

SAUEREISEN

FIBRECRETE™- GENERAL PURPOSE NO. 203

FibreCrete™ - General Purpose No. 203 is a fiber-reinforced, chemically-resistant, 100% solids, epoxy lining system used to protect concrete and steel from chemical and physical abuse. The interlocking fiber matrix of FibreCrete systems exhibits outstanding flexural and tensile strengths.

FibreCrete™ may be used in many kinds of manufacturing, processing, storage, and shipping areas. It is formulated to resist most acids and alkalis. This material is applied by spray and provides a protective barrier to processing chemicals.

The FibreCrete™ system should be used with an appropriate Sauereisen primer to enhance bonding. Consult Sauereisen for a primer recommendation depending on the type of substrate and surface conditions. Detailed literature on Sauereisen primers is available. Sauereisen ConoGlaze is recommended as a topcoat to FibreCrete when a glossy surface is desired.

CHARACTERISTICS

- Excellent resistance to food acids and by-products.
- Conforms to USDA standards for use in federally inspected meat and poultry plants.
- Interlocking fiber matrix promotes good flexural and tensile strength.
- Colors available: 25 beige, 50 lt. gray, 53 gray, 63 tile red, 99 white.

AREA PREPARATION

Temperature of Working Area

For optimum conditions, maintain a temperature of 60°-85°F on air, substrate, Liquid, and Hardener 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 below 65°F, the application becomes more difficult and curing is retarded. Above 80°F, the material working time decreases.

PHYSICAL PROPERTIES

Application time (ASTM C-308 modified)	
Working time at 70°F	30 minutes
Bond strength to concrete (ASTM D-4541)	Concrete failure
Compressive strength (ASTM C-579)	7,000 psi (492.1 kg/cm ²)
Density (ASTM C-905)	85.7 pcf (1.37 gm/cm ³)
Flexural strength (ASTM C-580)	5,100 psi (358.5 kg/cm ²)
Modulus of elasticity (ASTM C-580)	2.66 x 10 ⁵ psi (1.87 x 10 ⁴ kg/cm ²)
Maximum service temperature (Dry)	150°F (65°C)
Tensile strength (ASTM C-307)	2,700 psi (189.8 kg/cm ²)
Thickness	40 mils

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.

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. In rising temperatures it may be necessary to postpone the application or apply during cooler hours.

Surface Preparation

Metal - Abrasive blast to a nominal 2.5 mil profile employing SSPC-SP5 White Metal Blast for immersion and SSPC-SP10 for other service conditions. An SSPC-SP6 Commercial Blast may be suitable for mildly corrosive atmospheric exposure. All welds must be continuous, free of flux and have a smooth rounded radius without any sharp edges.

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

New Concrete - All structures must have the necessary strength to withstand imposed loads during normal use and operation. Surface should be floated free of ridges or depressions and all voids filled with Sauereisen Underlayment No. F-120 or No. 209 Filler Compound. The choice of underlayment will depend on the severity of the voids to be filled. Surfaces should be sloped a maximum 1/4 inch per foot for drainage.

Surfaces should be made free of oil, grease, water, and other contaminants that may inhibit bond. This can be achieved by chemical cleaning.

Abrasive blast, high-pressure water blast, or acid etch concrete to remove laitance and obtain uniform surface texture exposing fine aggregate resembling coarse sandpaper.

Old Concrete - Concrete must be dry, firm and must have the necessary strength to withstand imposed loads during normal use and operation. Mechanical methods should be utilized to remove old paints, protective coatings, and deteriorated concrete. Surfaces should be made free of oil, grease, water, and other contaminants that may inhibit bond. This can be achieved by chemical cleaning.

Abrasive blast, high-pressure water blast, or acid etch concrete to remove laitance and to obtain a uniform, sound substrate. All prepared surfaces must be allowed to dry prior to the lining application. Regardless of preparation method used, all surfaces must be vacuumed to remove any loose deposits or contamination.

EXPANSION/CONTROL JOINTS

Joints are to be placed over existing expansion joints, around all fixed objects, peripheries of rooms and all points of movement in the base slab. Consult Sauereisen for recommendations.

APPLICATION

An appropriate Sauereisen primer should be applied prior to the FibreCrete™ installation. This will enhance bond strength. ConoWeld No. 501 is the standard Sauereisen epoxy primer for concrete. Where porosity of concrete is a concern, PenePrime No. 500, a deep-penetrating waterborne epoxy primer, is recommended. Hi-Temp Primer No. 560 with Zinc Filler No. 561 is preferred over steel.

Mixing

Primer - Primers are supplied in premeasured containers. Remix individual containers before using.

Packaging of Primers No. 500 and 501 consists of Hardener Part A and Resin Part B which must be mixed together.

Completely empty contents of Hardener Part A into Resin Part B container. Using a slow speed 1/2 inch drill motor with a "Jiffy" type blade, mix thoroughly until blended for three minutes. Primer is ready for use immediately after mixing.

Primer No. 560 is a single-component urethane. Ferrous substrates require the addition of Zinc Filler No. 561.

FibreCrete™ - Packaging consists of premeasured unitized containers of Hardener Part A and Resin Part B. Remix Part A and B before combining.

Completely empty contents of Hardener Part A into Resin Part B. Using a slow speed 1/2 inch drill motor affixed with a "Jiffy" type blade, mix 3 - 5 minutes until thoroughly blended.

Mix only complete batches. Material which has begun to set must be discarded. Do not add any solvent, additive, or adulterant to any component or mixed material.

Installation

Primers - Apply Primer to concrete or steel using a short nap adhesive roller with a nondegradable core, or nylon bristle brush. Consult Sauereisen for spray recommendations.

Hi-Temp Primer No. 560 will dry to the touch in approximately 1-2 hours at 70°F. Topcoating should occur no sooner than two hours after application. Hi-Temp Primer No.560 may be topcoated after two hours at 70°. If the duration before topcoating exceeds 24 hours, consult Sauereisen to discuss proper solvent-wipe procedures.

Prior to application of FibreCrete inspect primed surface for voids, bubbles, or defects that may result in blistering or pinholes in the lining. Repair with Sauereisen No. 209 Fast Set to ensure a sealed surface.

FibreCrete™ No. 203

Spray application - A single coat of 40 mils thick is suitable for most FibreCrete applications. When building greater thicknesses, two equal coats may be necessary.

In either case, application should be done with a 50% overlap in a "cross hatch" pattern to reduce the possibility of pinholes and to assure complete coverage. Recoat times shall not exceed four hours.

After FibreCrete™ has sufficiently cured, a holiday detector should be utilized to ensure a continuous pinhole-free lining. Consult a Sauereisen representative for details.

The following equipment is typically used for spray application:

Mastic pump - FibreCrete may be sprayed with a minimum 45:1 piston-primed, airless pump such as the model formerly manufactured by Graco. The current specifications for new equipment is the Graco 56:1 King Piston Primed Airless, Model 236-477. Remove filter from surge tank. Remove cage above lower ball valve located near "foot" (lower end) of pump. Other pumps may be suitable, depending on job site requirements.

Moisture Air Dryer - RFI Model DA-300 or equivalent. Moisture air dryer must be placed at least 50 ' from air compressor on air line.

Gun - Graco's pistol grip Flo-Gun, Model 235-628 is preferred. This gun should be combined with Adapter Model 235-006. Alternatively, the Graco Flo-Gun Model 224-991 is acceptable.

Gun tip - For fiber filled linings, use a Graco Reverse-a-Clean™ housing part No. 222-674 with an orifice of 0.039 to 0.043 inches. For unreinforced coatings, the 0.039 inch tip works best. In either case, the diffuser should be removed prior to use.

Material hoses -

- ◆ 6' whip end, 3/8" i.d.; working pressure 5,000 psi, 16,000 psi burst.
- ◆ 0-25' overall, 1/2" i.d.; working pressure 4,000 psi, 16,000 psi burst.
- ◆ 25-75' overall, 3/4" i.d.; working pressure 4,000 psi, 12,000 psi burst.

Air compressor - 180 ft³ per minute at 100 psi, minimum.

Air hose from compressor - 3/4" to 1" i.d.: 100' maximum length to mastic pump.

COVERAGE

ConoWeld™ 501	200 ft ² /gal. at 8 mils
PenePrime™500	200 ft ² /gal. at 8 mils
Hi-Temp Primer 560	320 ft ² /gal. at 5 mils
FibreCrete™	40 ft ² /gal.at 40 mils

Coverage is theoretical and will vary depending upon surface conditions, porosity, application techniques and specific project conditions.

SETTING/CURING

Do not allow water or chemicals on the material surface for a minimum of 24 hours. For harsh chemical or physical environments cure a minimum of 72 hours prior to exposure.

PACKAGING

Unit Size	Part A	Part B
1 gallon	1 gal can	2 gal can
2.5 gallon	1 gal can	3.5 gal can
5 gallon	2 gal pail	6 gal pail

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

CLEAN-UP

All equipment should be cleaned with MEK or N-methyl pyrrol before material cures. If removal is required after cure consult Sauereisen for specific recommendation.

SHELF LIFE

FibreCrete, ConoWeld, and PenePrime have a shelf life of one (1) year. Hi-Temp Primer/Zinc Filler has a shelf life of (6) months. Store in unopened, tightly sealed containers in a dry location at 70°F. Avoid freezing. 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 nonconforming goods at our factory or, at our sole option, to repayment of the purchase price of nonconforming goods.

- Distributors and agents in major cities throughout the world. Consult manufacturer for locations.**
- Information concerning government safety regulations available upon request.**
- Sauereisen also produces inorganic compounds for assembling, sealing, electrically insulating and grouting.**

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