

# SAUEREISEN

## SEWERGARD™ NO. 210X

### PHYSICAL PROPERTIES

Abrasion resistance @ 28 days (ASTM D 4060, Taber Abraser CS-17 Wheel, 1,000 gram load, 1,000 cycles)	44.9mg average weight loss
Adhesion (ASTM D4541)	Concrete Failure
Application time (ASTM C308 modified)	30 minutes
Bond strength to concrete (ASTM D7234)	Concrete failure
Compressive strength (ASTM D695)	15,500 psi
Components	2 parts
Elongation (ASTM D638)	12.9%
Flexural Strength (ASTM D790) @ 28 days	8,000 psi (562.4 kg/cm <sup>2</sup> )
Max.service temperature (Dry)	150°F (65°C)
Mix Ratio (By Volume)	1 Part A-(Hardener) : 3 Parts B-(Resin)
Modulus of elasticity (ASTM D790)	5.1 x 10 <sup>4</sup> psi
Permeability (ASTM E96)	1.32 x 10 <sup>-10</sup> (g/m·s·Pa)
Shore D (ASTM D2240)	95
Tensile Strength (ASTM D638)	4,300 psi
Recommended Thickness	80 - 125 mils

\* All values determined @ 7 days unless otherwise noted

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.

Sauereisen SewerGard™ No. 210X is a protective lining specifically formulated for municipal wastewater environments. SewerGard™ No. 210X provides a chemical-resistant barrier for concrete, masonry, brick, and steel substrates.

As a 100% solids epoxy polymer No. 210X is specified to protect infrastructure throughout the wastewater industry. Wherever extreme corrosive conditions exist, No. 210X is used as a stand-alone lining. No. 210X is a high strength lining that enables high build capabilities. Applications range from manholes and lift stations within the collection systems to tankage, structural steel, digesters, clarifiers, and secondary containment at treatment plants.

Installation of SewerGard No. 210X is easily completed using airless or plural component spray equipment.

Touch up or small repairs can be completed using a trowel, brush, or roller.

### CHARACTERISTICS

- Resistant to hydrogen sulfide, sulfuric acid, MIC and treatment chemicals.
- Minimum thickness is 80 mils.
- Smooth finish aids wash down and prevents debris accumulation.
- Can be applied to surface dry, saturated concrete (SSD).
- Zero VOC's, 100% solids
- User friendly application by airless spray or plural component spray equipment.
- Color: SewerGard Beige for greater light reflection.
- Cured lining will prevent inflow & infiltration

### AREA PREPARATION

#### Temperature of Working Area

For optimum conditions, maintain a constant temperature of 60°-85°F on air, substrate, liquid, and hardener components during mixing, application, and cure. Keep materials and substrate at 60°-80°F for at least 48 hours prior to application. The temperature and material must be at least 5°F above the dew point.

At temperatures below 60°F, the application becomes more difficult and curing is prolonged.

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. If temperatures are rising, it may be necessary to postpone the application or apply during cooler hours. It may be necessary to utilize a primer to mitigate offgassing.

#### Surface Preparation

*Metal* - Abrasive blast to a minimum 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 or ground flat in accordance with SSPC/NACE Standard Practices.

Concrete - Refer to SSPC-SP13/NACE 6 "Surface Preparation of Concrete" for detailed guidelines or ICRI 310.2. Surface should be profiled to an ICRI CPS 4-6.

**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 shall be filled with an appropriate Sauereisen RestoKrete underlayment product. The choice of underlayment will depend on the severity of the voids to be filled.

Surfaces should be made free of oil, grease, 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 obtain uniform surface texture exposing fine aggregate resembling sandpaper.

**Old Concrete** - Concrete 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, standing water, and other contaminants that may inhibit bond. This can be achieved by chemical cleaning.

Suitable surface preparation methods include shotblasting, abrasive blasting or water jetting. Restore the substrate as needed to provide an appropriate bonding surface. Stop active water leaks with Sauereisen Insta-Plug No. F-180 or Hydroactive Urethane Grout No. F-370 prior to the coating installation. To assure material compatibility all voids should be filled with Sauereisen RestoKrete SubstrateResurfacer No. F-121, RestoKrete Filler Compound No. 209, or Epoxy Modified Cement Mortar No. 208.

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.

## MIXING

### Application by Airless Spray

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 three to five minutes until thoroughly blended.

### Application by Plural Component:

Premix Hardener Part A and Resin Part B separately before using.

## INSTALLATION

### Airless Spray Application:

SewerGard™ No. 210X may be spray applied at a thickness of 80 - 125 mils per coat. Installation by airless spray should be done with a 50% overlap in a "cross hatch" pattern to reduce the possibility of pinholes and to assure complete coverage. At temperatures above 85°F, the material working time decreases. Recoat window is between 12 and 24 hours at 70°F.

After No. 210X 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:***

Airless Spray Pumps - SewerGard™ No. 210X may be sprayed with a minimum 56:1 piston-primed, single stage 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. Remove all filters including the filter from the surge tank.

Other pumps may be suitable, depending on the job site requirements.

Water Trap: - must be placed on the air line at least 50' from the air compressor.

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 - Use Tip Housing Part No. XHD-001 with Graco Reversa Tips MDL No. XHD with orifices of 0.025 to 0.031 inch tip works best. Alternative brand tips may be suitable, however, do not use tips that contain a diffuser pin.

Material hose - 6' whip end, 3/8" i.d.; working pressure 5,000 psi, 16,000 psi burst.

Material hose - 0-50' overall, 1/2" i.d.; working pressure 4,000 psi, 16,000 psi burst.

Material hose - 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 airless pump.

### Plural Component Spray Applications:

Mix Ratio (By Volume)  
1 Part A-(Hardener) : 3 Parts B-(Resin).

Recommended equipment for plural component spray of Sauereisen No. 210X include WIWA and Graco variable ratio pumps (minimum 56:1). Examples include, but not limited to WIWA Flexi-Mix, Graco Xtreme Mix, and Graco XM50.

For Plural Component Spray Applications preheating the resin and hardener to the following temperatures are required.

Part A (Hardener) -	80-100°F
Part B (Resin) -	115 -125°F

Depending on job-site requirements, conditions and various spray equipment configurations, please consult Sauereisen Technical Service for information regarding pumps, hoses, static mixers, mixing blocks and spray guns.

Please consult Sauereisen for information and equipment required for spraying via plural component.

## COVERAGE

No. 210X: 20ft<sup>2</sup> per gallon at 80 mils

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

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

## SETTING/CURING

Do not allow water or chemicals on the material surface for a minimum of 17 hours. For harsh chemical or physical environments, cure a minimum of 72 hours prior to exposure.

Working Time: (For Airless Spay )  
30 minutes @ 70°F

Re-Coat Time:  
12-24 hours @ 70°F

Chemical Exposure:  
17 hours @ 70°F

## PACKAGING

Sauereisen SewerGard™ No. 210X is packaged in a 1-Gallon unit, a 3- Gallon (Regular) unit and a 15-Gallon (Large) unit.

### Unit Size

*Gallon Unit: = 1 Gallon*

Part A - Hardener is packaged in a 1-gallon can.

Part B - Resin is packaged in a 2-gallon plastic pail.

*Regular Unit: = 3 gallons*

Part A - Hardener is packaged in a 1-gallon can.

Part B - Resin is packaged in a 5-gallon plastic pail.

*Large unit: = 15 gallons*

Part A - Hardener is packaged in a 5-gallon (partial-filled) plastic pail.

Part B - Resin is packaged in three / 5 gallon (partial-filled) plastic pails.

## CLEAN-UP

All equipment should be cleaned with MEK before material cures.

## SHELF LIFE

Sauereisen SewerGard™ No. 210X has a shelf life of one year. Store in unopened, tightly sealed containers in a dry location at 70°F. Avoid freezing. If there is 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.**

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