



## SEWERSEAL™ NO. F-170FS (Fast Set)

Sauereisen SewerSeal™ No. F-170FS is a fast setting cementitious calcium aluminate repair mortar for use in wastewater collection and treatment systems. It develops strength very rapidly and is primarily used as a deep patch repair material or as a restoration lining. No. F-170FS combines 100% calcium aluminate cement with finely graded inert aggregate, thereby offering notable corrosion resistance to mild acids and alkalis.

No. F-170FS repairs and seals deteriorated masonry, brick and concrete surfaces. Typical applications include manhole walls, benches and channels, as well as wet well, lift station and pump station surfaces and other structures common to municipal wastewater. This product exhibits high strength quickly to withstand loads imposed upon underground infrastructure.

### CHARACTERISTICS

- o Rapid setting formulation-allows for faster turn around
- o Moisture tolerant
- o Corrosion resistant
- o Fiber reinforced for added durability

### AREA PREPARATION

#### Temperature of Working Area

Maintain a temperature of 50° - 90°F on air, substrate and material during mixing, application and cure.

At temperatures below 65°F, curing is slower. Above 80°F, the working time decreases.

#### Surface Preparation

The first step in any masonry rehabilitation is proper preparation of the substrate. For concrete substrates refer to SSPC-SP13/NACE 6 "Surface Preparation of Concrete" for detailed guidelines.

### PHYSICAL PROPERTIES

Compressive strength (ASTM C109)	
1 hour	1,500 psi (105.44 kg/cm <sup>2</sup> )
24 hours	2,000psi (140.60 kg/cm <sup>2</sup> )
7 days	3,200psi (224.96 kg/cm <sup>2</sup> )
Final Set @ 70°F	2-1/2 hours
Initial Set @ 70°F	20-30 minutes
Mix ratio (powder to water, by weight)	7.1 to 1
Shear bond strength @ 28 days (ASTM C882)	1600 psi (112.3 kg/cm <sup>2</sup> )
Shrinkage (ASTM C596 @ 80% R.H.)	
7 days	0.01%

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 is subject to reasonable deviation.

In order for any material to adhere, the substrate must be clean and free of all contaminants. Surfaces which are contaminated with oils or grease must be chemically cleaned or scarified to remove contaminants prior to beginning recommended surface preparation

All chemicals, debris, and loose concrete must be removed. The recommended method of surface preparation is hydroblasting or sandblasting.

The preparation must remove all laitance, contaminants or loose particles to produce a clean hard surface. All standing surface water should be removed prior to applying the F-170FS. To ensure maximum adhesion and to prevent dehydration of the No.F-170FS at substrate interface, the concrete should be thoroughly dampened with water prior to application.

Once the substrate has been properly prepared, active water leaks should be stopped with either Sauereisen InstaPlug F-180 or Hydroactive Polyurethane Grout F-370.

### APPLICATION

#### Mixing

Mixing should be done mechanically with a drill motor with a "Jiffy" type mixing blade to obtain a uniform consistency. Alternatively, mixing may also be done by hand with a trowel or a spade in a suitable container. The mixing equipment must be clean and free of contaminants. Batch size will be governed by the area to be covered, the number of workers applying the material, temperature of the area, and the speed with which it can be placed. Do not mix more material at one time than can be placed in approximately 10-15 minutes. The material should be mixed in a clean mixing vessel or bucket.

Sauereisen recommends that powder and water ratios are accurately measured prior to mixing. When water is measured in the field by volume, the approximate amount per 50-lb.bag of powder is in the range of 106 - 122, fluid ounces (3.25 - 3.75 quarts or 3.1 - 03.6 liters).

Pour the entire amount of potable water into the mixing container and add the powder slowly, mixing continuously to avoid entrapped air. Mix slowly and thoroughly for 5 minutes to a uniform consistency. Inadequate mixing or addition of more water will decrease physical properties and may cause cracking, excessive shrinkage and disbondment.

## INSTALLATION

The mix should be placed by hand or trowel. If the repair is to be top coated do not finish the surface smooth, but leave a broom or raked finish. If the repair is to be left uncoated, a smooth trowel finish can be applied.

## SETTING/CURING

Proper curing of No. F-170FS is critical to the serviceability of the completed structure. No. F-170FS has an initial set in 20-30 minutes at 70°F. A final set is achieved in 2 1/2 hours at 70°F (ASTM C-403).

No. F-170FS may be top coated with a SewerGard™ lining system after 3 hours at 70°F.

## COVERAGE

When mixed at the proper ratio of powder and water, a bag of No. F-170FS will yield the following:

0.42ft<sup>3</sup> per 50 lb. bag -OR- 10 ft<sup>2</sup> per bag at 1/2-inch thickness, or 5 ft<sup>2</sup> per bag per inch of thickness for deep patching.

## CLEAN-UP

Clean all tools as soon as possible after mixing and application with a stiff brush and clean water. The material will set up very quickly and become more difficult to remove from the tools after final set.

## PACKAGING

No. F-170FS is packaged in 50 lb. moisture resistant bags.

## SHELF LIFE

Sauereisen SewerSeal™ No. F-170FS has a shelf life of one (1) year when stored in unopened bags 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 Safety Data Sheet and bag 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 **Distributors and agents in major cities throughout the world. Consult manufacturer for locations.**
- o **Information concerning government safety regulations available upon request.**
- o **Sauereisen also produces inorganic compounds for assembling, sealing, electrically insulating and grouting.**

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