

## CreteShield 101 Penetrating Sealer

PRODUCT DESCRIPTION	RECOMMENDED USES
<p><b>CreteShield 101</b> concrete sealer is a specially formulated clear/flat sealer that has a penetrating inorganic potassium modified material that “fuses” to concrete and appreciably helps stop water, oil, gas, grease, salts and other fluids from damaging concrete. <b>CreteShield 101</b> allows entrapped water vapors to escape because the vapor molecule is significantly smaller. This vapor transmission is necessary if the substrate is to survive many freeze/thaw cycles. <b>CreteShield 101</b> unique formula reacts with the lime in the concrete to form a gel. The gel then hardens and consequently densifies the concrete, decreasing the moisture permeability and porosity. By this fusion, the substrate actually becomes better concrete and will only wear out when the substrate itself wears away to the depth of the penetration of <b>CreteShield 101</b>. Good as a cure &amp; seal.</p> <p><b>Statement:</b>  <b>CreteShield 101</b> is a high tech sealer and the product of a R&amp;D cementitious laboratory.  <b>CreteShield 101</b> is an excellent penetrating sealer for all cementitious applications. If we can get in, we can perform!</p>	<p>For use on most cementitious applications including:</p> <ul style="list-style-type: none"> <li>• <u>New construction</u> – as cure then seal</li> <li>• <u>Existing concrete</u> – as DPS sealer</li> <li>• Commercial Concrete Applications               <ul style="list-style-type: none"> <li>• <u>Below grade / pre-cast / tilt-up / form / bridge decks</u></li> </ul> </li> <li>• Ideal for: Driveways/Walkways/Basements                Concrete Pavers / Split face                Masonry products / Mortar                Pool decking / Marcite / Gunite/Stucco                Bridges / Tunnels / Foundations                Parking Garages / Warehouse Floors</li> <li>• Decorative Concrete Applications</li> <li>• Preservation / Historical Preservation</li> </ul> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><b>Benefits -</b>            Stops Mould and algae, Hardens concrete by up to 42%, No visual change, Stops dusting, Increased abrasion resistance, Increased chemical resistance, Stops rising damp, Stops efflorescence, Water based, No odour, Quick application, Never needs reapplication.</p> </div>
PRODUCT CHARACTERISTICS	PERFORMANCE CHARACTERISTICS
<p>Finish: Flat            Color: Clear            Average Spread Rate: 5SqM/L            Drying Time: 3 – 5 hours per application            Shelf Life: 2 years, stored unopened above freezing temperature *            Clean Up: soap &amp; water (avoid contact with glass &amp; plastic windows &amp; lenses)</p> <p>Note: * DO NOT FREEZE</p> <p><u>MSDS Information/Physical Data:</u>            Boiling Point: 100deg C (same as water)            Vapor Pressure: /20C/68 F water            Vapor Density: N/A            Solubility in Water: Excellent            Evaporation Rate: Same as water            Appearance &amp; Odor: Clear-slightly amine            Specific Gravity: (H2O-1):1.1 to 1.3 @ 20C            % Volatile by Volume: N/A            PH: 11.5            Flashpoint: N/A            Flammable Limits: N/A</p>	<p>ASTMD 2939: Resistance to water solubility, flexibility, no cracking..</p> <p>ASTMD 466: Resistance to water flow and Action. Excellent adhesion. No remulsification.</p> <p>ASTME 96: Water vapor transmission 0.04 grains/sq ft./hr. Water permeability–0102 perms</p> <p>ASTMC 836: Film thickness on a vertical scale</p> <p>SS-W-110C: Water repellence on masonry test: 1.925% avg.</p> <p>ASTMC672: Freeze/thaw cycle – 100 day cycle</p> <p>ASTMC-156: Water retention 0.47 kg/m2, Specification – 0.55 kg/m2</p> <p>ASTM C309-98a: Moisture loss – 1025 kg/ms</p> <p>ASTM C115-00: Moisture loss – 0.19 kg/m2</p> <p>Adhesion ASTM:            Elcometer Pull – 280 lbs, concrete failed 1<sup>st</sup>. no delamination</p> <p>ASTM C642 &amp; C672 Absorption:            Phase 1-48 hr: 0.64%; Phase 2-50 day: 1.32%</p> <p>ASTM Sealing Resistance: No Scaling</p>

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RECOMMENDED SYSTEMS	SURFACE PREPARATION
<p><u>New Concrete: Use as the Cure &amp; the Sealer</u></p> <p>Ideally, the best time to apply is when bleed water is gone and concrete will withstand the weight of a man. OK to apply anytime after placement. Avoid rain or freezing for 12 hours. Apply by spray with medium saturation, careful not to over apply.</p> <p><i>* We recommend a maintenance mist after the 28-45 day curing cycle complete, if possible, for best results.</i></p> <p><u>Old Concrete: Use as a Penetrating Sealer</u></p> <p>Always clean, rinse thoroughly, especially when using oil/citrus base cleaners. Flush out well, let dry and apply by low-pressure spray. Acid etching may be necessary for tight or smooth troweled surfaces to aid in penetration.</p> <p><i>* Always test first for penetration receptibility.</i></p> <p>Pavers, Split Face Block, Gunitite, Stucco, Plaster, Mortar, Marcite, Grout.....Same</p> <p>Wood....No Metal....No Plastic...No</p> <p><i>* Always test for porosity in all scenarios.</i></p>	<p>Since <b>CreteShield 101</b> is a deep-penetrating sealer, the surface it is to be applied to must be clean and porous enough to allow penetration into the substrate. Surfaces should be clean and free of dirt/debris/mildew/oils/grease/and other sealers that may have been used. If concrete is heavily troweled (smooth, tight) may need to acid etch with a mixture of 1 part muriatic acid to 4 parts water. (Pour mixture on surface, lightly push around with brush broom, leave on for 3-5 minutes, rinse thoroughly.) Let surface dry.</p>
	COLOR / TINT
	<p><b>CreteShield 101</b> DPS is clear/dries flat/no tint</p>
	APPLICATION CONDITIONS
	<p>Surface may be a little damp but not wet. Surface/outside temperature should be 3 degrees C or more. <b>CreteShield 101</b> is rendered ineffective after freezing.</p> <p style="text-align: center;"><b>*DO NOT FREEZE*</b></p> <p>Apply by <u>low-pressure spray</u> – a common garden sprayer works well. Apply an even blanket mist just to wet – not soak. When over applied, white, chalky deposits may appear after drying. These can be stiff-broomed/hot water or power washed off.</p>
LIMITATIONS/REGULATORY	SAFETY/FIRST AID PRECAUTIONS
<p><b>CreteShield 101</b> works best on porous concrete substrates and will not work with any other product with an oil base, such as asphalt, paints, vinyl, etc. When <b>CreteShield 101</b> cannot penetrate or over applied, a slight chalky residue may lay on surface. A stiff broom, power cleaning or time can usually remove this.</p> <p>This product is considered a non-hazardous chemical under the OSHA Hazard Communication Standard / (29CFR 1910.1200)</p> <p>Transportation Classification: 55 US DOT Hazard Class – Non Regulated <i>* Member of the ICRI (International Concrete Repair Institute)</i></p>	<p><u>Avoid contact with skin &amp; eyes.</u> EPA/OSHA Compliant – contains no solvents/0% VOC (Volatile Organic Compounds) Non-Hazardous to plants and animals. Wash application materials with water.</p> <p><u>First Aid:</u> Eyes: Flush with water for at least 15 minutes. Skin: Wash thoroughly with soap and water. Inhalation: No TVL established. Move subject to fresh air. Digestion: If swallowed, give 2 glasses of water to drink. Consult physician.</p>

## Specific Benefits of CreteShield 101

### Deep Penetrating Action

By penetrating the concrete surface, CreteShield 101 Concrete Sealer allows enormous benefits over silanes, siloxanes, silicones, silicates, resins, acrylic and other paint-based products that only coat the surface. Underlying moisture movement, hydraulic force and vapor pressure quickly destroy these physically bonded surface coatings (i.e., erosion, wear, peeling, discoloration and flaking, churning, spalling, scaling).

### Permanent Chemical Linking

CreteShield 101 Concrete Sealers create a permanent chemical fusion within the concrete. This equates to longer concrete life. This chemically insoluble fusion is what separates CreteShield 101 from other penetrating sealers.

***While sodium silicates, silica, siloxane, silane, silicone and other silicate products may promote similar properties in penetration and vapor transmission rate, their bond can be dissolved and purged as moisture and water vapor moves within the concrete.*** CreteShield's insoluble chemical bond in the substrate stands above traditional sealers.

### Controlled Surface Penetration

This maximises sealer effectiveness. Some concrete sealers can penetrate a surface to a depth of 1-2 inches. Originally CreteShield 101 Concrete Sealer was designed in the same manner, however during development scientists felt this was a waste of product performance. By controlling surface penetration, our scientist/chemists have kept CreteShield 101 focused within the top inch (depending on porosity) of the concrete where it is most needed and most effective.

### 2% Vapor Transmission Rate

While CreteShield 101 Concrete Sealer helps prevent moisture intrusion (drifting chloride ions, etc), it does not block some microscopic capillaries found in concrete. This is very important in concrete preservation as a 2% vapor transmission rate is necessary to endure freeze/thaw and flexing /shifting concrete.

### Improved Surface Condition

Because CreteShield 101 Concrete Sealer densifies the concrete surface, it effectively improves endurance to physical wear and erosion. Furthermore, CreteShield 101 Concrete Sealer does not change the surface profile and will not hinder traction.

### Waterborne and User-Friendly

CreteShield 101 Concrete Sealers are waterborne and EPA, FDA and OSHA compliant. It is easily and quickly applied (recommended ) with a low-pressure spray system ( i.e. Sureflo 30-50 psi, and pump-up-sprayers ) Clean up is with warm water.

### Why use CreteShield?

We don't just pass crucial tests for government, DOT's and special projects, we pass them admirably, unlike some sealers designed to just pass a test enough to earn a credential and squeak by. Try, use and understand the difference.