

# SAUEREISEN

## SEWERGARD - ROTARY SPRAY NO. 210RS

### PHYSICAL PROPERTIES

Abrasion resistance	
(ASTM D-4060, Tabor Abrader C-17 wheel, 1,000 gram load, 1,000 cycles)	49 mg. average weight loss
Application time (ASTM C-308 modified)	
Working time at 70°F	30 minutes
Initial set at 70°F	17 hours
Components	3 part
Thickness	125 mils (3.18 mm)
Bond strength to dry or damp concrete manhole (ASTM C-478)	Concrete failure
Coefficient of thermal expansion (ASTM C-531)	$3.8 \times 10^{-5}/F^{\circ}$ ( $2.1 \times 10^{-5}/C^{\circ}$ )
Compressive strength (ASTM C-579)	6,800 psi (478 kg/cm <sup>2</sup> )
Density (ASTM C-905)	114 pcf (1.82 gm/cm <sup>3</sup> )
Flexural strength (ASTM C-580)	4,600 psi (323 kg/cm <sup>2</sup> )
Maximum service temperature	150°F (65°C)
Modulus of elasticity (ASTM C-580)	$5.5 \times 10^5$ psi ( $3.8 \times 10^4$ kg/cm <sup>2</sup> )
Moisture absorption (ASTM C-413)	0.2%
Shrinkage (ASTM C-531)	0.11%
Tensile strength (ASTM C-307)	2,500 psi (176 kg/cm <sup>2</sup> )

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.

### CHARACTERISTICS

- ☐ Resistant to corrosive conditions common to municipal wastewater treatment industry.
- ☐ Suitable for application over damp or dry concrete surfaces.
- ☐ Spray applied... ideal for new construction.
- ☐ Available in Hot and Cold Weather formulations. Contact Sauereisen for more details.

Sauereisen SewerGard No. 210RS is a rotary spray-applied material specifically designed to protect concrete and steel surfaces of municipal wastewater treatment structures from chemical attack and physical abuse. The application properties of No. 210RS permit economical protection of new and rehabilitated substrates. When cured, No. 210RS provides an impermeable, high-strength, corrosion-resistant lining for manholes, lift stations, grit chambers, aeration basins and related structures subject to infiltration and attack from hydrogen sulfide and acid generated by microbiological sources.

### AREA PREPARATION

#### Temperature of Working Area

Maintain a temperature of 65°-85°F on air, substrate, Liquid, and Hardener components during mixing, application and cure.

The monolithic components and substrate 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 85°F, the material working time decreases. It is recommended that the material components be stored in a cooler area prior to mixing.

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

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

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

The following surface preparation equipment is typically used for rotary spray application:

**WaterBlasters, Inc.**  
**168 Georgetown Road**  
**Lawrence, PA 15055-0459**  
**Phone: 888.741.7094**  
**Fax: 724.873.7301**  
**e-mail: wbi@drillingtechnique.com**

WaterBlasters Manhole Master™

Proprietary 3-Dimensional blasting head

Extension arm for interior water supply  
 Standard lid to cover manhole openings of 24-29 inches.

Adjustment swivel allowing modification of depth and direction.

Waterblast Pump - Capability of 5000 psi pressure and 15-20 gallons of water per minute or a Jetter truck with a capacity of 2000-2500 psi and 50-80 gallons per minute.

Hoses separate.

*New Concrete* - All structures must be properly designed and capable of withstanding imposed loads. Abrasive blast, high-pressure water blast, or acid etch concrete to remove laitance and obtain uniform surface texture.

*Old Concrete* - Concrete must be firm and structurally sound as specified by the architect/engineer.

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

Substrate surfaces requiring repairs should be resurfaced with Sauereisen Underlayment No. F-120, Substrate Resurfacer No. F-121 or Filler Compound No. 209 depending on severity of repairs to ensure proper rehabilitation of the substrate.

*Brick* - Abrasive blast or high-pressure water blast all foreign particles and attacked or unsound mortar from the joints. Loose brickwork should be regouted with appropriate Sauereisen mortar to ensure structural integrity of the manhole.

All active hydrostatic leaks must be repaired with either Sauereisen InstaPlug No. F-180 or Hydroactive Polyurethane Grout No. F-370 prior to SewerGard No. 210RS application.

If abrasive or high-pressure water blasting is used as the method of surface preparation, all sand and/or debris must be removed by thoroughly vacuuming the area with an industrial vacuum cleaner. If surface does not have desired conditions, repeat surface preparation procedure.

*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.

## APPLICATION

### Mixing

No. 210RS is packaged in pre-measured units of Powder, Liquid, and Hardener components. Mixing should be done mechanically with a "Jiffy" mixer blade chucked into a drill motor. The mixing equipment must be clean and free of Portland cement or other contaminants.

Remix both Liquid and Hardener prior to combining components. Empty contents of the Liquid into a clean, dry mixing container. Empty contents of Hardener into Liquid and mix thoroughly until blended for at least one minute. Add Powder component gradually while mixing to a uniform consistency.

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

Remove the entire batch from the mixer when mixing is completed to prevent build-up in the equipment. While pouring one batch, another should be mixed in order to eliminate delays and to permit continuous operation.

### Installation

No. 210RS is applied through specialized rotary spray equipment and applied at a thickness of 60-125 mils. This is done from street level with minimal entry into manhole.

After the No. 210RS has sufficiently cured, a holiday detector should be utilized to ensure a continuous pinhole-free lining. A Sauereisen SewerGard Patch Kit may be used to conveniently repair any pinholes. Consult a Sauereisen representative for details.

Backrolling with a damp short nap mohair roller can be done to improve aesthetics.

The following types of equipment are typically used for rotary spray application:

**RFI Construction Products**  
**Division of Cangro Industries**  
**495 Smith Street**  
**Farmingdale, NY 22735-1186**  
**Contact: William Drudy**  
**Phone 631.752.8899**  
**Fax: 631.454.9155**

RFI Rotor/Stator Pump Model RSP-200

**Quickspray, Inc.**  
**2105 West Lakeshore Drive**  
**Port Clinton, OH 43452**  
**Contact: Park McRitchie**  
**Phone: 419.732.2611**  
**Fax: 419.734.2628**

Quickspray carousel pump Model 1250SXS-3.

### ACCESSORIES

RFI Model PE-100-01 Pole Gun w/aluminum spray head for straight shot applications.

RFI Spincaster Nozzle SPN-500 w/internal air motor.

Moisture Separator RFI Model DA300-FRO-1 for collecting condensation within air lines.

Material Hose of 1 inch diameter and 15 feet length with internal expanded male ends and cam locks. Capacity of 300 psi required.

Air Hose of 3/4 inch diameter and 50 feet length from compressor to Moisture Separator. Specify 200 psi and 2 lug Chicago fittings.

Air Hose of 1/2 inch diameter and 50 feet length from compressor to Wet Spray Nozzle. Specify 200 psi and 2 lug Chicago fittings.

Air Hose of 1/2 inch diameter and 15 feet length from Moisture Separator to Spinning Nozzle Assembly. Specify 200 psi capacity with one end Chicago fitting and one end brass female swivel.

Cam-Lock Couplings of 1 inch and 3/4 inch diameter (2 sets each).

3/16 inch hardened steel tip.

Tip retainer nut.

Pole gun assembly.

**Other Outside Source equipment:**

180 cfm Air Compressor

5500 watt Generator with 220 volt single phase.

## COVERAGE

No. 210RS: 50 ft<sup>2</sup> per unit at 125 mils.

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

## SETTING/CURING

SewerGard No. 210RS will take an initial set in 17 hours at 70°F. Do not allow water or chemicals on the material surface for a minimum of 24 hours. For temperatures below 70°F, cure a minimum of 72 hours prior to water or chemical exposure.

## PACKAGING

59 lb. unit:

Resin	14.4 lbs. in 2-gal. pail
Hardener	4.6 lbs.s in 1-gal. can
Filler	40 lb. bag.

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

## CLEAN-UP

All equipment should be cleaned with Sauereisen PumpClean 813 before material cures. If removal is required after cure consult Sauereisen for specific recommendation.

## SHELF LIFE

Sauereisen SewerGard No. 210RS has a shelf life of one 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.

## 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.

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

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