



# STRONGARD

## Technical Data Sheet

### Fiber Reinforced, Elastomeric Coating

STRONGARD is a premium quality fiber reinforced elastomeric wall coating designed for permanent flexibility. It will accept movement from thermal fluctuation, bridge hairline cracks and provide the structure with durable weather tight protection. STRONGARD can be applied onto most surfaces including concrete, split face block, brick, concrete block and precast concrete. STRONGARD maintains the qualities of being both decorative and durable.

**FEATURES AND BENEFITS:**

- Protects against wind-driven rain
- Resists chemical attack
- Excellent weathering properties
- Alkali and mildew resistant
- UV stable
- Excellent color stability
- Non-chalking
- Bridges hairline cracks
- Resists dirt pickup
- Reduces or extinguishes flame

**TYPICAL PHYSICAL PROPERTIES AT 75°F (24°C):**

Typical physical properties and test results may differ based upon statistical variations of independent testing labs with respect to test methods, mixing methods and the equipment used. Project application methods, temperature, actual site and environmental conditions will all affect the cure rate, working life, recoat time and open to traffic project conditions.

<b>Moisture Vapor Transmission</b>	ASTM E-96	2.4 perms
<b>Elongation</b>	ASTM D-412	178% @ 60°F
<b>Solids Content</b>	ASTM D-1044	65% (B.W.) 63% (B.V.)
<b>Tensile Strength</b>	ASTM D-412	348 psi
<b>FSI Rating</b>	ASTM E-84	Class "A"
<b>Flashpoint</b>	SETA	Non-flammable
<b>Fiber Type</b>		Calcium Silicate
<b>Fiber Aspect Ratio</b>		78:1
<b>Pigment Type</b>		Non-chalking
<b>Colorant Type</b>	UV rated	Exterior grade
<b>Alkalinity Resistance</b>	UV rated	Excellent
<b>Viscosity</b>		20,000 cps
<b>Weight per Gallon</b>		10 lbs.
<b>pH</b>		9.3
<b>VOC Compliant</b>		10 grams/liter
<b>Recoat Time</b>		5-6 hours depending upon weather conditions
<b>Millage in Two Coats</b>		40 mils
<b>Standard Colors</b>		24 standard colors, black and white
<b>Custom Colors</b>		Available upon request
<b>CSI</b>		09960

**PACKAGING:**

5 gallon pail

**COVERAGE:**

Many factors contribute to coverage rates such as, but not limited to: substrate texture and porosity, disparities in applied thickness, methods of application, individual installation techniques and typical allowance for waste. Two coats are required. Some specifications require three coats.

60 ft<sup>2</sup> per gallon @ 40 mils

### **JOB SITE SURVEY**

- Evaluate the existing substrate for signs of efflorescence.
- For on grade or exterior and non-controlled environments perform multiple adhesion tests.
- Testing may be required for moisture content, chlorides content, depth of carbonation, ASR, AAR and to determine if there are any deleterious aggregate or unacceptably high levels of potassium, sulfate, alkali or other aggressive agents within the concrete substrate.

### **ENVIRONMENTAL CONDITIONS:**

All materials are mixed, installed and cured at the job site. These environmental conditions are required to facilitate proper curing and performance of the products and systems. Do not proceed if outside of these environmental conditions.

<b>Ambient</b>	<b>Minimum</b>	<b>Maximum</b>
Temperature	50°F and rising	90°F
Wind	N/A	30 mph
<b>Substrate : Not frost laden</b>		
Temperature	50°F and rising	85°F
Measure and record these temperatures daily. Do not apply materials if rain or freezing conditions are anticipated. Substrate temperature must be at least 5°F above measured dew point.		

### **SURFACE PREPARATION GUIDELINES:**

- Inspect the concrete substrate to determine its general condition including previously applied products, concrete defects, soundness, chemical damage, presence of contaminants and excess moisture.
- Determine the best method or combination of methods of mechanical surface preparation: sandblast, scarify, scabble or diamond grind to open the concrete pore structure. Variations in surface conditions seen in walls and ceilings versus those in horizontal substrates should be considered when choosing surface preparation methods and techniques.
- Restore all non-durable, unsound, damaged, deteriorated, delaminated, cracked, weak, loose, spalled and rust stained concrete. Perform all repairs using the STRONGCRETE and STRONGPATCH repair mortars. Mechanically profile all repairs.
- Detail all cracks greater than  $\frac{1}{16}$ " with a premium grade of acrylic caulk. Mound the caulk slightly so that the repair is flush with the wall surface. Allow to cure as per manufacturer's recommendations.
- Eliminate all surface irregularities, fins, honeycombs, bug holes, spalls, cracks and deteriorated joints. Leave no voids.
- Remove or replace areas with penetrating and migrating contaminants, silicone coated surfaces, concrete curing compounds and form release agents, sealers, dirt, adhesives, oil, grease, wax, fatty acids, hydraulic fluid, cutting oils, paint, films, existing coating, laitance, glaze, efflorescence and all contaminants that will inhibit or prevent formation of a penetrating bond within the substrate.
- Mechanically profile the substrate to a concrete surface profile as required depending upon the substrate condition, bonding requirements, coating or system installation. Refer to the ICRI Technical Guideline # 310.2R-2013 for "Selecting and Specifying Concrete Surface Preparation."
- For assessment of decontamination, surface preparation and profile, perform a Tensile Adhesion Test per ASTM C-1583.

### **INSTALLATION:**

The proper application of the STRONGARD is the sole responsibility of the end-user.

The supervision and quality control of the project is the sole responsibility of the user.

Job site visits by SWI representatives are only for the purpose of making recommendations.

- Conduct a pre-installation conference on site with all parties in attendance to review the surface preparation, structural repair procedures, details regarding joints, crack isolation, transitions, flashing and any other conditions prior to commencing work. Application method and number coats are substrate dependent.
- For best results, install a field mock-up using the same equipment as in the construction procedures, for owner, architect and engineer approval of the following: surface preparation, adhesion, functionality, installation procedures and technique, finish, texture and color.
- Power wash at recommended psi to remove all contaminants.
- When power washing is not possible, thoroughly brush the substrate to remove small particles and dust. Clean with compressed air.
- All crack treatment details are required to be fully embedded and to not translate through the system.
- New and restored concrete are required to be thoroughly cured, free of surface irregularities and flat in line and grade
- Maintain dust free conditions throughout the installation as all contaminants will inhibit bond formation.
- Precondition properly stored material to 65°F - 75°F prior to mixing.
- Work according to the approved field mock-up.
- Provide sufficient ventilation to achieve optimal performance and a full and continuous cure.
- Follow all environmental conditions.

**MIXING:**

Disperse and eliminate settlement.  
Always pre-mix the pail before use.

- Pre-mix for 2 minutes.
- Use a 400 rpm drill with a mounted Jiffy mixer.
- Place at ¾ depth of the pail.
- Do not create a vortex or aerate the mix.

**PROCEDURES:**

Substrate must be completely dry.  
Sealant is skinned over prior to coating.  
Use as supplied.

Tape a clean line to work to.

Ensure good, intimate contact with the substrate.

If the surface is extremely porous, apply material onto a small test area and see if it holds. If it peels off, then a primer is required

If multiple pails are being installed; the contents of each new pail should be mixed into partially used pails to ensure color consistency. Repeat this throughout the project.

- Apply each coat in a continuous and uniform direction.
- Regularly check wet mil thickness and coverage rates.
- Apply evenly, keep a wet edge and back roll
- Avoid causing shadows, streaks or discoloration.
- Install in thin coats to reduce pin holing, achieve optimal adhesion and weatherproofing.
- Thoroughly scrub first coat.
- Allow to fully cure and remain dry between coats.
- Keep the surface dust free at all times.
- Apply the second coat.
- Install in a crosshatch method.
- Allow to fully cure.
- Discard coating once it begins to set up.
- Clean all tools and equipment with water while still wet immediately after use.
- Finish as per approved field mock-up.
- Open to the public after a 24 hour cure.

**Spray:**

Do not thin the product.  
Filter through a strainer screen.  
Use an airless sprayer (#35 orifice to start) with a reversible tip.

- Spray leaving no bare spots.
- Keep a wet edge and minimally overlap the spray.
- Angle the gun at 90 degrees to the surface.
- Back roll each coat.

**Roller:**

The nap thickness selection is based upon the intended substrate.

- Pour into paint tray.
- Dip and roll using a 1¼" medium to hard nap roller.
- Back roll each coat.

**EQUIPMENT AND TOOLS:**

Mechanical surface preparation

Power washer

Compressed air duster

Mil gauge

Grinder

Airless spray equipment

1¼" nap rollers

Nylon brushes

Paint tray

Variable speed industrial drill

Jiffy mixer model ES

### **PRECAUTIONS AND LIMITATIONS:**

Refer to corresponding Product Data Sheets, Installation Procedures and Safety Data Sheets of all products and systems prior to installation. Refer to [www.strongwall.com](http://www.strongwall.com) for the most recent information and updates.

- Allow repairs using polymer-modified products to cure a minimum of 10 days.
- Always apply to shaded areas of the building as not shaded areas may have high temperatures that may cause rapid skinning that could produce blisters. Never apply in direct sun.
- Substrate must be dry and not frost laden.
- High humidity and precipitation may interfere with application and adhesion.
- Never apply if the air temperature and is predicted to drop below 50°F unless an artificial heat source and enclosure are provided.
- Application at lower temperatures and higher humidity will prolong cure times.
- Do not expose fresh coating to water or excessive moisture prior to curing.
- If the coating sags or runs within 30 minutes the substrate may be too damp.
- Clean over spray or drips while still wet with soap and warm water.

### **SHELF LIFE:**

One year from date of manufacture as long as containers remain unopened and material is stored in a tempered area at 65°F to 75°F.

### **SITE, STORAGE AND TRANSPORTATION CONDITIONS:**

Materials should be delivered in their original packaging in containers with seals unbroken and bearing the manufacturers labels indicating brand name and directions for storage. Check pails upon receipt to make sure all is accounted for and has arrived in good condition. Store materials indoors, off the ground and in a dry location at temperatures not exceeding 80°F or lower than 65°F. Always keep the material out of direct sunlight and freezing temperatures in a protected environment. STRONGGARD must not freeze.

### **SPECIFICATION ASSISTANCE:**

Consult Strongwall Industries, Inc.

### **TESTING AND CHEMICAL RESISTANCE:**

The technical data contained herein is the result of tests made in the manufacturer's laboratories or independent laboratories using small scale equipment, ideal conditions 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.

Chemical resistance is a functional test usually limited to changes in weight or thickness measured in loss or gain and does not evaluate subject aesthetic issues. To determine aesthetic issues, Strongwall Industries, Inc. recommends testing the products or system in accordance with its intended end use prior to installation.

### **FIRST AID, HEALTH AND SAFETY:**

STRONGGARD is an alkaline, water-based product; avoid contact with skin or eyes. 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 in addition to medical attention. For respiratory problems, remove person to fresh air. In the case of ingestion, contact a physician immediately. Wear rubber gloves, coveralls, and safety goggles when applying this product. Contact a physician.

Users must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300. For further information and advice regarding transportation, handling, storage and disposal of chemical products, the user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data.

### **MATERIALS GUARANTEE**

Available upon request.

### **LEGAL DISCLAIMER:**

Strongwall Industries, Inc. products and systems are for professional use only and should be applied by professionals with prior experience with SWI products and systems or who have undergone training in the application of SWI products and systems. Published technical data and procedures are subject to change without notice. Call the corporate office at (201)-445-4633 or visit [www.strongwall.com](http://www.strongwall.com) for current technical data, guidelines or project specific recommendations.

Prior to each use of any product of Strongwall Industries, Inc., the user must always read and follow the warnings and instructions on the product's most current Product Label, Safety Data Sheet, Product Data Sheet, and Installation Procedures.

In addition, no materials guarantee will be issued with respect to appearance, color, fading, chalking, staining, shrinkage, peeling, normal wear and tear and improper application and/or surface preparation performed by the applicator. Damage caused by abuse, neglect, and lack of proper maintenance, acts of nature and/or physical movement of the substrate or structural defects is also excluded from the materials guarantee. SWI reserves the right to conduct performance tests on any material claimed to be defective prior to any repairs by the owner, general contractor or applicator. Nothing contained in any Strongwall Industries, Inc. literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each Strongwall Industries, Inc., product as outlined in the current Product Label, Product Data Sheet and Installation Procedures prior to use of the Strongwall Industries, Inc. product.

Strongwall Industries, Inc. warrants this product free from manufacturing defects if installed as directed and within the product's shelf life by a state-licensed waterproofing contractor over a clean, sound and properly mechanically prepared substrate. The user determines the suitability of the product for the intended use and assumes all risks associated with the use or application of the product. Users and/or buyers sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs. No claim of any kind shall be greater than the purchase price of the product in respect of which damages are claimed. No other warranties express or implied shall apply including any warranty of merchantability or fitness for a particular purpose. Strongwall Industries, Inc. shall not be liable under any legal theory for special or consequential damages. Strongwall shall not be responsible for the use of this product in a manner to infringe on any patent or any other intellectual property rights held by others. In addition, all recommendations, statements and technical data contained herein are based on information and tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty or materials guarantee, either expressed or implied. It is the user's responsibility to satisfy himself, by his own information and test, to determine the suitability of the product for his own intended use, application and job situation and the user assumes all risk and liability resulting from his use of the product. We do not suggest or guarantee that any hazards listed herein are the only ones that may exist. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss or damage directly or indirectly resulting from the use or inability to use the product. Recommendations or statements, whether in writing or oral, other than those contained herein shall not be binding upon the manufacturer, unless in writing and signed by a corporate officer of the manufacturer. Technical and application information is provided for the purpose of establishing a general profile of the material and proper application procedures. Test performance results were obtained in a controlled environment and SWI makes no claim that these tests or any other tests accurately represent all environments.

Keep containers tightly closed. Always keep out of reach of children. Never for internal consumption. For industrial use only. For professional use only. Do not allow application by untrained workers.