TechCrete® 2500 Waterproofing Agent is a bio-based, gel forming, modified silicate solution, that creates a barrier within the concrete against long-term water entry and enhances concrete durability. Using the free calcium contained within the concrete, a calcium silicate gel is formed. This gel forms within the pores, cracks and capillaries of the concrete, which then forms a barrier against moisture and environmental contaminants. In addition the presence of the gel increases the ability of the concrete to resist chloride ions.

TechCrete 2500 Waterproofing Agent is designed and created to seal non-structural cracks up to 5/64” (2.0 mm) in width and will seal future, non-structural cracks, up to 1/64” (0.4 mm). Once in the concrete the will remain reactive as it comes in contact with water. This reactive state provides long term performance for self-repair of future non-structural cracks.

KEY BENEFITS
15-Year & 30-Year labor & material warranties are available against water penetration. 100% trafficable within 8 hours, with minimal risk of damage during construction or thereafter. Find stubborn cracks easily, with an easy fix.

TYPICAL APPLICATIONS
- Rooftops & Podium Decks
- Parking Decks
- Facades
- Wharf Decks & Marine Structures
- Airport Runways, Taxiways, Aprons
- Precast elements & panels
- Tiled shower recesses
- Specialty Applications
- Water Tanks
- Facades

PRODUCT PROPERTIES
- Colorless, clear to slightly opaque, odorless, soapy feel
- Non-toxic & Biodegradable
- Percent non-volatile solids: 27.7%
- Specific gravity at 77°F (25°C) : 1.225
- Flash point - no true flash - boils at 214°F (101°C)
- Auto-ignition temperature - N/ANon-explosive
- Viscosity - 14.3 centipoise or 0.1172 Stokes
- Hazardous chemicals - Sodium Silicate (modified)
- pH 11.7

PERFORMANCE CHARACTERISTICS
- Will seal cracks up to 5/64” (2.0 mm) on initial application and can seal future non-structural cracks up to 1/64” (0.4 mm), except for cold joint applications.
- Creates a reduction of chloride diffusion coefficient by 89% to 3.5 (10-12m/s).  
- Increases surface hardness from 6 to 8 on Moh’s scale.
- Scaling is reduced by 89% at 50 cycles in freeze-thaw environments.
- Improves moisture vapor permeability by 84.1%.
- Suitable for water holding vessels (positive hydrostatic pressure) - tested to 400 meters (1,312).

PRECAUTIONS
- Protect aluminum, glass, painted surfaces, wood, terra-cotta, glass-glazed tiles, red brick, marble and travertine from overspray.

PACKAGING
TechCrete 2500 Waterproofing Agent comes in the following sizes:
- 1 gallon bottle (3.8 liters)  
- 5 gallon Pails (18.92 liters)
- 55 gallon drums (208.2 liters)

APPLICATION
Basic Requirements
Prior to the application of the TechCrete 2500 Waterproofing Agent, the surface must be clean, dry and dust-free that is at least 28-days old. If the surface is not clean, then the use of one of the following Alchemco Clean & Repair (ACR) products, or a shot blast system, is required for prepping the surface for warranted applications. Chemical cleaning may require multiple applications and the use of different products to achieve complete cleaning. Certain types of cleaning equipment may improve performance and speed of application when applying chemical cleaners, contact the Technical Department for a list of approved equipment and cleaning methods.

- ACR Concrete & Masonry Cleaner
- ACR Emulsifying Cleaner
- ACR Concrete & Masonry Etch
- ACR Paint & Stain Remover
- ACR Rust Converter & Inhibitor

Contact the Technical Department for help and directions for which cleaning product will provide the best result for a clean surface.

Where segregation or voids are apparent, chip out and treat with ACR Concrete Patch & Repair. Once repaired, allow at least 24 hours for patches to dry and cure. If works needs to be completed faster, then use ACR HP Concrete Repair. Do not apply where ambient temperatures are below +39°F (+4°C) or above +95°F (+35°C). Do not apply within 24 hours of the surface being wet.

Application Rates
Normal: 1 gallon per 200 square feet (1 liter to 5 square meters) on average. Coverage rate may vary depending on the substrate absorption, which can vary depending on the age of concrete and original density.

Application Method
1. No less than 28 days after the placement of the concrete and once the surface has been prepared for the application, begin.
2. Using a pump style sprayer, either manual, backpack, or barrel style, fill the sprayer with TechCrete Waterproofing Agent. Apply pressure to the sprayer and using a fan style tip, being applying the waterproofing agent to the entire surface of the concrete.
3. First apply product to all cracks by spray floor coating the crack with an application that covers the crack and at least 2” (50 mm) to either side of the crack.
4. Once all cracks have been treated then apply liberally to the entire surface area, but without puddling. Apply in even strokes with a small amount of overlap to ensure proper coverage.
5. Once the waterproofing agent has been spray-applied and is dry to the touch (no more than 6 hours) then begin the first watering. Water shall be applied at no less than 1 gallon (1 liter) and no more than 2 gallons (2 liters) per each 100 square feet (10 m²) of work area.
6. No less than 6 hours after the application of waterproofing agent has occurred, then spray-apply TechCrete Crack & Void Treatment to all cracks and TechCrete Accelerating Agent to the field of the project.
7. Once dry to the touch, being second watering. Watering should be done in the same manner as the first watering.
2500 Waterproofing Agent

Performance Timeline
The TechCrete 2500 Waterproofing system utilizes a modified silicate gel forming technology to stop water penetration. TechCrete 2500 Waterproofing Agent penetrates into the concrete to create a barrier to water, stopping the water from within the concrete rather than on the surface. The technology is catalytic in nature and requires between 3 – 5 days for the products to reach full water stopping capabilities. Full waterproofing should not be expected until complete gel formation has been achieved. NOTE: The surface will continue to accept water, so a flood test will be required to determine if full waterproofing has been achieved.

SHELF LIFE & STORAGE
When containers are kept sealed and prolonged exposure to direct sunlight is kept at a minimum there is no known limit to shelf life. Always agitate drum or container before use.

LIMITATIONS
Curing Compounds
Water curing is preferred. Aqueous acrylics that degrade within 28 days are also suitable. Other materials such as chlorinated rubber, resins and wax emulsions are suitable, but must be completely removed by grit blasting or grinding to allow product penetration.

DETAILING REQUIREMENTS
For more extensive information, please refer to the TechCrete 2500 Waterproofing System specifications, design detailing sheets and written application instructions.

Cold Joints - Existing Construction
A cold joint is a plane of weakness in the concrete caused by an interruption or delay in the concreting operations. Due to the potential for unseen voids to occur below the surface of the concrete at the cold joint, cold joints must be treated with the additional application of TechCrete PolyMembrane Flashing. Once the initial application of TechCrete 2500 Waterproofing Agent has been applied and is dry, TechCrete PolyMembrane Flashing is applied no less than 4" (101 mm) wide to the surface of the concrete over all areas designated to be cold joints.

Penetrations
Use TechCrete PolyMembrane Flashing extending 4" (101 mm) around penetrations and at least 6" up the drain, fulgo inlets etc. Use TechCrete WT Joint System for all areas where expansion joints are specified or required.

Large Cracks
Refer to TechCrete written specifications, and details and application instructions.

Underside Crack Preparation
Refer to TechCrete written specifications, and details and application instructions.

WARRANTY & SYSTEMS
The following warranties require the use of TechCrete 2500 Waterproofing Agent and are only available when the full system is applied by a TechCrete Certified Applicator:


The following warranties are available when using TechCrete 2500 Waterproofing Agent:

• New & Existing Construction: TechCrete 20-Year Limited Liability Material Warranty. This warranty requires the project to be registered.

• New & Existing Construction: TechCrete 2-Year Limited Liability Material Warranty.

For additional information about the Alchemco system specifications or available warranties, either contact your local Alchemco distributor or Alchemco’s Technical Department at info@alchemco.com or call 800-610-2895.

WARNINGS

DANGER! TOXIC IF SWALLOWED
This product contains Sodium Silicate and may be harmful if swallowed. Wash hands, face and any exposed skin thoroughly after handling. Keep container tightly closed. Do not eat, drink or smoke when using this product.

IF SWALLOWED: Immediately call a POISON CONTROL CENTER or doctor/physician. Rinse mouth.

See Safety Data Sheet for further details regarding safe use of this product. Alchemco, 3532 Mayland Court, Henrico, VA 23233. 800-610-2895.