

Sure-Tough ST 3103

APPLIED POLYMER SOLUTIONS, LLC

PRODUCT PROFILE

GENERIC DESCRIPTION CLEAR WATER BASED (fast set) EPOXY COATING - is a two component water based epoxy coating that exhibits excellent characteristics that rival solvent based products. SURE-TOUGH ST 3103 has superb chemical resistance, abrasion resistance, and substrate penetration.

RECOMMENDED USAGE Recommended for priming or coating concrete, wood or masonry. This product can withstand exposure to many common solvents and chemicals

COLORS Clear only. The clear is not water clear and is not suitable for topcoating over previously color coated floors. The clear is suitable as a primer or concrete sealer only.

CHARACTERISTICS/FINISHES

SURFACE Satin gloss (>60 at 60 degrees @ Erichsen glossmeter)

PRIMERS Self Priming for multiple coats or 100% solids epoxy and urethane coatings

TOPCOATS/FINISHES Optional – Many products are suitable as topcoats including multiple coats of this product. For added chemical resistance, color stability, or UV stability, topcoat with a suitable aliphatic urethane.

TECHNICAL SPECIFICATIONS

SOLIDS BY WEIGHT Mixed: 43% (+/- 2%)

THICKNESS 5-7 mils (wet) / 2-3.5 mils - dry film thickness

VOLITALE ORGANICS 1.2 pound per gallon (mixed)

MIX RATIO Part A: 4 gallon / Part B: 1 gallon by volume approximate.

APPLICATION TEMP 55°F - 90°F (12°C - 32°C)

Cure State	70°F (21°C)
Pot Life	2 hours
Light Traffic/Recoat	2-4 hours
Full Cure/Heavy Traffic	12-24 hours

**Full chemical resistance may not be reached for up to 5 days.*

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/WFT) x gallons
2 gallon kit	1.6 gallon	.4 gallon	460 - 640 sq. ft.
5 gallon kit	4 gallon	1 gallon	1150 - 1600 sq. ft.

Published technical data and instructions may be modified at any time without prior notice. Please contact your Applied Polymer Solutions representative with any questions.

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TECHNICAL SPECIFICATIONS (CONTINUED)

CHARACTERISTICS	Gloss - 40-80 at 60 degrees
VISCOSITY	400-900 cps (mixed)
BOND STRENGTH	425 psi (concrete failure)
HARDNESS	Shore D = 62
GARDNER VARIABLE IMPATOR	50 in/lbs direct - Passed
ABRASION RESISTANCE	CS-17 wheel with 1000 gm/500 cycles = 45 mg loss
FLEXIBILITY	No cracks on 1/8" mandrel
WEATHERING	Good Stability
DOT CLASSIFICATIONS:	Not regulated

CHEMICAL RESISTANCE			
Ammonia	C	Sodium Hydroxide 50%	B
Citric Acid	B	Sulfuric Acid 30%	A
Corn Oil	B	HCl (aq) 36%	B
Lactic Acid	B	Nitric Acid 30%	A
Salt Brine	C	Phosphoric Acid 40%	B
Gasoline	B	Sodium Hypochlorite 3-5%	A
Motor Oil	C	MEK	A
Skydrol	B	Mineral Spirits	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 four to one mix ratio by volume. 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. Avoid whipping air into the coating. Improper mixing may result in product failure.
- THICKNESS** 5-7 mils (wet). The mixed material can be applied by brush or roller. Maintain temperatures within the recommended ranges during the application and curing process. Properly prime the substrate. It is best to maintain a wet edge to avoid roller marks. Direct sunlight or high temperatures may cause visible roller marking during application. Too thick of an application may result in solvent entrapment and product failure.

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APPLICATION (CONTINUED)

RECOAT/TOPCOAT Multiple coats of this product are acceptable. The information on the front side are reliable guidelines to follow. However, it is best to test the coating before recoating or topcoating. This can be done by pressing on the coating with your thumb to verify that no fingerprint impression is left. If no impression is created, then the recoat can be started. Always remember that colder temperatures will require more cure time for the product before recoating can commence. Before recoating or topcoating, check the coating to insure no contaminants exist. If a blush or contaminants are present on a previous coat, remove with a standard detergent cleaner. When recoating this product with subsequent coats of the urethane, it is advisable to apply the recoat before 24 hour passes. Also, it is advisable to degloss the previous coat to insure a trouble free bond.

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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