



PRODUCT DATA SHEET

SCP 578

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SCP 578 is a penetrating colloidal silica concrete treatment that is spray-applied on existing concrete. SCP 578 is a permanent alternative to traditional moisture mitigation systems.

ABOUT THIS PRODUCT

When applied to porous concrete, SCP 578 penetrates into the concrete, filling the accessible pore space with naturally occurring concrete reaction product. This action reduces the water vapor transmission to levels low enough for even the most moisture-sensitive flooring materials.

SCP 578 is formulated to penetrate into a prepped, clean, porous surface. SCP 578 is a one-time application moisture management product that does not need to be re-applied for the life of the concrete. Since SCP 578 works within the concrete, demolition of existing flooring or other construction practices can be performed without compromising the moisture control. SCP 578 is not a bond breaker because it works within the concrete and does not stay at the surface of the concrete.



TYPICAL APPLICATION RATE

Concrete
 200 ft² per 1 gallon
 (4.9 m² per 1 liter)

Recommended Equipment for Applications

Important: The use of centrifugal pumps is not recommended.

Use a low to medium pressure sprayer complete with an extension wand and fan tip spray size of 0.024-0.031 inches (0.61-0.79 mm) for flatwork applications.

Alternate spray system: Use an agricultural sprayer using an approximate 5 gallons per minute (18.93 liters per minute) diaphragm pump and fan tip spray size of 0.50-1.0 gallons per minute (1.89-3.79 liters per minute) for flatwork applications. A backpack or Hudson type sprayer should be used if only applying one bucket or fewer of material.

PERFORMANCE

Test Method Standard	Typical % Improvement
ASTM E96 WATER VAPOR TRANSMISSION	70%
EN 12390-8 DEPTH OF HYDROSTATIC PEN.	70%

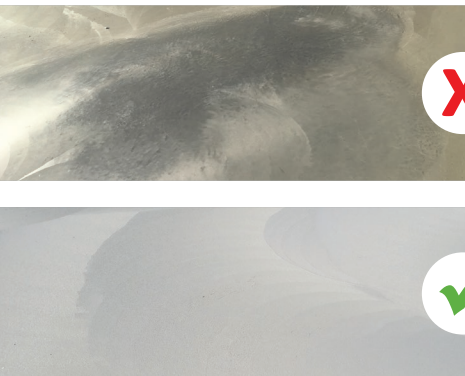
Recommended Application Method

Important: Spray in a 50% overlapping pattern.

For slab applications, hold wand perpendicular to the surface and spray 6 inches (15 cm) from the surface. Apply product using the prescribed application rate for the area. If pooling or dry areas are observed while applying, use a broom to distribute material so that the product remains uniform throughout the application area. Do not allow excess material to dry on the slab. Remove excess SCP 578 with a foam squeegee, wet-vac, or mop.

Note: Product not removed from the slab may become slippery in a wet condition.

Treatments should extend beyond the proposed treatment area to the nearest control or construction joint.



Surface Preparation

The concrete surface needs to be structurally sound. If there are any concerns, consult with an engineer on the project or consult with a structural engineer. Any weak or degraded concrete surface or concrete exhibiting signs of scaling, delamination, or spalling must be mechanically removed to achieve a solid substrate. The concrete should be free of contaminants such as dirt, wax, oil, grease, curing compounds, adhesives, paint, or any other material that could prohibit SCP 578 from entering the concrete matrix. SCP 578 needs a porous (open-matte) finish to penetrate into the concrete and perform as intended. The surface may need to be mechanically opened (e.g. surface grinding, shot blasting, etc.). SCP recommends utilizing ASTM F710 for floor preparation. SCP recommends following the flooring manufacturers' recommendations for installation of flooring including environmental conditions.

Water Absorption Testing

Always perform a water absorption test to determine if SCP 578 will be able to penetrate into the concrete surface. There are standards that describe a method for testing water absorption, such as ASTM F3191. An alternative would be to outline a penny with a pencil and place 5 drops of water inside the marked outline. Monitor the water to see if the water is penetrating into the concrete or moving outside the outline. After two (2) minutes, the water should be absorbed into the concrete without having any bubbling or sheen when viewing the area. The contractor is responsible for choosing the test method and quantity of testing.

Topically Applied Concrete Products

Curing compounds (ASTM C309 or ASTM C1315 products) or topical surface sealers need to be removed prior to the application of SCP 578.

ENVIRONMENTAL CONDITIONS

Hot Weather

One of the challenges of hot weather applications is rapid evaporation and unwanted gelling. SCP recommends pre-wetting concrete when surface temperature is above 90°F (32.2°C). Pre-wetting consists of spraying a light coat of water directly in front of the SCP 578 application. This process helps in preventing rapid evaporation of SCP 578 from the surface of the slab, allowing for better penetration into the hot concrete. SCP 578 should be removed before allowing to dry on the slab.

Cold Weather

Challenges faced during cold weather applications include low temperature application and shorter days. The minimum air and concrete temperature at which SCP 578 can be applied is 35°F (1.7°C) and rising.

Rain Event

A rain event is defined as liquid precipitation that is sufficient enough to cause standing water on the concrete structure. If a light mist is observed that causes no standing water, this is not considered a rain event and application does not require interruption.

If a rain event begins during an application, the portion of the slab that has been treated and squeegeed off is considered treated. If a portion of the slab is being treated and not squeegeed when it rains, SCP 578 will need to be reapplied after rain has stopped. Mark the area last treated so that you have a reference on where to resume application after the rain event. After rain has stopped, the slab should be squeegeed to remove all standing water. Application can continue as normal, beginning after the last treated section of the slab.



POST-APPLICATION

Traffic

Areas can be accessed by foot and vehicle traffic within 1 to 3 hours of treatment.

NOTES

- » SCP 578 may etch glass, shiny aluminum, and brass if left to dry on the surface. Simply remove while wet.
- » **DO NOT** apply on frozen substrate.
- » Joints, cracks, and penetrations should be addressed separately as part of the overall waterproofing plan. ASTM F710 addresses how to handle any cracks and joints in a slab. SCP recommends using a waterproof product meant for the joint or crack and is approved under the flooring as well. For penetrations (any hole that penetrates through the concrete), SCP recommends a water stop material around them.

Packaging/Storage

SCP 578 is packaged in 5-gallon pails, 20-liter pails, 55-gallon drums, and multi-gallon totes. Product shall ideally be stored in a location that is dry and between 35°-100°F (2°-38°C) ambient temperature. Optimal storage is at the middle of the temperature range. Protect from freezing and direct sunlight. 5-year shelf life under proper storage conditions.

General Information

For safe handling information on this product, see the Safety Data Sheet (SDS).

Product Warranty

SCP warrants the product to be free from material defects provided that the product was sold within its identified shelf life and stored according to guidelines on product packaging. SCP's sole liability shall be limited to the purchase price paid by the customer for SCP 578 for the quantity of defective material.

Mock-ups, testing, or sample applications to determine fitness of products for a particular use are the responsibility of the user. In-house and independent testing supports the instructions and claims made in this document. Due to the variation in job conditions, surface preparations, concrete substrates, and application methods, SCP cannot ensure uniformity in product performance.

PRODUCT ATTRIBUTES

Color

Cloudy White

Odor

None

Specific Gravity

1.10

pH

11.5 +/-

Flammability

0 (non-flammable)

VOC/VOS Content

0.0 g/mL

Clean-up Solvent

Water

Environmental Impact

None/Neutral

User Status

Friendly

QUESTIONS?

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