# SEWERGARD® 210FS – TROWELABLE FAST SET

## PHYSICAL PROPERTIES

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|---|---|
| Application time (ASTM C-308 modified) | |
| Working time at 70°F | 20 minutes |
| Initial set at 70°F | 2 hours |
| Components | 3 parts |
| Bond strength to concrete (ASTM D 7234) | Concrete failure |
| Compressive strength (ASTM C-579) | 12,300 psi (863.4 kg/cm$^2$) |
| Density (ASTM C-905) | 123 pcf (1.97 gm/cm$^3$) |
| Flexural strength (ASTM C-580) | 7,200 psi (506.3 kg/cm$^2$) |
| Maximum service temperature (continuous) | 150°F (65°C) |
| Moisture absorption (ASTM D-570-95) | < 0.04% |
| Tensile strength (ASTM C-307) | 2,900 psi (205.5 kg/cm$^2$) |
| Thickness | 1/8 inch (3.175 mm) |

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.

## CHARACTERISTICS

- Fast set allows rapid return to service Resistant to corrosive conditions common to the municipal wastewater ~~industry~~
- Suitable for application over damp or dry concrete surfaces
- Trowelable, non-sag consistency ensures ease of application on vertical and overhead surfaces
- Does not require a primer
- Prohibits water infiltration
- Can be finished with water-moistened roller

Sauereisen SewerGard® 210FS is a fast-setting three-component epoxy material for use in municipal wastewater environments. This lining protects concrete surfaces from chemical attack and physical abuse. It is particularly useful for protection of manhole benches, inverts and other structures subject to short maintenance downtimes.

SewerGard® 210FS has non-sag application properties that permit vertical and overhead applications. When cured, 210FS provides an impermeable, high strength, corrosion- resistant lining.

## AREA PREPARATION

**Temperature of Working Area**

For applications intended to be fast setting, maintain a temperature of 60°-85°F on air, substrate, Liquid, Hardener, and Powder components during mixing, application, and cure. The three components should be maintained at 60oF to 80oF for 48 hours prior to beginning work.

At temperatures between 35°-65°F, the application window and cure time increases. This allows No. 210FS to be used in cold weather. However, do not apply at temperatures below 35 ° F. Conversely, in warm weather above 80° F, the material working time is reduced.

Application in direct sunlight and rising surface temperature may result in blistering of the materials due to expansion of entrapped air (out gassing) or moisture in the substrate. Concrete surfaces that have been in direct sunlight must be shaded for 24 hours prior to application and remain shaded until the initial set has taken place. In rising temperatures, it may be necessary to postpone the application or apply during cooler hours.

**Surface Preparation**

Surfaces should be made free of oil, grease, water, and other contaminants that may inhibit bond. This can be achieved by abrasive blasting or high-pressure water blasting (min 5,000 psi).

*Concrete* - Refer to SSPC-SP13/NACE 6 "Surface Preparation of Concrete" for detailed guidelines.

*New Concrete* - All structures must be properly designed and capable of withstanding imposed loads. Abrasive blast-or high-pressure water blast concrete to remove laitance and obtain a uniform surface texture.

*Old Concrete* - Concrete must be dry, firm and structurally sound as specified by the architect/engineer. Mechanical methods, such as abrasive blasting or high-pressure water blasting should be utilized to remove old protective coatings, attacked or deteriorated concrete, and any remaining laitance, leaving a uniform sound substrate.

Substrate surfaces requiring repairs in excess of 1/8 inch deep may be resurfaced with Sauereisen's cementitious RestoKrete® Underlayment F- 120FS to ensure proper rehabilitation of the substrate.

*Brick* - Abrasive blast or high-pressure water blast all foreign matter and attacked or unsound mortar from the joints. Loose brickwork or open joints should be regrouted with appropriate Sauereisen mortar to ensure structural integrity.

All active hydrostatic leaks must be stopped with Sauereisen materials such as InstaPlug™ F-180 or Hydroactive Urethane Grout F-370 prior to SewerGard® application.

If abrasive blasting or high-pressure water blasting is used as the method of sur face preparation, all sand and/or debris must be removed by thoroughly vacuuming the area with an industrial vacuum cleaner. If surface does not have desired conditions, repeat surface preparation procedure.

No. 210FS may be applied over damp surfaces that are free of standing water. The best results are achieved with dry surfaces.

## APPLICATION

**Mixing**

No. 210FS is packaged in pre-measured units of Powder, Liquid, and Hardener components. Mixing should be done mechanically with a "Jiffy" mixer blade chucked into a 1/2-inch drill motor. The mixing equipment must be clean and free of Portland cement or other contaminants.

Remix both Liquid and Hardener prior to combining components. Empty contents of the Liquid into a clean, dry mixing container. Empty contents of Hardener into Liquid and mix thoroughly until blended- for at least one minute. Add Powder component gradually while mixing to a uniform consistency. Mix only complete batches.

Material which has begun to set must be discarded. Do not try to retemper the material. Do not add solvent, additive or adulterant to any component or mixed material.

Remove the entire batch from the mixer when mixing is completed to prevent build-up in the equipment.

**Installation**

No. 210FS is applied by trowel at a minimum 1/8-inch thickness. Theoretical coverage is 20 $ft^2$ per unit at 1/8-inch thick. Actual coverage may vary, depending upon jobsite conditions. Screed bars may be used to control thickness on large surface areas.

To provide a pinhole-free surface and remove trowel marks in 210FS, a short-nap mohair paint roller slightly dampened with water may be used. Excess water should be shaken off prior to back rolling.

After SewerGard® 210FS has cured throughout its entire thickness, a holiday detector should be utilized to ensure a continuous pinhole-free lining.

For details regarding construction joints, protrusions or penetrations through concrete, consult Sauereisen for specific recommendations.

## COVERAGE

The 210FS 20 $ft^2$ per unit at 1/8 inch coverage rate is theoretical and will vary depending upon surface conditions, porosity, application techniques and specific project conditions.

## SETTING/CURING

SewerGard® 210FS will take an initial set in two hours at 70ºF. It will also cure in lower temperatures at a slower rate. Flowing water may be returned to the area in 4 hours. Consult Sauereisen for details.

## SHELF LIFE

SewerGard® 210FS has a shelf life of one (1) year, when stored in unopened, tightly sealed containers in a dry location at 70ºF. Avoid freezing. If there is a doubt as to the quality of the materials, consult Sauereisen for details.

## CLEAN-UP

All equipment should be cleaned with MEK before material cures. If removal is required after cure consult Sauereisen for specific recommendations.

## CAUTION

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

## PACKAGING

All components of 210FS are packaged together in a 5-gallon plastic pail.

Part A Hardener:
1.7 lbs. in a quart can

Part B Liquid:
5 lbs. in a 1-gal. can

Part C Powder:
20 lbs. in a plastic bag

*Containers are filled by weight, not volume. Container size does not indicate volume of contents.

## 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 nonconforming goods at our factory or, at our sole option, to repayment of the purchase price of nonconforming goods.

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