

Sections

03 03 35 00 / 36 60
Concrete Finishing / Densifier & Hardener

LITHI-TEK® 4500

A HIGH PERFORMANCE PENETRATING REACTIVE CONCRETE DENSIFIER THAT STRENGTHENS AND HARDENS CONCRETE, INCREASING THE ABRASION RESISTANCE, REDUCING DUSTING

Description

Lithi-Tek® 4500 is a high performance, deep penetrating industrial-grade, water-based, lithium densifier for use as a stand-alone product or as a primer to strengthen and harden concrete.

With its proprietary reactive agent & through the latest advances in nanotechnology, its smaller molecular structure penetrates deep into the substrate forming an insoluble crystalline structure within the pores and capillaries increasing the density and abrasion resistance while leaving the surface unchanged.

Lithi-Tek® 4500 dries completely invisible, leaving the concrete appearance completely natural while forming an effective barrier within the concrete reducing concrete dusting, surface wear and micro cracks.

Actives

100%

Appearance/color

Clear

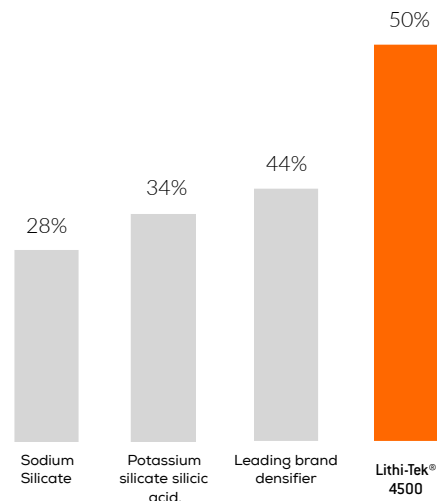
Coverage

(Lithi-Tek® 4500 is concentrated)

750-1500 ft²/gallon once reconstituted

DEPTH OF PENETRATION AND IMPACT RESISTANCE

Meets the requirements of:
ASTM WK24567, ASTM C 779



Percentage Improvement vs. Control



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TECHNOLOGY // ADVANTAGES

- **100% reactive** - Densifies concrete surfaces into a solid mass by penetrating the concrete and chemically filling the pores from within reacting with the calcium hydroxide becoming an integral part of the concrete
- **Increases abrasion resistant by up to 50%** Tightly binds together concrete reducing concrete dusting. Provides ease of maintenance to provide long-lasting protection on substrates subject to traffic
- **Small molecular structure** - allows for deeper penetration and increased performance
- **Combats ASR attacks** - Resists alkali-silica reaction
- **One-time permanent application** eliminating the need for re-application
- **Increased performance** of topcoat sealers when used as a densifying primer
- **Does not alter surface appearance** - the treated surface is natural, tack-free and slip-resistant
- **Resists efflorescence**
- **100% Breathable** - allows moisture to escape without damaging the sealer
- **Water-based** - proprietary environmentally friendly formula with no odor, no VOC's
- **Excellent penetration depth** - into any concrete substrate

- **Improves durability** - increases impact resistance
- **Super UV stable** - resistant to ultra-violent radiation, will not yellow or fade
- **Unrivaled industry leading 100 year warranty** - penetrates never delaminates, never diffuses, peel or flakes will not discolor yellow or degrade from UV light exposure.
- **Can be applied to cured and honed and concrete** - ideal for horizontal surfaces exposed to pedestrian and vehicle traffic

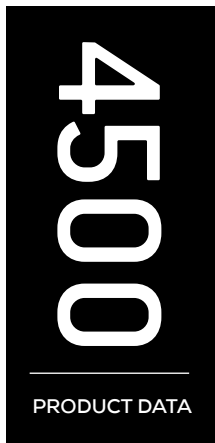
TYPICAL PROPERTIES

Appearance - Transparent clear liquid

Packaging - 1 gallon concentrate (3.78 L), 55 gallon (208 L) drums

VOC'S - 0g/L

Specific gravity - 0.97 **Density** - 8.5 lb/gal



Technical Data Sheet

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TESTING DATA

TEST METHOD

ASTM WK 24567

Standard test method for soluble silicate densifiers, chemical hardening treatments, and waterproofing treatments for hardened concrete.

ASTM C 39 Standard test method for compressive strength of cylindrical concrete specimens

ASTM E 303

Standard test method for measuring surface friction (BPT).

ASTM C 779

Standard test method for abrasion resistance of horizontal concrete surfaces

Applications / Substrates

- Interior // Exterior concrete
- Horizontal // Vertical substrates
- Concrete parapet caps
- Concrete ramps and barriers
- Parking garages
- Stadiums and buildings
- Concrete driveways, loading docks, public sidewalks, garages and shops floors.
- Plazas
- Warehouses

Substrates

- Poured and cast in place concrete

TYPE

RESULTS

Density of substrate and water repellency	Pass in
Compression test, 3000 psi	
Untreated	3150 psi
Treated	4250 psi
Skid Resistance Troweled Concrete	
Untreated	90
Treated	90
Abrasion Resistance, depth of wear, in (mm) 30 minutes	
Untreated	0.0264 (0.7)
Lithi-Tek® 4500 Treated	0.0025 (0.06)

Test results are averages obtained in a controlled environment, material and curing conditions of 75°F and 50% relative humidity. Reasonable variations should be expected .



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APPLICATION

Surface Prep

1. New "green" concrete must be properly cured. Concrete should obtain 80% of design strength, typically achieved within 28 days.
2. The concrete substrate must be structurally sound and clean of oil, grease, dirt, wax, curing compounds, efflorescence, paints, previous sealers, adhesives and other contaminants that might interfere with the penetration of the sealer. Power wash, acid etch or mechanically scarify as necessary to achieve the desired surface condition. If acid was used to clean the concrete, neutralize the surface and rinse with water prior to application. Allow for proper dry time before application. May be applied to slightly damp surfaces, although maximum penetration is achieved on dry substrates. Do not apply if standing water is visible.
3. Surface and air temperatures must be at least 40°F during application. Surface and air temperatures should not exceed 95°F. Do not apply when temperatures are expected to fall below 32°F within 8 hours or when rain is expected within 12 hours following application. Keep material from freezing. If freezing conditions exist before application, let the substrate thaw before application. Do not apply during inclement weather or when inclement weather is expected within 12 hours.
4. Crack, patching and expansion joint sealants can be applied after application; always test for compatibility and adhesion.
5. Protect people, property, vehicles, window glass, roofing materials, plastic products, shrubbery, landscaping and all surfaces not set for treatment from overspray.

Application - Primer

1. Always test a small area before application to ensure desired performance, aesthetics, coverage rates and to verify application technique. Let test area dry thoroughly, 5-7 days, before inspection.
2. Always mix the concentrate with 3 parts water prior to application. Distilled water is recommended for maximum performance. Stir material thoroughly before and during application.

Application - Primer (Continued)

3. One uniform coat is needed to ensure complete coverage. Apply with a roller, brush or low-pressure non-atomizing sprayer. Apply to saturation and roll or broom out any puddles until the sealer penetrates the substrate. **Do not over apply.** If applied too heavily, an unreacted white residue may develop on the surface. If it starts to rain, stop treatment and cover the treated areas.

Application (Polishing)

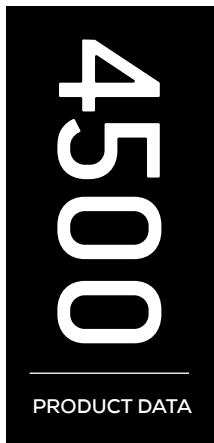
1. Always test a small area before application to ensure desired performance, aesthetics, coverage rates and to verify application technique. Let test area dry thoroughly, 5-7 days, before inspection.
2. Always mix the concentrate with 2 parts water prior to application. Distilled water is recommended for maximum performance. Stir material thoroughly before and during application.
3. One uniform coat is needed to ensure complete coverage. Apply with a roller, brush or low-pressure non-atomizing sprayer. Apply to saturation and roll or broom out any puddles until the sealer penetrates the substrate.

Dry Time

Typical drying time is 4-6 hours at 70°F and 50% relative humidity. Cooler temperatures or higher relative humidity can extend the drying time. Treated surfaces will be ready for pedestrian and vehicle traffic within 24 hours.

Clean Up

Clean equipment and tools with hot soapy water. Unused or old material may be disposed of in a waste disposal site in accordance with local, state and federal laws.



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APPLICATION

Precautions/Safety

Avoid contact with skin, eyes and clothing, do not take internally. Use appropriate safety equipment during application and handling. Please refer to the safety data sheet (SDS) for additional precautionary instructions before use.

Best Performance (application notes)

- Proper application is the responsibility of the user.
- Do not use on extremely porous concrete or masonry such as CMU block.
- **Do not over apply. Sealer is highly reactive. Excess material may result in a white residue or discoloration on the surface.**
- Does not protect against equipment leaks such as oils and hydraulic fluids.
- Make sure the most current versions of product data sheets and SDS are being used.

Coverage

Lithi-Tek® 4500 is concentrated. 1 coat: 750 - 1500 square feet. Variations in texture and porosity of substrate may affect the coverage and performance of the product.

KreteTek Industries Inc.

1000 N West Street
Wilmington, DE 19801

www.Ghostshield.com

Customer Service and Technical Support

1-855-KreteTek (1-855-573-8383)

Warranty

KreteTek Industries Inc. warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. KreteTek Industries Inc. makes no other warranty or guarantee, express or implied, including warranties of merchantability or fitness for a particular purpose with respect to its products. The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is the replacement of product or refund of the purchase price at the sole option of KreteTek Industries Inc. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by Purchaser. KreteTek Industries Inc. will not be responsible for any special, incidental, consequential (including lost profits) or punitive damages of any kind.

Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. This information and all further technical advice are based on KreteTek Industries Inc. present knowledge and experience. However, KreteTek Industries Inc. assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. KreteTek Industries Inc. reserves the right to make any changes according to technological progress or further developments. The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.

For professional use only.

Last revised 4/17