## TSSPRO600

### Product Data Sheet and Application Guide TSSPRO POROUS PRO PLUS

Water-based protection and consolidation plus efflorescence prevention

**DESCRIPTION:** TSSPRO600 is new. It is the only sealant of its kind: it represents breakthrough technology in water based weatherproofing protection for concrete based products and for general stone that is porous or soft or friable:

- it is water/salt water repellent,
- it is extremely deep penetrating,
- is a powerful consolidator making the substrate stronger resisting deterioration thus lasting longer.
- it prevents efflorescence and has
- minimal change to the natural color of the surface.

TSSPRO600 was formulated to significantly improve the protection afforded by conventional sealants for protecting concrete tiles and pavers, porous stones, and for soft or friable or flaking stone, brick, roof tiles, floor tiles, grouts and more.

WHAT IT UNIQUELY DOES: In addition to it its water base, TSSPRO600 has three chemical components that uniquely work and sequence together. The first is a tetrahedral silicate monomer that forms a true nano-scale molecular structure that rises to the surface, the second is a oligomeric propyl siliconate that penetrates deep into the substrate, the third is a chemical agent that helps pull and disburse the oligomeric propyl siliconate still deeper into the substrate.

As the water evaporates the siliconates form a molecular covalent bond (they cross-link) with themselves, each other and with the substrate. The oligomeric propyl siliconate continues building and solidifying bonds for up to 48 hours – it completes consolidation. The result is:

- a one of a kind nano-scale molecular surface layer is created that rejects water and dissolved salts, chlorides and minerals in the water,
- the surface layer is molecularly bonded to the substrate and the consolidating siliconate below,
- the consolidating siliconate penetrated deeply into the substrate creating increased strength and durability and is also hydrophobic (resists water).
- The substrate is now much stronger, will deter the effects of traffic and use, weather and temperature fluctuations for years, will look

better longer and significantly increase the useful life of the substrate.

TSSPRO600 will also prevent efflorescence in concrete, materials containing Portland cement and alkali surfaces such as limestone, marble or grout. TSSPRO600 provides long lasting protection and does not alter the natural appearance of most substrates.

In addition to preventing efflorescence, TSSPRO600 is a powerful sealer forming a virtually impervious barrier to water and dissolved materials in water such as pool salt and pool chemicals. The two phased siliconate technology incorporated in TSSPRO600 provides water repellant protection superior to silane and siloxane emulsions, silicates, petroleum distillates and other common water repellants.

**FEATURES AND BENEFITS:** TSSPRO600's advanced technology produces application friendly properties, including ease of application and rapid curing for quick usability and service. Treated surfaces also discourage the growth of discoloring mold and mildew.

#### **Benefits**

- Easy to use, easy to apply, rapid drying
- Strengthens/consolidates new and deteriorated deteriorating substrates
- Suitable for restoration
- Lengthens and extends the life of the substrate
- Efflorescence repellency
- Salt water proof prevents salt water erosion
- Non-film forming
- Only one saturation coat required
- Superior coverage
- Resistance to molds, fungus, algae
- VOC compliant

#### **Features**

- Dries for foot traffic in two hours or less
- Protects concrete and treated substrates from deterioration caused by traffic/use and water absorption, snow, ice and salt, freeze thaw spalling and salt water damage
- Extremely deep penetration
- Retains natural look minimal if any color change
- Excellent long-lasting beading

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- Not influenced by UV rays
- Where salt water erosion already exists, can slow rate of deterioration
- Treated surfaces do not trap moisture
- Low odor; use inside or outside
- Makes stain and dirt clean up much easier
- Water based VOC compliant
- Non-flammable

#### **INSTALLATION**

TSSPRO600 is designed to increase and lengthen the useful life of the substrate. It is a salt water and efflorescence repellent on patios, decks, walkways, floors, showers, decorative landscape stone, around swimming pools, spas and waterfalls, grout and unglazed tile floors, kitchens, bathrooms and showers; the product will prevent the penetration of salts and minerals contained in water, including the water in structurally sound, crack-free, treated surfaces. TSSPRO600 will inhibit capillarity action from within a substrate and penetration of exterior salts (white calcium carbonate powder) and forms a revolutionary water resistant seamless surface matrix.

**SUBSTRATES AND SURFACES:** Use on uncoated, vertical or horizontal, interior or exterior surfaces. TSSPRO600 provides protection for:

- Concrete, pavers, tiles and products made with concrete
- High porosity natural stone: (flagstone, limestone, sandstone, cantera, quartzite, etc.)
- Grout and mortar
- Low fired clay products (roofing tiles, common brick, floor tiles, terracotta)
- Artificial stone

PREPARATION: Protect people, passersby, home/building occupants, vehicles, plants, painted surfaces, anodized aluminum, wood and all non-masonry surfaces from product, residue, splash, fumes and wind drift. Use polyethylene or other proven protective material. Surface to be treated <u>must be clean.</u> TSSPRO600 can be applied on a damp surface - not wet or with standing water. Allow substrate surface 24 hours to dry after heavy rain. Remove dirt oil, grease, paint waxes, efflorescence and any surface sealers. Ensure fresh air entry and cross ventilation during application and drying. Do not dilute or alter.

**ALWAYS TEST** a small area of each surface to confirm suitability possible color change I.E. desired results before starting overall application. Test with the same equipment, recommended surface preparation and application procedures.

**SURFACE AND AIR TEMPERATURES:** For maximum effectiveness surface and air temperatures should be 50-95°F (10-35°C). Dry time will be slower at lower temperatures.

- Ambient air temperatures ideally should be 50 - 95° F(10-35°C); Temperatures above 95°F are marginal, that is the carrier will evaporate too fast not allowing the active silicone to chemically react with the substrate AND COULD DEPOSIT A WHITE FILM ON THE SURFACE.
- When surface temperatures are too hot, the carrier (water) will evaporate too fast and preventing the siliconate elements to penetrate and form an adequate bond which can lead to a shorten product life cycle. Typically, surface temperatures above 95° F can create this situation.
- Where ambient temperatures typically reach above 95°F in the afternoon, application should be scheduled for the morning where it will be cooler. Hand held surface temperature reading devices are inexpensive and eliminate guess work.
- Air temperature below 55°F will cause the product to cure slower increasing the probability of less than adequate bonding.
- If surface temperature will drop below freezing within 48 hours do not apply.
- Do not let product freeze freezing will render product ineffective.

**EQUIPMENT:** The easiest method of application is with a low-pressure pump-up sprayer which can be purchased inexpensively at most hardware stores or with a brush or paint roller.

**APPLICATION:** Always wear protective gloves. Avoid getting on skin – product is an irritant and can burn with extended exposure. Do not get in eyes. Always wear protective eyewear. Remove contaminated or saturated clothing immediately. Before applying read all sections above and below; do not dilute or alter; <u>ALWAYS TEST</u> a small area of each surface to confirm suitability



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and desired results before starting overall application. Test with the same equipment that will be used in application.

General Horizontal Application:

- Apply an even saturation coat of TSSPRO600 with either a brush, paint roller, low-pressure pump up sprayer or high pressure commercial spray rig; rinse out pump up sprayer, wash brush or roller with water when finished.
- Complete area to be treated in one continuous saturation application
  - Continue to apply product if the product continues to be absorbed and surface remains dark (damp to wet appearing). Very porous stone such as limestone will absorb much more sealant than a less porous stone such as a typical flagstone.
  - Overlapping or applying over a previously applied area that has dried will slightly darken the surface color.
  - Avoid allowing product to puddle and dry on the surface; use a blower to blow off excess product or a clean brush/broom to evenly distribute.
  - Protect from rain and sprinklers for three hours after application.

#### Vertical Application

- For best results apply on a dry surface
- Apply an even saturation coat
- Apply from the bottom up. Apply enough material to create a 6" to 8" rundown below the spray contact point. When using a brush or roller also saturate the substrate vertical surfaces leave less time for penetration.
- Brush out heavy runs and drips that do not penetrate after a few minutes – these can leave visible drip lines if allowed to dry.
- Protect from rain or sprinklers for three hours after application.

**TRAFFIC:** Pedestrian generally 2 hours; light vehicular, 2 hours. Note: Dry time is dependent on temperature and humidity. Cooler weather or high humidity may affect dry time and availability for use.

#### **APPROXIMATE SHIPPING WEIGHTS**

1 Gallon (4.39L) 8.50 lbs. 5 Gallon Pail (21.94) 42.50 lbs.

#### **DILUTION**

Apply as packaged. Do not dilute or alter or use for applications other than as specified.

#### **COVERAGE RATE:**

Coverage varies based on porosity and texture of the surface:

- Porous substrates range (medium to high) typical flagstone, slate: 175 – 200 sq. ft. / gal.
- Actual coverage will be determined by the porosity of the substrate

Re-application may be desired every five years. A small area should be tested for product acceptance.

#### **LIMITATIONS**

- Limited shelf life remains storage stable for approximately 12 months in sealed containers, use within 6 months where possible
- TSSPRO600 is an alkaline material. Substrates such as glass, wood, plastic and metal should not be treated with TSSPRO600. TSSPRO600 will leave white deposits on these alkaline sensitive materials
- May slightly darken some stone always test a small area prior to application
- Will not prevent water penetration through material defects or structural cracks/fissures in the material.
- Will not stop salt water erosion if the erosion has already started
- Do not allow product to freeze

#### CAUTION! HARMFUL IF SWALLOWED. EYE, SKIN AND RESPIRATORY IRRITANT.

If swallowed DO NOT induce vomiting. Call physician immediately. In case of: Eye contact flush with large amounts of room temperature water for 15 minutes. Skin contact- wash thoroughly with soap and water. Irregular or stopped breathing-administer oxygen, give artificial respiration. Get medical attention (immediately). Do not breath vapors or spray mist. Wear respirator approved by NIOSH. (NIOSH/MSHA TC 23C or equivalent).

## FOR EXTERIOR & INTERIOR USE Use with adequate ventilation Keep Out of Reach of Children

24-Hour Emergency Information:



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INFOTRAC at 800-535-5053

#### **CUSTOMER CARE**

Factory personnel are available for product, environment and job-safety assistance with no obligation. Call 877-333-8188 and ask for Customer Care - technical support.