



CRETEPRO[™] ULTRA WATERPROOFING AGENT

TECHNICAL DATA SHEET

CretePRO[®] Ultra Waterproofing Agent is a bio-based waterproofing system designed to replace traditional waterproofing systems. In application, the system penetrates the concrete and creates a subsurface barrier against the ingress of water and contaminants such as chloride ions. When introduced to water, the reaction between the calcium in the concrete and enzyme-based waterproofing agent forms a gel complex that fills the cracks, pores, and capillaries. This vapor-permeable gel is flexible and can handle thermal stress over time. The product remains reactive within the matrix and, when in contact with water, provides autogenous repairing properties to future hairline cracks.

KEY BENEFITS

- Fast and simple to apply.
- 100% trafficable within 4 hours after completed and dry, with minimal risk of damage during construction or thereafter.

PHYSICAL PROPERTIES

- Colorless, clear to slightly opaque, odorless, soapy feel
- Non-toxic & Biodegradable
- Percent non volatile solids 26.55%
- Specific gravity at 77°F (25°C) : 1.2
- 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 11.51

PERFORMANCE PROPERTIES

- UL Classified NSF/ANSI 61.
- Safe for potable (drinking) water.
- Increases surface hardness from 6 to 8 on Moh's scale.
- Allows 84.1% moisture vapor permeability.
- Suitable for tanking applications (positive hydrostatic pressure) - tested to 400 meters (1,312').

PERFORMANCE TIMELINE

CretePro Ultra Waterproofing Agent is a bio-based modified gel-forming technology to stop water penetration, the chemical reaction that creates this barrier is catalytic in nature and **may require 3-5 days to reach full water stopping capabilities**. Full waterproofing should not be expected until complete gel formation has been achieved.

APPLICATION

SURFACE PREPARATION

CretePro Ultra Waterproofing Agent must be applied to a clean, dry, dust-free concrete surface, at least 14 days after the placement of new concrete. If the concrete is an older existing concrete then it should be cleaned, it is recommended that one of the many Alchemco cleaning and preparatory products be utilized.

On some projects, it may make more sense to utilize shot blasting or grinding to prepare the surface for the application of the system and related products. This is acceptable in lieu of chemical cleaning.

NOTE: Any Alchemco system products should only be applied when the surface temperature is 50°F (10°C) and rising or 100°F (38°C) and falling. Temperature should be measured with a infrared hand held thermometer.

Clean the entire concrete surface, including any vertical surfaces that are adjoining the concrete surface to be waterproofed. Make sure all dirt and environmental debris has been removed from the surface.

EXISTING CONSTRUCTION APPLICATION

1. Waterproofing should be applied using a low-pressure pump style sprayer, backpack sprayer or a drum style sprayer. A fan or cone style sprayer tip is best for the application of the product. It is highly recommended that separate spray units be used for the waterproofing agent application, Crack Accelerating Agent, and Surface Accelerating Agent. **DO NOT MIX THESE PRODUCTS TOGETHER.** This will induce the products reactive properties and will cause problems with spray equipment.

2. Treat any cracks that may have occurred. Flood cracks with CretePro Ultra Waterproofing Agent to the point where they are overflowing.
3. Once all cracks have been properly flooded, begin applying CretePro Ultra Waterproofing Agent to the entire concrete surface area. Product should be sprayed onto the concrete surface to the point of saturation but not to the point of puddling. Spraying should be constantly watched to ensure the proper amount of material is being applied. Absorption rate may vary with concrete on the same project due to different porosity.
4. Once all surfaces have been sprayed, allow product to sit up to three (3) hours, with a maximum of four (4) hours before proceeding with washing the entire surface.
5. To properly wash the surface, use soft bristle brooms to loosen material and squeegees to remove the excess material. Rinse with clean water with some pressure.
6. Once the surface has been cleaned, let dry over night.
7. The **next day**, begin application of the ACR Accelerating Agent and ACR Crack Accelerating Agent. Both accelerating products are designed to speed up the reactive process within the concrete.
8. Begin by spraying ACR Crack Accelerating Agent into all cracks, flooding them with product. Once all the cracks have been treated with ACR Crack Accelerating Agent, begin spraying all concrete surfaces that were treated with waterproofing with ACR Accelerating Agent. Spray ACR Accelerating Agent at the same rate as the waterproofing material.
9. After spraying both accelerating products, allow the treated surface to sit a minimum of one (1) hour and maximum of two (2) hours before the washing procedure. Use the same procedure that was used to remove excess waterproofing materials.
13. Once all surfaces have been sprayed, allow product to sit up to three (3) hours, with a maximum of four (4) hours before proceeding with washing the entire surface.
14. To properly wash the surface, use soft bristle brooms to loosen material and squeegees to remove the excess material. Rinse with clean water with some pressure.
15. The **next day**, begin application of the ACR Accelerating Agent and ACR Crack Accelerating Agent. Both accelerating products are designed to speed up the reactive process within the concrete.
16. Begin by spraying ACR Crack Accelerating Agent into all cracks. Once all the cracks have been treated with ACR Crack Accelerating Agent, then begin spraying all vertical concrete surfaces that were treated with waterproofing. Spray ACR Accelerating Agent at the same rate as the waterproofing material.
17. Allow product to dry to the touch, but not more than 2 hours, then begin the washing procedure. Use the same procedure that was used to remove excess waterproofing materials.

VERTICAL SURFACE

10. The same type of spray equipment should be used to apply the waterproofing agent to vertical surfaces as was used on the horizontal surfaces.
11. Spray all vertical cracks in the same manner as the horizontal, but it is not necessary to flood them.
12. Apply the waterproofing agent to vertical walls by a light spray, allowing material to penetrate but not run down the wall. Once the wall has been sprayed and while still slightly wet, make a second pass of a light spray onto the wall. This will ensure that there is enough material to be absorbed into the surface.
4. Once all surfaces have been sprayed, allow product to sit up to one (1) hour, but not more than two (2) hours before proceeding with watering the entire surface.

NEW CONSTRUCTION APPLICATION

1. Waterproofing should be applied using a low-pressure pump style sprayer, backpack sprayer or a drum style sprayer. A fan or cone style sprayer tip is best for the application of the product. It is highly recommended that separate spray units be used for the waterproofing agent application, Crack Accelerating Agent, and Surface Accelerating Agent. **DO NOT MIX THESE PRODUCTS TOGETHER.** This will induce the products reactive properties and will cause problems with spray equipment.
2. Treat any cracks that may have occurred. Flood cracks with CretePro Ultra Waterproofing Agent to the point where they are overflowing.
3. Once all cracks have been treated begin applying CretePro Ultra Waterproofing Agent to the entire concrete surface area. Product should be sprayed onto the concrete surface to the point of saturation, but not to the point of puddling. Spraying must constantly be watched to ensure proper amount of material is being applied. Absorption rates vary on the concrete within the same project.
4. Once all surfaces have been sprayed, allow product to sit up to one (1) hour, but not more than two (2) hours before proceeding with watering the entire surface.

5. Watering application can be done with a hose with spray nozzle or by low pressure sprayer. Watering the surface will help the waterproofing agent to penetrate the surface and begin to be reactive with the concrete. Spray the surface with an amount of water equal to the amount of waterproofing material that was applied.
6. After watering, wait up to one (1) hour, but not more than two (2) hours and repeat the process. The higher the temperature and the more direct the sunlight, the more important it is to begin the process closer to the one (1) hour mark.
7. Once both watering applications have been implemented, leave the project to sit overnight. The waterproofing product must sit overnight before any further work may continue.
8. The **next day**, begin application of the ACR NC100 Accelerating Agent and ACR Crack Accelerating Agent. Both accelerating products are designed to speed up the reactive process within the concrete.
9. Begin by spraying ACR Crack Accelerating Agent into all cracks, flooding them with product. Once all the cracks have been treated with ACR Crack Accelerating Agent, begin spraying all concrete surfaces that were treated with waterproofing on day one (1) with ACR NC100 Accelerating Agent. Spray ACR NC100 Accelerating Agent at the same rate as the waterproofing material.
10. After spraying both accelerating products, it is required for the treated surface to sit a minimum of one (1) hour and maximum of two (2) hours before watering the surface in the same manner as the waterproofing.
11. Only one watering is needed after application.
15. Once all surfaces have been sprayed, allow the product to sit a minimum of one (1) hour, but a maximum of two (2) hours before proceeding.
16. Watering application can be done with a hose with a spray nozzle or by low pressure sprayer. Watering the surface will help the waterproofing agent to penetrate the surface and begin to be reactive with the concrete. Spray the surface with an amount of water equal to the amount of waterproofing material that was applied.
17. After watering, wait up to one (1) hour, but not more than two (2) hours, and repeat the process. The higher the temperature and the more direct the sunlight, the more important it is to begin the process closer to the one (1) hour mark. Once both watering applications have been made, leave the project to sit overnight.
18. The **next day**, begin application of the ACR NC100 Accelerating Agent and ACR Crack Accelerating Agent. Both accelerating products are designed to speed up the reactive process within the concrete.
19. Begin by spraying ACR Crack Accelerating Agent into all cracks, flooding them with product. Once all the cracks have been treated with ACR Crack Accelerating Agent, begin spraying all concrete surfaces that were treated with waterproofing on day one (1) with ACR NC100 Accelerating Agent. Spray ACR NC100 Accelerating Agent at the same rate as the waterproofing material.
20. After spraying both accelerating products, it is required the treated surface to sit a minimum of one (1) hour and maximum of two (2) hours before watering the surface in the same manner as the waterproofing.

VERTICAL SURFACE

12. The same spray equipment should be used to apply the waterproofing agent to vertical surfaces as used on horizontal surfaces.
13. Spray all vertical cracks in the same manner as the horizontal, however, it is not necessary to flood them.
14. Apply the waterproofing agent to vertical walls by a light spray, allowing material to penetrate and void material run down the wall. Once the wall has been sprayed and while still slightly wet, make a second pass of a light spray onto the wall. This will ensure that there is enough material to be absorbed into the surface without running and/or puddling.

APPLICATION RATES & PACKAGING

Surface Coverage rate:	900 - 1,000 ft ² / 5 gallon pail 84 - 93 m ² / 19 liter pail 9,900 - 11,000 ft ² / 55 gal drum 920 - 1,022 m ² / 208 liter drum
Crack Coverage rate:	150 lft / 5 gallon pail 10 LM / 19 liter pail
Packaging:	5 gallon / 19 liter pail 55 gallon / 208 liter drum

NOTE: Coverage rate will vary. The Alchemco technical department will evaluate the concrete surface and provide direction on the amount of product to be applied based upon the concrete surface.

SHELF LIFE & STORAGE

Containers should be sealed, kept in a cool & dry location, and should avoid prolonged exposure to direct sunlight. These methods should be practiced when shipped, stored, and on-site. If properly maintained, this product has a shelf life of two (2) years. Please adhere to the same storage advisories when product is being stored on the project site.

PRECAUTIONS

CretePro Ultra Waterproofing Agent should not be used for sealing existing cracks, it is recommended that a good sealant be used.



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, doctor/physician. Rinse mouth.

See Safety Data Sheet for further details regarding safe use of this product. Safety Data Sheets for any Alchemco product may be obtained by contacting:

Alchemco, 3532 Mayland Court, Henrico, VA 23233. 800- 610-2895 or emailing technical@alchemco.com or calling:

**CHEMTREC 800-424-9300 (US)
703-741-5970 (International).**



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