

TRÜNANO™ STONE ARMOR

Complies with SCAQMD
 VOC: Less than 95 g/L
 LEED 7 Points CARB

DESCRIPTION

TruNano™ Stone Armor is a clear coating for Marble, Limestone, Travertine and Onyx surfaces. TruNano™ Stone Armor protects stone from normal destructive forces, providing a long lasting barrier with superior resistance against moisture intrusion, stains, mold, food acids abrasion and chloride ion penetration. Available in a gloss or satin finish, TruNano™ Stone Armor is ideal for use in kitchens, restaurants and harsh environments on old and new honed or polished stone surfaces.

SURFACE

Marble, Limestone, Travertine, Tumbled Marble, Onyx and other natural stone.

SOLUTION

Moisture, Stains, Mild Acids and Abrasion.

CHARACTERISTICS

Color: Clear
 Finish: Gloss or Satin
 Vehicle Type: Solvent Base
 Flash Point: (C Penskey-Martens closed Cup)
 -9C/15F
 VOC: less than 100 g/L
 Weight per Gallon: 7.36 lb
 Non-breathable
 Not for use as a hydrostatic barrier

COVERAGE

Substrate	Sq Ft / gal
Limestone	250-300*
Marble	300- 400
Travertine	300-400
Tumbled Marble	300-400
Onyx	300-400
Polished Marble	300-400

Coverage will vary depending on the porosity and texture of the substrate.

*Requires 2 coats

SPREAD RATE

Recommended Spread Rate per coat:
 Wet mils: 4.0
 Dry mils: 1.5

EXPECTED WEAR

3 to 5 years under normal conditions.

SURFACE PREPARATION

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, and other foreign material.

Removal of all existing silicone sealers

To determine if the surface is previously sealed or coated, sprinkle water onto the surface. If the water is absorbed and the surface becomes darker it has not been sealed. If the water beads up, there is a coating or sealer that must be removed to allow adhesion of Stone Armor to the substrate. It is crucial to ensure adhesion of the coating. Remove all surface contamination by washing with a pH neutral cleaner, rinse thoroughly and allow to dry. To remove silicone sealers, clean surface with a solution of 80% water and 20% vinegar. Wet surface with water and vinegar solution and let stand 10 minutes. Remove solution and rinse thoroughly with clean water. Allow the surface to dry thoroughly.

Polished Stone Surfaces

On new, unsealed marble, travertine or onyx, lightly sand the surface with 360 to 400 grit sandpaper using a random orbital sander. This abrasion will allow for proper adhesion of the coating. Some stones may be too hard for the 360 or 400 grit abrasives to cut through. If this occurs, go down in grit size to 220 or even 120 until the surface is abraded. Then go back up in grit size to finish at 360 to 400. Make certain the surface doesn't contain "J" hooks", half moons" or other types of scratches as they may appear under the clear coating, requiring re-sanding and starting over.

Once sanded, clean the surface well with a 50/50 mixture of water and acetone to remove all slurry and dust from sanding. Straight acetone never completely removes slurry, therefore it must be mixed with water to hydrate the dry dust. It is extremely important all dust is cleaned out of the pores of the stone, otherwise you won't achieve adhesion where dust remains. Stone needs to be tack clothed and completely dry before application of coating. If using a moisture meter, moisture should be less than 3% for safe application.

Honed Stone Surfaces

On new, unsealed honed marble, travertine, limestone or onyx there is no need to abrade the surface by sanding. Clean the surface well with 50/50 mixture of water and acetone to clean any dust or dirt off the surface and in the pores. Allow to dry completely, tack cloth and begin application. If using a moisture meter, moisture should be less than 3% for safe application.

Existing Previously Sealed Stone Surfaces

On all previously sealed marble, travertine, limestone, or onyx remove the existing sealer prior to application of Stone Armor. Once the sealer is removed following the methods outlined below, prepare the surface as described above. There are a several simple, effective methods for removing sealer. Boiling hot water or steam cleaning, if conditions allow (usually not in a residence). Alternately, mix 20% vinegar to 80% water and saturate the surface for approximately 10 minutes, wipe clean and neutralize with 50% baking soda and water, then wipe down with 50/50 mixture of acetone and water and allow to dry completely. If using a moisture meter, moisture should be less than 3% for safe application.

Exterior Surfaces

It should be noted that on exterior surfaces, coating will yellow slightly over time.

APPLICATION INSTRUCTIONS**Test Area**

Due to the wide variety of colors and textures of stone and the various methods of application and environments, test Stone Armor in an inconspicuous location to ensure adhesion and determine that the desired look is achieved. There will be a slight enhancement or change in appearance from the natural stone.

Application

Once surface had been properly prepared and is clean, dry, and free of any prior silicon based sealers (Stone Armor will not adhere to silicone), mask off any adjacent surfaces to keep them free of drips or accidental coating. Stone Armor is available in two finishes, satin or gloss. Make certain the correct product is applied to achieve desired finish. The application area must be free of dust and other contaminants that may settle into the finish during application and become part of the surface. Always wipe surface with a tack cloth prior to application to remove any small pieces of dust.

This is a 2 component product. Open Stone Armor. Stir contents thoroughly to suspend the nano particles that have settled to the bottom. In a separate, clean container large enough to accommodate equal parts Stone Armor and Quick Cure, mix 1 part Stone Armor and 1 part Quick Cure and stir thoroughly. Make certain to re-stir every 15-20 minutes to ensure proper performance.

Using an ultra smooth high density foam roller (available at most major home improvement stores), pour the 1:1 mixture of Stone Armor and Quick Cure into a roller pan and completely saturate the roller with the mixture. Apply a liberal coat in a cross-pattern; left to right, then up and down as quickly as possible, making sure there is always plenty of material in the roller so no spots are missed. Desired wet film thickness (WFT) is approximately 4.0 mils. Observe the surface right away to make certain there are no lines or roller marks. If lines or marks are visible, quickly touch up and avoid any further contact to the surface as the working time is very short. Over-working the coating will ruin the finish. Over the next 30 minutes, the coating will level further and become more smooth.

For limestone or sandstone, apply one coat in each direction and let dry 24 hours, then lightly sand with 400 grit sandpaper to abrade the surface so the second coat can bond. Clean the surface and re-apply following the Application Instructions.

In about 1 hour, the surface will be dry to the touch. Observe to make certain the desired finish has been achieved. Avoid liquids and heavy use for a full 7 days to allow for the molecular curing to complete its process. The surface is ready for use on Day 8.

If defects are visible, wait 24 hours and sand the surface to remove the defects. It is not necessary to completely sand off the Stone Armor, only sand down the imperfections until they are no longer visible. The remaining surface can be lightly sanded to 400 grit if recoating the entire surface is desired. Stone Armor may also be blended in by an experienced finisher, similar to paint repair on a car. Wait the full cure time of 7 days after making repairs, avoiding liquids and heavy use. The surface is ready for use on Day 8.

Alternative Spray Application

This is a 2 component product. Open the can of Stone Armor. Stir contents thoroughly to re-suspend the nano particles that have settled to the bottom. In a separate, clean container large enough to accommodate equal parts Stone Armor and Quick Cure, mix 1 part Stone Armor and 1 part Quick Cure and stir thoroughly. Make certain to re-stir every 15-20 minutes to ensure proper performance. Stir slowly to avoid creating air bubbles, which can affect the performance of the finish. If air bubbles are present, the spray gun will spray the air bubbles through the tip and onto the surface. When surface preparation is complete and surface is dry and free of dust, begin application using a high volume, low pressure (HVLP) spray gun with a 1.4 size tip and the pressure set at approximately 25 psi. On a separate piece of cardboard first spray a test pattern to achieve a 6" to 8" elongated pattern approximately 1 1/2" wide in the middle.

When spraying outdoors, make certain there will be no rain for at least 5 hours after your anticipated completion time. If there is high wind, this will affect the quality of the finish as blowing wind can disrupt the spray pattern from your HVLP. It can also contribute to contamination of the finish with blowing dust. It may be necessary to erect a wind screen to protect the area. Once this spray pattern is achieved on the test cardboard, spray in a cross-pattern; left to right, then up and down. This will provide sufficient coverage and will help prevent holes in coverage. Desired wet film thickness (WFT) is approximately 4.0 mils.

CAUTION: If using spray application method in an enclosed space, make certain to tent off the area being sprayed with plastic tarps to avoid spray dust from traveling and contaminating other surfaces with overspray dust. Tented and enclosed areas should always be positively supplied with fresh air and have ventilated exhaust to outside using fans.

Never spray near any open source of ignition such as pilot light flames, or anything that may spark, as this may cause ignition and explosion of the fumes and vapors.

Finish

Once Stone Armor is applied, do not attempt to adjust the finish by sanding to create a more matte finish, as this process will open the surface grain causing failure of the coating. Dust knobs or sharp peaks can be lightly buffed off with a soft wool polishing pad and polishing compound. Be very careful not to penetrate the surface. If the surface is accidentally abraded through the coating, re-sand to 400 grit and re-apply Stone Armor using Application Instructions above.

DRY TIME

Drying Time (@ 77 F, 50% RH):
Temperature and humidity dependent.
Touch: 30 Minutes
Through: 2-4 Hours
Dry: 24 Hours
Full Cure: 7 Days

INTERRUPTION OF WORK

It is not advisable to stop application in the middle of a singular surface.

CLEAN-UP

Clean tools and flush equipment with acetone thoroughly before the product dries.

CAUTION

Always wear OSHA approved 1910.134 and ANSI Z88 2 respiratory protection. Fresh air and exhaust should be provided in the work area. If inhaled, remove affected person to fresh air. Call physician immediately if physical difficulties occur. Wear butyl-rubber gloves and other skin protection to avoid contact. In the event of contact with skin, wash skin thoroughly with soap and water. Chemical safety goggles or splash shields are recommended. Do not wear contacts without eye protection. Immediately flush eyes with water for 15 minutes after contact and get medical attention. If accidentally swallowed, rinse mouth thoroughly. In case of discomfort, obtain immediate medical attention.

CARE & MAINTENANCE

First 7 Days (VERY IMPORTANT)

After Stone Armor has been applied, do not use the surface for 3 days, keeping all liquids and objects off of the surface. On days 4 through 7, light use is allowed, but continue to keep all liquids off of the surface. Liquids will penetrate the surface before the coating has completely cured, which can cause a blister in the coating.

Days 8 and Beyond

On day 8, curing is complete and the Stone Armor surface is ready for normal use. It is designed to be a barrier between moisture, mild acids and stains. Neglect or lack of normal care can eventually damage the surface. Stone Armor is designed to provide protection against etching of the stone's surface from food acids for up to 8 hours. Vinegars should be cleaned up as quickly as possible or within 1 to 2 hours.

Cleaning

Use warm water and, if desired, a mild, over the counter cleaner with a soft cloth or sponge to clean up after spills. Always wipe up spills and standing water as soon as possible to properly care for the coating. Although Stone Armor is scratch resistant, it is not scratch-proof. Do not use abrasive cleansers or abrasive scouring pads. Paint can be removed with acetone without damaging the coating. Stone Armor does not require any additional waxing or protection.

LIMITED WARRANTY

Evolution Surface Solutions guarantees TruNano™ Stone Armor to be defect free and any material that is proven to be defective will be replaced in a like quantity by the manufacturer within 1 year of date of purchase with proof of purchase, and provided it has been applied according to the instructions in this document along with any other related guidelines posted at www.evolutionsurfaces.com. This warranty only extends to the owner of the property upon which the product is applied and is non-transferable. Any warranty claim must be made in writing and sent to Seller with supporting materials and access to the property for inspection and testing as requested by Seller. Seller will thereafter provide replacement product for product found to be defective. This warranty is given in lieu of all other warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose. The remedy stated herein is an exclusive remedy and Seller shall not be responsible for any other damages, including labor or any incidental, consequential, special or punitive damages, whether based on breach of express or implied warranty, negligence, strict liability or other legal theory.