

# Sure-Tough ST 4009

## APPLIED POLYMER SOLUTIONS, LLC

### PRODUCT PROFILE

**GENERIC DESCRIPTION** **FLEXIBLE EPOXY MEMBRANE COAT** - two component 100% solids epoxy designed for sealing traffic surfaces exposed to vehicular or foot traffic. The toughness and elongation eliminate the need to repair hairline cracks. This product is formulated for use in a broadcast system as the basecoat prior to installing epoxy mortars or other suitable topcoats.

**RECOMMENDED USAGE** Recommended for priming with broadcasting as a crack bridging sealer before application of epoxy mortar or topcoats.

**COLORS STANDARDS:** clear (clear is opaque)

### CHARACTERISTICS/FINISHES

**SURFACE** Smooth. Non-skid media may be used to provide additional texture.

**PRIMERS** None Required.

**TOPCOATS/FINISHES** Many suitable toppings can be used. This would include products like epoxy mortars, two component urethanes or novolac coatings. Contact your sales representative for proper topcoat system selections.

### TECHNICAL SPECIFICATIONS

**SOLIDS BY WEIGHT** 100% (mixed)

**THICKNESS** 10-50 mils

**VOLITALE ORGANICS** Zero pounds per gallon

**MIX RATIO** Part A: 1 gallon (9.2 lbs) / Part B: 1 gallon (8.2 lbs.) (volumes & weights approximate)

**APPLICATION TEMP** 60°F - 90°F (15°C - 32°C)

#### CURE SCHEDULE

<b>Cure State</b>	<b>70°F (21°C)</b>
Pot Life	30 minutes
Light Traffic/Recoat	5-6 hours
Full Cure/Heavy Traffic	12-24 hours

**STORAGE TEMP** 65°F - 85°F (18°C - 30°C) in a dry area. Avoid excessive heat and freezing.

**SHELF LIFE** 1 years in an unopened container

**PACKAGING** All kits are premeasured, ready for blending and application

Size	Part A	Part B	Coverage (1,604/DFT) x gallons
2 gallon kit	1 gallon	1 gallon	64 - 320 sq. ft.
10 gallon kit	5 gallon	5 gallon	320 - 1600 sq. ft.
Drum Kits	55 gallon	55 gallon	3520 - 17,600 sq. ft.

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### TECHNICAL SPECIFICATIONS (CONTINUED)

<b>COMPRESSIVE STRENGTH</b>	4,100 psi @ ASTM D695
<b>FLEXURAL STRENGTH</b>	2,600 psi @ ASTM D790
<b>TENSILE STRENGTH</b>	2,450 psi @ ASTM D638
<b>BOND STRENGTH</b>	450 psi (concrete failure)
<b>GARDNER VARIABLE IMPACTOR</b>	160 in/lbs direct - Passed
<b>ABRASION RESISTANCE</b>	CS-17 wheel with 1000 gm/500 cycles = 6 mg loss
<b>ULTIMATE ELONGATION</b>	60%
<b>HARDNESS</b>	Shore D = 58
<b>VISCOSITY</b>	1,000-1,700 cps (mixed)
<b>WEATHERING</b>	Good Stability

<b>CHEMICAL RESISTANCE</b>			
<b>Ammonia</b>	B	<b>Sodium Hydroxide 50%</b>	D
<b>Citric Acid</b>	B	<b>Sulfuric Acid 10%</b>	C
<b>Corn Oil</b>	B	<b>HCl (aq) 36%</b>	B
<b>Lactic Acid</b>	B	<b>Nitric Acid 30%</b>	B
<b>Salt Brine</b>	C	<b>Phosphoric Acid 40%</b>	B
<b>Gasoline</b>	A	<b>Sodium Hypochlorite 3-5%</b>	A
<b>Motor Oil</b>	C	<b>MEK</b>	A
<b>Skydrol</b>	A	<b>Mineral Spirits</b>	B

Rating key: A - not recommended, B - 2 hour term splash spill, C - 8 hour term splash spill, D - 72 hour immersion, E - long term immersion. NOTE: extensive chemical resistance information is available through your sales representative.

### SURFACE PREPARATION

- SURFACE** All dirt, oil, dust, foreign contaminants and laitance must be removed to assure a trouble free bond to the substrate.
- MOISTURE** Allow concrete to cure for 28 to 45 days. Verify dryness by testing for moisture with a "plastic film" test; this can be done at room temperature by placing a 4' x 4' plastic sheet on the substrate and taping down the edges. If after 24 hours, the substrate is still dry below the plastic sheet, then the substrate is dry enough to start coating. Should moisture be present, perform Moisture Vapor Emission Rate testing using Anhydrous Calcium Chloride (ASTM F1869). Moisture content should not be in excess of 3 lbs. per 1,000 sq. ft. for coatings (5 lbs. for resurfacers) in a 24 hour period.
- MOST SURFACES** Aggressively shot-blast or mechanically prepare the substrate to properly profile the substrate and remove hardeners, curing compounds, sealers, laitance and other contaminants. All edges and around columns or beams should be mechanically scarified. All termination points should not be feather edged, but should be saw cut with the termination ending at the sawcut.
- FILLING & PATCHING** Voids, cavities, nail and bug holes should be filled with a recommended epoxy filler. All large cracks should be V cut and filled with an appropriate semi-rigid epoxy crack filler.
- JOINTS** All expansion joints should be filled with an appropriate joint filler. When overlaying an expansion joint, a single saw cut through the epoxy overlay will prevent random fracturing.

### APPLICATION

- MIXING** This product has a mix ratio of 9.2# part A to 8.2# part B or one part A to one part B by volume. Standard packages are in pre-measured kits and should be mixed as supplied in the kit. We highly recommend that the kits not be broken down unless suitable weighing equipment is available. After the two parts are combined, mix well with slow speed mixing equipment such as a jiffy mixer until the material is thoroughly mixed and streak free.
- THICKNESS** 10-50 mils. Apply the mixed coating by a flat flexible rubber squeegee so as to spread out the material in a uniform manner removing all excess material from the surface of the mortar; then backroll (removing all excess material) with a fine nap roller. Depending on the porosity of the substrate, it may be necessary to apply more than one coat of material to achieve uniform coverage. When applied properly, the texture of the substrate may still be visible. Aggregate should be broadcast into the applied material before applying suitable topcoats. Maintain temperatures and relative humidity within the recommended ranges during the application and curing process.

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### APPLICATION (CONTINUED)

**RECOAT/TOPCOAT** We recommend a suitable topcoat be applied only after broadcasting suitable aggregate into the basecoat. If you recoat or topcoat this product, you must first be sure that the coating has tacked off before recoating. All previous coats that were not applied as a broadcast, should be deglossed to insure a trouble free bond prior to application of recoats or topcoats. It is advisable to test topcoats for suitability prior to application when not in a broadcast system. Colder temperatures will require more cure time for the product before recoating or topcoating can commence. Before recoating or topcoating, check for epoxy blushes (a whitish, greasy film, or deglossing.) If a blush is present, it can be removed by any standard detergent, cleaner prior to topcoating or recoating. Many epoxy coatings and urethanes as well as multiple coats of this product are compatible for use. Contact your representative for further details.

**CLEAN UP** Citrus based cleaners or solvents such as Xylene.

*\*Restrict the use of the floor to light traffic and non-harsh chemicals until the coating is fully cured (see technical data under full cure). It is best to let the floor remain dry for the full cure cycle.*

### LIMITATIONS

**FLOOR CLEANING** Caution! Some cleaners may affect the color of the floor installed. Test each cleaner in a small area, utilizing your cleaning technique. If no ill effects are noted, you can continue to clean with the product and process tested.

\*Color stability may be affected by environmental conditions such as high humidity or chemical exposure.

\* Product is not UV color stable and may discolor if exposed to lighting such as sodium vapor lights.

\* Colors may vary from batch to batch due to variations in the silica filler.

\* Mortar colors are not from our standard color chart.

\* Substrate temperature must be 5 degrees F above dew point.

\* For chemical exposure areas, we recommend a suitable topcoat to reduce porosity and chemical migration.

\* Test data based on neat resin.

\*This product is not intended for use as a decorative coating or where color stability or visual appearance is of any significant importance. Its sole purpose is as a protective coating.

\*If a topcoat of a different color is to be used, multiple coats will be necessary to prevent bleed-through (discoloration)

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