

SAUEREISEN

UNDERLAYMENT NO. F-120FS (Fast Set)

Sauereisen Underlayment No. F-120FS is an especially fast-setting, Portland-based resurfacing material. It develops its strength very rapidly and is primarily used for trowelable applications.

Underlayment No. F-120FS is mixed with potable water as a safe, easily applied material. Installation of a chemical-resistant lining or topcoat may proceed after three hours at 70°F in order to minimize downtime.

CHARACTERISTICS

- High early strength material.
- Quick set allows fast turnaround.
- Tolerant to cold environments.
- Adheres to vertical surfaces.
- Topcoat in 3 hours at 70°F.

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 monolithic components should be maintained at 65°F to 80°F for 48 hours prior to beginning work.

At temperatures between 35°-65°F, the application window and cure time increases. This allows No. F-120FS 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 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.

PHYSICAL PROPERTIES

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| Application time | |
| Working time at 70°F | 15 minutes |
| Initial set at 70°F | 1.5 hours |
| Compressive strength | 6,100 psi (425 gm/cm ²) |
| Density | 137 pcf |
| Mix ratio (powder to water, by weight) | 9:1 |

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.

Anchoring System

When Underlayment No. F-120FS is applied on vertical or overhead surfaces at a thickness greater than 1 inch, it should be reinforced or anchored for best results. "T"-type anchors or 2 inch x 2 inch mesh are suitable to secure the material.

Surface Preparation

Concrete - All surfaces to receive Underlayment No. F-120FS must be properly designed and capable of withstanding imposed loads. Surfaces must be free of dust, loose particles, laitance, oil, grease, chemical contaminants, and previously applied coatings.

Concrete surfaces which are contaminated with form oils or grease must be chemically cleaned or scarified to remove contaminants prior to beginning recommended surface preparation.

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 Underlayment No. F-120.

To ensure maximum adhesion and to prevent dehydration of No. F-120FS at 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.

Following hydroblast, all active hydrostatic leaks must be stopped by use of Sauereisen InstaPlug No. F-180 and all structural defects, voids, or cracks in substrate must be repaired prior to application of No. F-120FS.

Brick - Underlayment No. F-120FS may be used to patch voids where brick is missing. It may also be applied over brick as part of a resurfacing process, if needed.

When using No. F-120FS in conjunction with brick surfaces, remove oil, grease, and other contaminants that may inhibit bond. If necessary, hydroblast mortar joints to a depth of 1/2" to remove all loose material and to provide a clean, firm surface. All active hydrostatic leaks must be stopped prior to application of No. F-120FS.

EXPANSION/CONTROL JOINTS

Control joints should only be used when No. F-120FS is placed over concrete surfaces where existing expansion/control joints are present. Consult Sauereisen for recommendations.

APPLICATION

Mixing

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

Selection of No. F-120FS Trowelable or Castable grade will be dependent upon extent of concrete deterioration; whether the application is on vertical, horizontal, or overhead surfaces; and degree of slope required if resurfacing to pre-existing levels.

Sauereisen recommends that Powder and water ratios are accurately weighed prior to mixing. If water must be measured in the field by volume, the approximate amount per 25 lb. pail of Powder is 48 fluid ounces which is the same as three pints or 1.4 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 five minutes until uniform consistency. Inadequate mixing or addition of more water will decrease physical properties.

Do not add sand, gravel, Portland cement or other additives to No. F-120FS material. Remove entire batch from the mixing vessel when mixing is completed to prevent build-up in the equipment. While applying one batch, another should be mixed in order to eliminate delays and permit continuous operation.

Installation

Troweling - Underlayment No. F-120FS is typically installed by trowel. Sauereisen recommends a minimum 1/8-inch thickness. When thickness exceeds 1/2-inch on vertical or overhead surfaces, there is a high likelihood that reinforcement is needed.

Casting - Place Sauereisen No. F-120FS onto properly the prepared substrate to a specified thickness. If forms are required, they should be constructed of firmly braced wood or metal which has been given a light coating of form release agent. The form release agent must prevent No. F-120FS from adhering to the screeds or forms, but should not leave a residue on the freshly cast material.

Forms are to be completely sealed and rendered watertight with heavy consistency pliable caulking. Seal forms placed over horizontal rough surfaces.

The form and screed systems should be strong enough to retain No. F-120FS in place without deformation. Forms and screeds may be removed after set has occurred and No. F-120FS has sufficient strength to support itself.

Do not impose loads until final set has been achieved. Lower temperatures will require longer cure periods before removing forms.

Cold joints require a liberal priming of the previously placed material with epoxy bonding agent. The bonding agent should not be allowed to dry prior to placing the freshly mixed Underlayment No. F-120FS.

FINISHING

Trowel - After placement of material by trowel, apply a broom or brush finish to provide a more desirable bonding surface.

Cast - Place material and screed to desired height. A trowel can be used to distribute material. Broom or brush finish to provide a more desirable bonding surface.

COVERAGE

11.4 pounds of No. F-120FS will cover an area of one square foot at a thickness of one inch. Stated differently, a 25-lb. pail of material will cover slightly more than two square feet at one inch of thickness.

PACKAGING

Underlayment No. F-120FS is packaged in 25 lb. plastic pails.

SETTING/CURING

Proper curing of No. F-120FS is critical to the serviceability of the completed structure. Application of a chemical-resistant lining may proceed after 3 hours at 70°F.

If an elapsed time of at least 8 hours is expected before the Underlayment is to be topcoated, moisture retaining measures for proper cure must be taken. After initial set and until application of chemical-resistant lining, Underlayment No. F-120FS must be properly cured by means of fog spray, wet burlap or an appropriate Sauereisen curing compound.

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.

SHELF LIFE

Sauereisen No. F-120FS has a shelf life of six months when stored unopened in a dry location at 70°F. Avoid freezing.

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. WE GIVE NO WARRANTY, WHETHER OF MERCHANTABILITY, FITNESS FOR PURPOSE OR OTHERWISE, EXPRESS OR IMPLIED, OTHER THAN AS EXPRESSLY SET FORTH HEREIN. Users shall determine the suitability of the product for intended application before using, and users assume all risk and liability. In no event shall we be liable for incidental or consequential damages. Our liability is 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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