**TechCrete® Bridge & Deck Waterproofing Agent** is a modified silicate solution that provides waterproofing and durability benefits to concrete. It penetrates into concrete and reacts with free calcium and water to form a calcium silicate gel complex in cracks, pores and capillaries. This gel creates a sub-surface barrier against the ingress of water and contaminants such as chloride ions.

TechCrete Bridge & Deck Waterproofing Agent will seal stable cracks up to 5/64” (2.0 mm) in width and will seal future, non-structural cracks, up to 1/64” (0.4 mm). In the matrix, the product remains reactive when in contact with water, to provide autogenous healing properties to future hairline cracks that increase in size.

**KEY BENEFITS**
Warranty against water penetration. Excellent performance for 15 years. After 15 years, achieve an additional 5 years of protection with application of **TechCrete Bridge & Deck Waterproofing ReActivator**. This process can be repeated every 5 years to further extend the life of the product. 100% trafficable after the first watering with minimal risk of damage during construction.

**TYPICAL APPLICATIONS**
- Concrete Overpasses
- Bridge Structures
- Bridge Decks
- Concrete Docks
- Precast Deck Panels
- Concrete Floors

**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/A Non-explosive
- Viscosity - 14.3 centipoise or 0.1172 Stokes
- Hazardous chemicals - Sodium Silicate (modified)
- pH 11.7

**PERFORMANCE CHARACTERISTICS**
- Seals cracks up to 5/64” (2.0 mm) on initial application and will seal future non-structural cracks up to 1/64” (0.4 mm), **except for cold joint applications**.
- Reduction of chloride diffusion coefficient by 89% to 3.5 (10-12m²/s).
- Increases surface hardness from 6 to 8 on Moh’s scale.
- Reduces scaling in freeze-thaw environments by 89% at 50 cycles.
- Allows 84.1% moisture vapor permeability.

**APPLICATION**
**Basic Requirements**
TechCrete Bridge & Deck Waterproofing Agent must be applied to a clean, dry, dust-free concrete surface, at least 28 days old. If the surface is not clean, then the use of any one of the following Alchemco Clean & Repair (ACR) products, or the use of a shot blast system, is recommended for prepping the surface. 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 work 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. Can vary depending on substrate absorption, which varies depending on the age of concrete and original density.

**Application Method**
1. Locate all cracks and flood with solution, first ensuring they are filled with product.
2. Apply the solution to the remaining area at a rate of between 160-240 square feet per gallon (4-6 square meters per liter).
3. First watering - When surface becomes touch dry - (usually 2-6 hours depending on wind conditions and ambient temperature) flood spray the treated areas with water. If product is still wet after 6 hours, begin first watering.
4. On Day 2 - 24 hours later apply water again or apply TechCrete Accelerating Agent to enhance the application.
5. On Day 3 - 24 hours later water again.
6. After the third watering, block drains and pond area for a minimum of 12 hours to verify the waterproof seal.
Performance Timeline
The TechCrete Bridge & Deck Waterproofing Agent utilizes a modified silicate gel forming technology to stop water penetration. TechCrete Bridge & Deck 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 product 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.

Large Cracks Application
For cracks greater than 1/64” (.4 mm) and less than a 5/64” (2.0 mm), create a small dam and flood crack with product, repeating the application process. For cracks larger than 5/64” (2.0 mm) use ACR Concrete Patch & Repair or ACR HP Concrete Repair. Consult Technical Department for where cracks are volatile. TechCrete PolySeal Sealant should be used if there is a risk that the joint will move in the future.

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

PACKAGING
TechCrete Bridge & Deck 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)

LIMITATIONS
TechCrete Bridge & Deck Waterproofing Agent is not suitable for sealing working/volatile cracks as a result of structural defects or caused by mechanical damage.

The product is NOT suitable for sealing where segregation and voids are likely such as construction joints and pour joints. Nor suitable around penetrations where there is a non-masonry/cementitious interface.

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.

WARRANTY & SYSTEMS
The following warranties are available when using TechCrete Bridge & Deck 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.

SHELF LIFE & STORAGE
No known limit to shelf life. Keep container sealed and avoid prolonged exposure to direct sunlight. Always agitate before use.

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, 8590 Sanford Drive, Henrico, VA 23228. 800-610-2895.