



**STRONGWALL INDUSTRIES, INC.**

## **STRONGCRETE SW-81**

### **Deep Horizontal and formed Structural Repairs**

### **Product Data Sheet**

Strongcrete SW-81 is designed to address deep horizontal and formed structural concrete repairs. It is a two-component latex modified structural repair mortar which includes migratory corrosion inhibitors. The unique chemistry of this superior SBR (Styrene Butadiene Rubber) modifier allows the Strongcrete repair material to penetrate the capillaries of the substrate forming a long lasting bond. SW-81 utilizes a polymer-modified liquid combined with cement aggregate powder. This chemistry provides a low modulus of elasticity and a high flexural strength. As a result, there is no required minimum depth. The mortar contains zero VOC and is Class A rated. SW-81 can be applied from 1/8" to full depth. It can be extended using 3/8" pea gravel for depths exceeding 3/4".

#### **Yield and Packaging**

One 5-gallon pail of SW-81 latex liquid and ten 37.5-lb bags of SW-81 aggregate powder form one unit.

Yield: Three cubic feet without addition of aggregate.  
Three and a half cubic feet with eight gallons of aggregate.  
Four cubic feet with the addition of ten gallons of aggregate.

#### **Shelf Life**

One year from date of manufacture of all unopened bags and buckets if stored properly.

#### **Site and Storage Conditions**

Indoors, off the ground and in a dry location, at temperatures not exceeding 90 ° F or lower than 45 ° F. Pre-condition material to be applied to ambient temperatures as necessary. Keep the material out of the direct sunlight when possible.

#### **Typical Physical Properties at 75°F (24°C)**

**Compression Strength ASTM C109:** 4,050 psi  
**Tensile Strength ASTM C307:** 800 psi  
**Flexural Strength ASTM C580:** 1,150 psi  
**Hardness ASTM D2240, Shore D:** 70-75 psi  
**Adhesion ASTM D4541 :** >400 psi (100% failure in concrete)  
**Indentation MIL-D-3134, Para. 4.7.4.2.1:** 2.25 %  
(steadily applied load, 2,000 lbs. On 1" steel ramp imposed for 30min.)  
**Adhesion MIL-D-3134, Para. 4.7.1.4 :** 303 psi  
**Water Absorption MIL-D-3134:** 3.14 %  
**Impact Resistance (Gardner Impact Tester):** No chipping, cracking or delaminating and not more than 0.014"

#### **Where to use**

- Concrete repairs deeper than 3/8", if < 3/8" use SW-83
- Form and pour applications.
- Leveling of irregular substrates.
- Creating slope to ensure positive drainage prior to placement of traffic membranes and coatings.

#### **Advantages**

- Low modulus of elasticity and high flexural strength.
- Contains migratory corrosion inhibitors to suppress corrosion of rebar.
- Tenacious adhesion eliminates need for sandblasting rebar or total encapsulation of reinforcing steel.
- SBR rubber modifier provides superior bonding ability eliminating need for saw cutting perimeters.
- Physical properties allow for feather edge repairs.
- Suitable for horizontal patches as well as form and pour applications.

#### **Overview of Installation Procedures**

1. Prepare surface by careful and thorough removal of laitance, grease, and foreign matter as per the installation procedures.
  - a. Notes: When preparing surface for overlay, profile to a minimum of 5 or 6, using ICRI concrete surface chip profiles. This must be achieved on all substrates, including new concrete.
2. Minimum ambient and surface temperatures are 45° F and rising at time of placement. **Do not allow product to freeze prior to fully curing.**
3. Do not apply in direct sun or high winds. If these conditions arise during placement, cover with damp burlap to assist in cure.

**Prime:** Pre mix the SW-81 liquid. Use SW-81 liquid directly from pail. Apply with a mason brush to all concrete and steel surfaces that will receive the mortar mix, leaving no puddles. Do not allow primer to cure prior to application of mortar (15 minutes max.) **Material is required to be installed while primer is still wet. Reapply primer if concrete is rapidly absorbing the primer. Finish after placement (immediately) as material cannot be troweled once it begins to cure.**

**SW-81:** Mixing: One 5 gallon pail of SW-81 liquid plus ten 37.5 pound bags of SW-81 powder form one unit.

Average Yield: Three cubic feet without addition of aggregate.  
Three and a half cubic feet with eight gallons of aggregate.  
Four cubic feet with the addition of ten gallons of aggregate.  
Working time is 20 minutes at 75° F.

At 75° F, cure times:

6-8 hours for pedestrian traffic.  
24 hours for vehicular traffic.

#### **Exposed Aluminum, Steel and Rebar**

As with all cementitious products, avoid all contact with exposed aluminum. Completely expose and clean all reinforcing steel. It is practice to have a 3/4" clearance behind reinforcing steel. Perform this preparation of the steel according to the ICRI # 03730 of their technical guidelines.

This material does not contain added gypsum, lime or high aluminum cements.

Protect materials at all times from excessive temperatures and pre-condition to ambient temperatures prior to application.

The proper application of this product is the sole responsibility of the end user. Job site visits by Strongwall representatives are only for the purpose of making recommendations and do not assume any liability for inspection, supervision or quality control.

#### **Equipment**

- Jiffy Mixing Blade
- ½" Variable speed industrial drill
- Clean, empty mixing containers
- Flexible masons brush
- Scale for pre-measured materials for small installations
- Power washing machine capable of developing 4,000 psi.
- Air blower
- Shot blast machine
- Scarifier

#### **Cleaning Tools**

Clean all tools with water immediately after use. If cured, mechanical means will be necessary.

#### **First Aid**

In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes. For respiratory problems, remove person to fresh air. Contact a physician. Keep container tightly closed. Keep out of reach of children, Not for internal consumption. For industrial use only.

#### **Specification Assistance**

Consult Strongwall Industries Incorporated for specification assistance and details. This consultation is highly recommended prior to specification.

#### **Testing**

The technical data contained here is the result of tests made in manufacturer laboratories or in independent laboratories using small scale equipment and following generally accepted trade practices. Although this information is believed to be true and accurate, the use of different equipment for testing under dissimilar conditions or the testing of samples produced under dissimilar conditions may develop substantially different results.

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Natural gray and pigmented cementitious coatings may exhibit color variegation due to fluctuating evaporation rates during cure. Measure surface and ambient temperatures to ensure the material is only applied when temperatures are 45°F and rising during placement and cure time.

All information provided by Strongwall Industries concerning Strongwall products, including but not limited to, any recommendations and advice relating to the application and use of Strongwall products, is given in good faith based upon Strongwalls current experience and knowledge of its product when properly stored, handled,

and applied under normal conditions in accordance with Strongwalls' instructions.

In practice, the differences in materials, substrates, storage and handling conditions, actual site conditions and other factors outside of Strongwalls' control as such that Strongwall assumes no liability for the provision of such information, advice, recommendations, or instructions related to its products, nor shall any legal relationship be created by or arise from the provision of such information, advice, recommendations, or instructions related to its products. The user of the Strongwall product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with the full application of the product(s). Strongwall reserves the right to change the properties of its products without notice. All sales of Strongwall product(s) are subject to its current terms and conditions of sale which are available by calling 201-445-4633.

Prior to each use of any Strongwall product, the user must always read and follow the instructions on the products most current product data sheet, product label, and Safety Data Sheet which are available by calling at 201-445-4633. Nothing contained in Strongwall materials relieves the user of the obligation to read and follow the instructions for each Strongwall product as set forth in the current product data sheet application instructions, product label, and Safety Data Sheet prior to product use.

#### **Material Guarantee**

Strongwall Industries, Inc. (hereafter referred to as Strongwall) guarantees materials only for a period of 1 year from the date of installation, when applied to an approved substrate by an approved applicator in accordance with Strongwall's written specifications, application instructions, and Product Data Sheet. Strongwall disclaims any other guarantee or warranty express or implied of the materials and this guarantee shall be the sole remedy of any person who purchases or uses the materials.

This guarantee applies only to material defects and will not apply in instances where failure has been caused by substrate defects including improper preparation, structural movement or settlement. In addition, it will not cover vandalism, accidents, acts of God, ordinary wear or any other damage not associated with normal usage. Where the materials have been applied over a previous coated surface, guarantee is limited to adhesion of the materials to previous coating and does not guarantee adhesion of previous coating to substrate.

This guarantee is valid only upon completion of the job, proper maintenance of all systems, payment in full to Strongwall and after the applicator and owner have affixed their signatures to the fully executed document to signify their acceptance of its terms and conditions and to release Strongwall of all claims and obligations other than those set forth in the above paragraph. A fully executed copy must be returned to Strongwall.

In the event of any kind of failure, the owner will advise the approved applicator in writing. The applicator will make an inspection to determine the cause of such failure. Should materials failure occur, Strongwall will provide replacement of materials that may be required to correct deficiencies. There are no express agreements other than those set forth in the above paragraphs.

Buyer understands and agrees that any and all warranties implied by the provisions of the Uniform Commercial Code are executed from this sale.



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