



DESCRIPTION: TSSPRO650 is a ready-to-use consolidation treatment that stabilizes, strengthens and densifies natural stone and masonry by replacing the natural binding materials lost due to deterioration, decay, weathering and other causes. When properly applied, TSSPRO650 penetrates deeply, 10-20cm (4-8 inches) and retains the substrate's natural vapor permeability and is water/salt water repellent.

In instances where salt water can continue to be on the surface, a second water resistant surface silicone can be added which will form a matrix that repels salt water while TSSPRO650 is curing.

In addition to the general consolidation of severely deteriorated masonries, TSSPRO650 is an effective pretreatment for friable substrates that need to be strengthened before cleaning, patching or coating and can be very effective at slowing or preventing on-going salt water erosion. TSSPRO650 may be used on most types of natural stone, concrete, stucco, brick, terra-cotta, etc.

TSSPRO650 is based on a silane with an extremely small molecular structure which enables them to penetrate deeply into deteriorated masonry surfaces, collecting at contact points between individual stone grains. An internal catalyst and atmospheric humidity then convert the silane into silicon dioxide (SiO₂) a silica-gel like binder which binds the stone particles together. The newly deposited silica-gel like binder replaces the stone's and masonry's natural cement which has been lost due to weathering influences exhibiting chemical characteristics and thermal expansion/contraction characteristics which are virtually identical to that of natural stone.

TSSPRO650 contains a water repellent and will repel water and salts in the water after the surface cures, about one hour. Full curing may take as many as 4 – 5 days.

BACKGROUND: Although historically natural stone and masonry are one of the most durable materials, it has become apparent in recent years, however, that these materials are not as enduring as once believed. Placed in contemporary urban environments, these "timeless" materials can decay at alarming rates. Some deterioration may be attributed to the natural weathering process. In

the case of masonry, the majority of the deterioration, however, is the result of oversights in use and maintenance of the masonry, and of the impact that industrialization has had in the form of "acid deposition".

TSSPRO650 treatment was created to restore the structural integrity to crumbling, decaying natural stone and masonry and/or provide a means of controlling future decay.

FEATURES

- Multi-component - strengthens deteriorated/deteriorating stone.
- Will help in slowing or halting salt water erosion
- No aesthetical change to substrate.
- Small molecule, low viscosity allows deep penetration. Does not form surface crust.
- The cross-linking binder is mineral – similar to the original stone.
- Rapid initial drying – no dirt attraction.
- Forms no by-products harmful to the masonry.
- Treated surfaces "breathe" – does not trap moisture – cures water resistant.
- TSSPRO650 is very acid rain resistant.
- Once surface cures, about one hour, surface will be water repellent

ALWAYS TEST a small area of each surface to confirm suitability and desired results before starting overall application. Be sure to become familiar with multiple app-steps (see General Application Paragraph). Test with the same equipment, recommended surface preparation and application procedures planned for general application.

The test area is necessary to confirm application procedures under job site conditions and allow calculation of the consumption rate. The on-site tests also provide a visible sample of the effects of the treatment on actual job surfaces.

PREPARATION: Protect people, vehicles, property, metal, glass, foliage, painted surfaces and all non-masonry surfaces from contact with product, fumes or wind drift. Protect and/or divert pedestrian and auto traffic. Ensure fresh air entry and cross ventilation during application and drying. Extinguish all flames, pilot lights and other potential sources of ignition during use and until all vapors are gone. When applying to exteriors of occupied buildings, make sure all windows,



exterior intakes and air conditioning vents are covered and air handling equipment is shut down

DO'S - DON'TS: READ BEFORE APPLYING

ALWAYS TEST each type of surface for penetration, appearance and protective ability before overall application.

DO NOT apply on dense stone. TSSPRO650 will not absorb into dense stone. Test a small area, if the product does not absorb and stays on the surface, the substrate is non-compatible. Wipe product off test area.

BE SURE test area and application area are THOROUGHLY DRY before application. Applying the product over an area that is not dry will result in the product not penetrating and a white haze may form on the surface that is difficult to remove.

DO NOT APPLY OVER PREVIOUSLY SEALED AREAS: If unsure if application area has been sealed before, test a small area. If product does not absorb into the substrate, this indicates prior sealing or too dense a substrate; applying the product over a previously sealed area will result in a white haze forming on the surface that is difficult to remove.

SURFACE TEMPERATURE: Do not apply if the surface temperature exceeds 90° F. Ideal application temperature is a surface temperature of 41 to 68°.

REMOVE EXCESS PRODUCT: Once product has been absorbed, wipe off or blow off any excess product remaining on the surface, do not leave "puddling" or pooling in low areas.

BE SURE no water is applied, or rain occurs for minimum 24 – 48 hours prior to application depending on amount of rainfall. If area to be treated has been underwater for long periods such as a waterfall or the backside of the substrate is adjacent to water, additional drying time will be necessary. If unsure of substrate moisture content, test with a moisture meter. The area to be treated must be thoroughly dry.

during application and until all vapors have dissipated.

CLEANING THE SUBSTRATE: Following on-site testing, clean the area with the appropriate product, power washing is recommended unless too much surface will be lost. In most cases, surface contaminants such as carbon crust, salts, pigeon droppings, mildew and atmospheric stains must be completely removed to assure thorough penetration of TSSPRO650. In addition, surface sealers and repellents which may have been applied must be thoroughly removed.

In cases where pressure washing would remove an unacceptable level of surface detail, TSSPRO650

Consolidation Treatment may be applied to the soiled surface to pre-consolidate the stone. If such pre-consolidation is necessary, further evaluation will be required to ensure that no undesirable reactions take place between the consolidation treatment and the surface contaminants which may interfere with further conservation measures, i.e. subsequent cleaning, general consolidation, patching/repair, etc.

Equipment: Apply by low-pressure spray, brush or dipping. Larger surfaces should be treated using low-pressure spray equipment, most pump up sprayers will work fine. Mobile objects such as sculptures are best treated indoors by dipping or with the use of compresses.

APPLICATION

Dilution: Do not dilute or alter before use.

Coverage Rates; Coverage rates vary depending on the substrate and degree of deterioration.

APPLICATION INSTRUCTIONS

Initial Direct Sunlight Protection

- Surface temperature should be relatively cool to prevent too rapid evaporation of TSSPRO650 and to ensure proper penetration.
- Do not apply if the surface temperature is greater than 90° F.
- Protect surface to be treated from direct sunlight for several hours prior to beginning application if possible.
- Whenever possible, begin treatment when surfaces are shaded.
- Do not apply during rain or to wet surfaces, Surface should be completely dry.

General Application

Apply TSSPRO650 in repeated applications referred to as "app-steps." An app-step consists of two and sometimes three successive saturating applications depending on the amount of deterioration. Wait 5 – 15 minutes between app-steps; all of the material will have been absorbed and the surface will have started drying but is still wet. Apply until product no longer absorbs into the substrate – do let excess product dry on the surface, remove any excess.



Product Data Sheet and Application Guide

TSSPRO650 CONSOLIDATING DENSIFIER

Natural stone densifier and consolidator Treatment

If a second treatment is necessary, allow one full week curing time following first treatment. Deep penetration with maximum saturation is critical to the long-term benefits of any consolidation treatment. Because of the low viscosity TSSPRO650 can penetrate 4 – 8 inches.

Vertical Surface Treatment

Vertical surfaces are more difficult to get proper product demonstration. 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, complete saturation is important.

LIMITATIONS

- Will not prevent water penetration through structural cracks, defects or open joints.
- Not recommended for below-grade application.
- Although it can greatly slow and delay salt water erosion it may not eliminate all erosion.
- Limited shelf life – remains storage stable for approximately 12 months in sealed containers.
- Not suitable for architectural concrete block, dense stone, and some types of marble.

Surface and Air Temperatures: Ideal surface and air temperatures would be between 41–68°F (5–20°C) during application. Relative humidity should be greater than 40%. Excessive surface heating can be prevented by shading with awnings.

Low Humidity Environments: In low humidity areas – surface may need to be dampened prior to application.

Cleanup

Clean tools and equipment immediately with mineral spirits, denatured alcohol or an equivalent cleaning solvent. Remove over spray and spills as soon as possible.

Storage and Handling

Store in a cool, dry place and away from potential ignition sources. Keep tightly closed when not dispensing. Published shelf life assumes upright storage of factory-sealed containers in a dry place.

Maintain temperature of 45–90°F (7–33°C).

REGULATORY COMPLIANCE

VOC Compliance; TSSPRO650 Consolidation Treatment is compliant with the following national, state and district AIM VOC regulations:

US Environmental Protection Agency - It is not compliant with the following:

- California Air Resources Board SCM Districts
- South Coast Air Quality Management District
- Maricopa County, AZ
- Northeast Ozone Transport Commission
- Manufactured and marketed in compliance with
- USEPA AIM VOC regulations (40 CFR 59.403)

SAFETY INFORMATION

TSSPRO650 Consolidation Treatment is a solvent carried product and may cause symptoms typical with organic solvent exposures. This is a combustible material. Use appropriate ventilation, safety equipment and job site controls during application and handling. Read the full label for precautionary instructions before use.

First Aid:

Ingestion: If swallowed, call a physician immediately. Do not induce vomiting except at the instruction of a physician. If vomiting occurs, keep head below waist to prevent entry of liquid into lungs. **Eye Contact:** Rinse eyes thoroughly for 15 minutes. Get medical assistance. **Skin Contact:** Rinse thoroughly. Get medical attention if irritation persists. Launder contaminated clothing before reuse. **Inhalation:** Remove to fresh air. Give artificial respiration if not breathing. Get immediate medical attention.

24-Hour Emergency Information:
INFOTRAC at 800-535-5053

CUSTOMER CARE

Factory personnel are available for product, environment and job-safety assistance with no obligation. Call 888-958-0556 and ask for Customer Care - technical support. Please visit our website at www.texasstone sealers.com