

Sure-Tough ST 7017

APPLIED POLYMER SOLUTIONS, LLC

PRODUCT PROFILE

GENERIC DESCRIPTION **DENSIFYING/SATURANT** - is a one component water based sodium methyl silicate solution designed to impart water repellency to a wide variety of surfaces. The silicate reacts with moisture and carbon dioxide in the air to form an insoluble water resistant resin. This product offers low water absorption that is maintained for long periods of time. Even exterior applications with ST 7017 show little change in water repellency over a five to ten year period.

BENEFITS OF USE Concrete sidewalks, drives or floors:

- * Increases durability by improving resistance to freeze thaw effects (horizontal surfaces that bear traffic will need to be retreated more often to maintain optimum performance)
- * Improves weathering and reduces efflorescence of natural stone, precast stone and ceramics.
- * Protects and fortifies concrete as it seals against moisture damage.
- * Product will not discolor or stain under normal use
- * Application of the ST 7017 will reduce dusting and increase concrete life

COLORS clear to very opaque color - will not change the color of the concrete.

CHARACTERISTICS/FINISHES

SURFACE This product does not change the overall appearance of the substrate. After the material is applied and allowed to dry for 24 hours, it will not be readily apparent that the application has occurred, except the concrete will be fortified and exhibit excellent water repellency.

PRIMERS None required. If applying multiple coats, a wet edge should be maintained. If the ST 7017 dries between applications, water spotting may result.

TOPCOATS/FINISHES None required. Multiple coats of this product are compatible (see information under primer).

TECHNICAL SPECIFICATIONS

VOC Water based material with essentially no VOC's

RECOMMENDED THICKNESS Apply until surface is saturated without puddles.

ABRASION RESISTANCE The application of this product will increase the abrasion resistance of most substrates. Results will vary according to substrate type.

ADHESION Because this material becomes an integral part of the surface that is coated and does not form an impermeable barrier, delaminations do not occur.

PACKAGING	Size	Part A	Coverage (1,604/WFT) x gallons
	1 gallon kit	1 gallon	When the surface is fully saturated, coverage will depend on the absorptivity of the substrate resulting in 100 to 400 square feet per gallon coverage.
	5 gallon kit	5 gallon	
	55 gallon kit	55 gallon	

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

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TECHNICAL SPECIFICATIONS (CONTINUED)

PERFORMANCE OF ST 7017

TYPE OF MATERIAL	% ABSORPTION
shale	0.02
quarry stone	0.49
quarry stone (untreated)	2.55
white kaolin	0.40
white kaolin (untreated)	12.0
streator	0.30
streator (untreated)	7.60

OTHER VARIOUS SUBSTRATES

TYPE OF MATERIAL	% water exclusion
limestone	67.0
sandstone	79.5
concrete block	75.5

*The percent water exclusion is based on and in comparison to an untreated control sample.

*When properly used, this product can reduce water absorption while still maintaining greater than 50% breathability. (Details of these test procedures can be found in the ASTM standard C-67 and U.S. Federal Specifications SS-W-110C.)

SURFACE PREPARATION

SURFACE All dirt, oil, dust, foreign contaminants and laitance must be removed to assure a trouble free application. Under certain conditions, a precipitate of sodium carbonate may be deposited as the water repellent dries. Substrates with a high acid level will react with the water repellent and cause some neutralization of the material before it is absorbed into the surface leaving a white precipitate. This white precipitate is more readily noticeable on darker concrete and substrates. A test should be made to determine that none of these conditions exist. The substrate can be damp prior to application but there should be no standing water or puddles.

APPLICATION

MIXING Stir material before using.

THICKNESS Apply material without thinning with a brush or spraying equipment. Avoid rundown, overlapping or second coating on vertical surfaces. On vertical surfaces, work from the top down. When applying the material, always maintain a wet edge as this will reduce any chance of water spotting. When spraying, this product is caustic and can kill vegetation, stain or etch glass, aluminum, metal and plastic. If contamination does occur, rinse it off with water immediately. If a white precipitate of Na_2CO_3 should form due to high acid content, rundown, overlapping, or second coating, rinsing with a stiff broom will usually be able to remove the spotting. However, it may be necessary to remove the white spots with a wire brush or blasting. Since ST 7017 water repellent does not seal pores, water can evaporate through the wall face (the wall can breathe), if water gains entrance at sills, copings, or faulty flashings etc., it can still be carried through brick by capillarity. However, if capillary water is traveling toward the treated face, most of it will be stopped at the depth to which the ST 7017 has penetrated. At this point it will evaporate, passing through the treated area as water vapor. This normally will present no problem. However, if the capillary water source contains soluble salts, they will be deposited at this point within the substrate where this water evaporates. In essence, this reduces visible efflorescence but there is this danger: If capillary water deposits excessive amounts of soluble salts, their crystalline growth can develop sufficient pressure resulting in spalling. Spalling may also result from substantial pressures of water freezing behind the face of the surface before evaporation can occur. These conditions both develop from outside sources of water. This product is developed to prevent the migration of water beneath the treated surface while still allowing water vapor to escape. Applications of this material will prevent positive side absorption of water and improve the capability of the substrate to resist spalling. Although the material will strengthen the substrate, outside sources of water may cause problems if the hydrostatic pressure is sufficiently great.

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APPLICATION (CONTINUED)

RECOAT/TOPCOAT Normally one coat is all that is required. It is best to make a second pass when required only while the substrate is still wet. Avoid overlapping wet to dry as this can cause water spotting.

CLEAN UP Citrus based cleaners or any suitable detergent and water.

**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! Although very unlikely, some cleaners may affect the color of the treated surface. 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.

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

*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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