

RestoKrete® SubstrateResurfacer No. F-121 by Sauereisen is a high strength, substrate repair material designed for an economical repair where deterioration is greater than small voids, bug holes and irregularities in concrete or brick substrates. No. F-121 repair material is designed as a water resistant barrier to aid in the prevention of inflow and infiltration.

RestoKrete® SubstrateResurfacer - a portland cement-based material, is used where the surface integrity needs to be restored. No. F-121 Resurfacer is proven in many types of brick and concrete structures in various industries, including wastewater environments.

### CHARACTERISTICS

- o Pumpable and sprayable.
- o Economical.
- o Moisture tolerant.
- o Applied by spincast/spray.
- o Safe to use, non-toxic.
- o Trowelable

### AREA PREPARATION

#### Temperature of Working Area

The substrate should be maintained at 50°F to 80°F for 48 hours prior to beginning work.

At temperatures below 50°F, the application becomes more difficult and curing is retarded.

Above 85°F, the material working time decreases. It is recommended that the material components be stored in a cooler area prior to mixing.

#### Anchoring System

When No. F-121 is applied on a vertical surface at a thickness greater than 1 inch it must be reinforced or anchored. "T" type anchors or 2 inch x 2 inch mesh are suitable to secure the No. F-121 material.

### PHYSICAL PROPERTIES

(At seven days, unless noted otherwise)

Bond strength by Slant Shear (ASTM C-882)	2,200 psi (154.9 kg/cm <sup>2</sup> )
Compressive strength (ASTM C-109)	
@ 24 hours	3,900 psi (274.2 kg/cm <sup>2</sup> )
@ 7 days	5,000 psi (351.5 kg/cm <sup>2</sup> )
@ 14 days	5,500 psi (386.7 kg/cm <sup>2</sup> )
@ 28 days	7,000 psi (492.1 kg/cm <sup>2</sup> )
Density (ASTM C-20)	137 pcf (2.19 gm/cm <sup>3</sup> )
Flexural strength (ASTM C-580)	1,500 psi (105.5 kg/cm <sup>2</sup> )
Freeze Thaw (ASTM C-666 Method A)	100 cycles: Durability factor >78
Mix ratio	6.25 to 1, by weight
Tensile strength (ASTM C-307)	822 psi (57.78 kg/cm <sup>2</sup> )

Physical properties were determined on specimens prepared under laboratory conditions using applicable ASTM procedures. Actual field conditions may vary and yield different results; therefore, data are subject to reasonable deviation.

Consult Sauereisen for applications on overhead surfaces for recommendations on required thickness, reinforcement and anchoring systems.

#### Surface Preparation

Concrete - Refer to SSPC-SP13/NACE 6 "Surface Preparation of Concrete" guidelines. Surface should be profiled to an ICRI CSP 4-6 per ICRI 310.2.

Surfaces should be made free of oil, grease, water, and other contaminants that may inhibit bond.

Concrete must be firm and structurally sound as specified by the architect/engineer.

Hydroblasting or abrasive blasting should be utilized to remove laitance, contaminants, or loose particles and to produce a clean hard surface. All standing surface water should be removed prior to applying RestoKrete® SubstrateResurfacer No. F-121.

To ensure maximum adhesion and to prevent dehydration of No. F-121 at the substrate interface, the concrete should be thoroughly dampened with water prior to application.

If concrete cannot be dampened or an unusual stress condition exists, a concrete bonding agent is recommended. Consult Sauereisen for recommendations.

### APPLICATION

#### Mixing

Mixing should be done mechanically with a slow speed mortar mixer or drill motor with a "Jiffy" type mixing blade to obtain a uniform consistency. The mixing equipment must be clean and free of contaminants.

Sauereisen recommends that powder and water ratios are accurately weighed prior to mixing. For every 50 lb. bag of powder, the appropriate amount of water is 8 lbs. If water must be measured in the field by volume, the approximate amount per 50 lb. bag of powder is in the range of 0.962 gallons or 7.7 pints(124 ounces). The approximate mixing time for this mixture is 5 minutes.

Mix only as much RestoKrete® SubstrateResurfacer No. F-121 material that can be applied in 15-20 minutes. Do not retemper by adding more water and remixing. Material that has hardened due to delay in placing must be discarded.

## APPLICATION

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### Installation

When using a lightweight mobile rotor-stator pump, apply a uniform coat to a minimum thickness of 1/8 inch. The following equipment is typical for rotary sprayed applications of substrate resurfacing materials:

**Rotor/Stator Pump** outfitted with an appropriate spincaster nozzle with internal air motor for rotary spray applications. For straight shot applications, use a pole gun with aluminum spray head.

**Moisture Separator** for collecting condensation within air lines.

**Material Hose** of 1-1/4 to 1-1/2 inch diameter and 15 feet length with internal expanded male ends and cam locks, with capacity of 300 psi required.

**Air Hose** of 1/2 inch diameter and 50 feet length from compressor to wet spray nozzle. Specify 200 psi and 2 lug Chicago fittings.

**Air Hose** of 1/2 inch diameter and 15 feet length from Moisture Separator to Spinning Nozzle Assembly. Specify 200 psi capacity with one end Chicago fitting and one end brass female swivel.

**Cam-Lock Couplings** of 1 inch and 3/4 inch diameter (2 sets each).

### Miscellaneous Parts

- \* 3/16 inch hardened steel tip
- \* Tip retainer nut
- \* Pole gun assembly

### Other Outside Source Equipment

- \* 180 cfm Air Compressor
- \* 5500 watt Generator with 220 volt single phase

## FINISHING

If Sauereisen RestoKrete® Substrate Resurfacer No. F-121 is applied by trowel, finishing after material placement is recommended. In this case, apply a broom or brush finish to provide a more desirable bonding surface.

Such a surface texture is desired for spin-cast applications as well. Finish in a similar manner if necessary, take care not to disrupt the sprayed thickness.

## COVERAGE

When mixed at the proper ratio of powder and water, a bag of RestoKrete® Substrate Resurfacer No. F-121 will yield the following:

- 0.423 ft<sup>3</sup> per bag.
- 40 ft<sup>2</sup> per bag at 1/8 inch thickness.
- 20 ft<sup>2</sup> per bag at 1/4 inch thickness.
- 10 ft<sup>2</sup> per bag at 1/2 inch thickness.

## CLEAN-UP

All equipment should be cleaned by scrubbing with a stiff brush and water at the end of each working period or when build-up becomes pronounced.

## SETTING/CURING

Proper curing of No. F-121 is critical to the serviceability of the completed structure. No. F-121 may be top coated after it's initial set in 8 hours at 70°F. Final set is achieved at 24 hours at 70°F.

RestoKrete® F-121 must be properly cured in a high humidity environment (fog spray or equivalent). A Sauereisen curing compound may be utilized. If special condition exists, please consult Sauereisen's technical service department for additional information.

## PACKAGING

RestoKrete® No. F-121 is packaged in 50 pound moisture-resistant bags on plastic wrapped pallets.

## SHELF LIFE

Sauereisen RestoKrete® Substrate Resurfacer No. F-121 has a shelf life of twelve (12) months when stored unopened in a dry location at 70°F. If there is a doubt as to the quality of the materials, consult a Sauereisen representative.

## CAUTION

Consult Material Safety Data Sheets and container label Caution Statements for hazards in handling these materials.

## WARRANTY

We warrant that our goods will conform to the description contained in the order, and that we have good title to all goods sold. WE GIVE NO WARRANTY, WHETHER OF MERCHANTABILITY, FITNESS FOR PURPOSE OR OTHERWISE, EXPRESS OR IMPLIED, OTHER THAN AS EXPRESSLY SET FORTH HEREIN. We are glad to offer suggestions or to refer you to customers using Sauereisen cements and compounds for a similar application. Users shall determine the suitability of the product for intended application before using, and users assume all risk and liability whatsoever in connection therewith regardless of any suggestions as to application or construction. In no event shall we be liable hereunder or otherwise for incidental or consequential damages. Our liability and your exclusive remedy hereunder or otherwise, in law or in equity, shall be expressly limited to our replacement of non-conforming goods at our factory or, at our sole option, to repayment of the purchase price of non-conforming goods.

o Information concerning government safety regulations available upon request.

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160 Gamma Drive  
Pittsburgh, PA 15238-2989 USA  
Phone 412.963.0303 Fax 412.963.7620  
www.sauereisen.com