

SAUEREISEN

FIBRECRETE - CHEMICAL AND FOOD GRADE NO. 204

FibreCrete™ Chemical and Food Grade No. 204 is a fiber-reinforced and chemically-resistant epoxy lining system used to protect concrete and steel from chemical and physical abuse. The interlocking fiber matrix within FibreCrete systems contributes outstanding flexural and tensile strengths while significantly reducing permeability.

FibreCrete™ may be used in many kinds of manufacturing, processing, storage, and shipping areas. It is specifically formulated to resist food acids, fats and oils. This material is applied by spray and provides a protective barrier to processing chemicals and harsh cleaning solutions.

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

FibreCrete™ No 204 is responsibly formulated to contain no volatile organic compounds (VOC's) or hazardous air pollutants (HAPS). Like the vast majority of Sauereisen materials, No. 204 qualifies as an environmentally-friendly green coating that enables compliance with both federal and local regulations.

CHARACTERISTICS

- Excellent resistance to food acids and by-products.
- Conforms to USDA requirements for use in federally inspected meat and poultry plants.
- Environmentally friendly green chemistry. 100% solids. No VOC's or HAP's.
- Standard colors available in 50 light gray, 53 gray, 63 tile red.

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.

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)	4,500 psi (316.4 kg/cm ²)
Modulus of elasticity (ASTM C-580)	3.0 x 10 ⁵ psi (2.1 x 10 ⁴ kg/cm ²)
Maximum service temperature (Dry)	150°F (65°C)
Tensile strength (ASTM C-307)	2,100 psi (147.6 kg/cm ²)
Thickness	40 mils (1.02mm)

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.

The monolithic components should be maintained at 65°F to 80°F for 48 hours prior to beginning work. At temperatures below 60°F, the application becomes more difficult and curing is retarded. Above 85°F, the material working time decreases.

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 Near White Metal Blast for other service conditions. All welds must be continuous, free of flux and have a smooth rounded radius or ground flat without any sharp edges.

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. Surfaces should be sloped a maximum 1/4 inch per foot for drainage.

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

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

All voids should be 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.

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. Abrasive blast or high-pressure water blast concrete to remove laitance and to obtain a uniform, sound substrate.

Surfaces must be made free of oil, grease, water, and other contaminants that may inhibit the bond. This can be achieved by chemical cleaning. All prepared surfaces must be allowed to dry prior to applying the lining system. All voids should be 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.

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 above existing expansion joints, around all fixed objects, peripheries of rooms and all points of movement in the base slab. Consult Sauereisen for recommendations.

APPLICATION

ConoWeld No. 501 is the epoxy primer recommended for most FibreCrete applications. Apply ConoWeld prior to the FibreCrete installation to enhance bond strength. Certain substrates and/or certain site specific conditions may require another primer. Consult Sauereisen for a recommendation.

Mixing

Primer - Primers are packaged in pre-measured containers consisting of Hardener Part A and Resin Part B which must be mixed together before use. Remix the Part A and Part B before combining.

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 3 minutes. Primer is ready for use immediately after mixing.

FibreCrete™ - Packaging consists of pre-measured 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

ConoWeld No. 501 - 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, primer should be allowed to cure at least eight hours, but no longer than 24 hours prior to application of FibreCrete™. If recoat time exceeds 24 hours, consult Sauereisen.

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

FibreCrete™ No. 204

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:

Mastic pump - FibreCrete™ may be sprayed with a minimum 45:1 piston-primed, airless pump such as the model 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. Other pumps may be suitable, depending on job site requirements.

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.

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

COVERAGE

ConoWeld	200 ft ² per gal. at 8 mils
FibreCrete	40 ft ² per 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	1 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 before material cures. If removal is required after cure, consult Sauereisen for a specific recommendation.