

# SAUEREISEN

## FIBRECRETE™ - EPOXY NOVOLAK NO. 218

FibreCrete™ - Epoxy NovolAK No. 218 is a fiber-reinforced, chemically-resistant, 100% solids, epoxy novolak lining system used to protect concrete and steel from chemical and physical abuse. The interlocking fiber matrix of FibreCrete™ systems exhibit outstanding flexural and tensile strengths.

FibreCrete™ may be used in many kinds of manufacturing, processing, storage, and shipping areas. It is specifically formulated to resist strong oxidizing environments, especially high concentrations of sulfuric acid. This material is applied by spray and provides a protective barrier resistant to thermal shock in refrigeration areas and is resistant to higher temperatures.

The FibreCrete™ system utilizes Sauereisen ConoWeld No. 501 as a bond enhancing primer. For a glossy surface, FibreCrete may be topcoated with Sauereisen ConoGlaze.

### CHARACTERISTICS

- Excellent resistance to sulfuric acid.
- Meets USDA standards for use in federally inspected meat and poultry plants.
- Inter-locking fiber matrix.
- Colors available in 53 gray, 63 tile red.
- Excellent resistance to hydrocarbon exposure.

### 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.

Application in direct sunlight and rising surface temperature may result in blister-

### 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)	6,600 psi (464.0 kg/cm <sup>2</sup> )
Density (ASTM C-905)	88.6 pcf (1.42 gm/cm <sup>3</sup> )
Flexural strength (ASTM C-580)	3,100 psi (217.9 kg/cm <sup>2</sup> )
Modulus of elasticity (ASTM C-580)	10.5 x 10 <sup>5</sup> psi (7.4 x 10 <sup>4</sup> kg/cm <sup>2</sup> )
Maximum service temperature (Dry)	180°F (82°C)
Tensile strength (ASTM C-307)	2,300 psi (161.7 kg/cm <sup>2</sup> )
Thickness	40 mills

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.

ing 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. 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 coating 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 around existing expansion joints, all fixed objects, peripheries of room 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.

At 70°F, the epoxy primers must be allowed to cure at least eight hours, but no longer than 24 hours, prior to application of FibreCrete™. The moist-cured urethane No. 560 may be topcoated between two hours to 24 hours after application. If recoat time exceeds 24 hours consult Sauereisen for 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. 218

**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 24 hours at 70° F.

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

The following equipment is typically used for spray application:

**Airless Spray Pumps** - FibreCrete may be sprayed with a minimum 56:1 piston-primed, airless pump such as the model formerly manufactured by Graco. Alternative equipment such as the Graco 56:1 King Piston Primed Airless, Model 236-477 is also suitable. The current specification is the Graco Xtreme Sprayer X60 - MDL#X60-DH4. Other pumps may be suitable, depending on job site requirements. Remove all filters including the filter from surge tank..

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 Ultra-Lite pistol grip Flo-Gun, Model 235-628 is preferred. This gun must be combined with Seat Adapter Model 235-006. Alternatively, the Graco Flo-Gun Model 224-991 is acceptable.

**Gun tip** - For fiber filled materials, use Tip Housing Part No. XHD-001 with Graco Reversa Tips MDL No. XHD with orifices of 0.039 to 0.043 inches. Alternative brand tips may be suitable, however, never use tips that contain a diffuser pin.

### 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 ft<sup>3</sup> per minute at 100 psi, minimum.

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

Measures such as water traps, dryers, or filters should be used to prevent pump freeze-up.

### COVERAGE

ConoWeld™ 501	200 ft <sup>2</sup> /gal. at 8 mils
PenePrime™ 500	200 ft <sup>2</sup> /gal. at 8 mils
Hi-Temp Primer 560	320 ft <sup>2</sup> /gal. at 5 mils
FibreCrete™	40 ft <sup>2</sup> /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 qt. can	2 gal. pail
2.5 gallon	1 gal. can	3.5 gal. pail
5 gallon	1 gal. can	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 before material cures. If removal is required after cure, consult Sauereisen for specific recommendations.

## SHELF LIFE

FibreCrete™ has a shelf life of one (1) year, when stored 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.

## LEGAL NOTICE

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## WARRANTY

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- ❑ **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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