



Sections

07 07 19 16
Water Repellents



Technical Data Sheet

ISO-TEK™ 8501

A NEW CLEAR HYDROPHOBIC IMPREGNATING SEALER THAT PENETRATES TWICE AS DEEP AS TRADITIONAL CLEAR SEALERS

Description

A new supercharged nano-technology driven, breathable, deep penetrating, clear, water, and chloride repellent that provides exceptional penetrating power and water repellency.

Iso-Tek™ 8501 is a hydrophobic impregnating sealer used to prevent water and water-soluble damaging substances from penetrating concrete and mineral substrates. Once impregnated the change of the surface tension creates a surface environment that is hydrophobic and able to repel water and water-soluble deleterious materials. Iso-Tek™ 8501 dries completely clear, does not darken the concrete, aides in a dramatic reduction of chloride ion ingress, sulfates,

acidic gases, salts and water absorption. Because Iso-Tek™ 8501 is impregnating, rebar in reinforced concrete will resist oxidization, inhibiting rust.

The proprietary nanotechnology offers deeper penetration when compared to traditional silane isomers resulting in an even longer service life that protects the concrete, forming an invisible barrier that leaves the concretes appearance completely natural.

Composition

*100% silane

Appearance/color

Milky white to yellowish gel, dries clear

Coverage

100-200 ft²/gallon

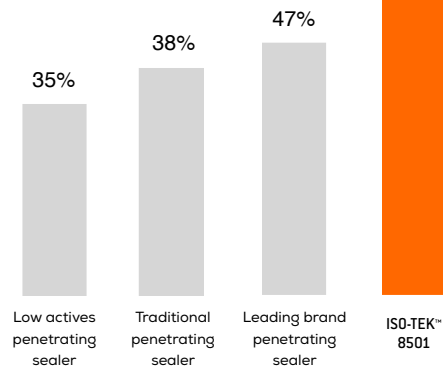
DEPTH OF PENETRATION WATER REPELLENCY AND WEATHERING

Meets the requirements of:

ASTM 514, ASTM E 96, ASTM E 303
ASTM F 609, ASTM C 672
AASHTO T-259 & T-260
NCHRP 244 Series II & IV



59%



Percentage improvement vs. control

* Product actives content may vary +/- 5% (active content >95% - <100%) due to manufacturing and blending operations.



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TECHNOLOGY // ADVANTAGES

- **Composition** - 100% nano technology derived silane isomers. Its smaller molecular structure allows for deeper penetration increasing performance and protection.
- **Exceptional waterproofing** - Penetrates deep within the concrete chemically reacting within the pores and capillaries creating a long-lasting hydrophobic surface
- **100% breathable** - Non-film forming. Allows moisture within the concrete to escape without adverse effects to the sealer. Does not trap moisture
- **Protects against chloride ion penetration** - Forms an effective chloride screen dramatically reducing chloride ion ingress preventing deicing salt / chloride damage
- **Resists oxidization** - Protects reinforced concrete by limiting surface water content and inhibits rust and corrosion of rebar in reinforced concrete
- **Resists moisture intrusion** - Resists wind-driven rain, spalling, pitting and cracking.
- **Resist organic growth** - Mold, mildew lichen and efflorescence
- **Department of Transportation** - Meets or exceeds DOT specifications
- **Resists freeze thaw & thermal cycling damage** - Resists ASR/alkali attacks by preventing the ingress of water
- **Provides good adhesion for coatings**

- **Improves durability** - Prevents capillary uptake of water and the aggressive substances dissolved in it
- **Natural flat finish** - Does not change surface appearance, UV stable, will not breakdown with light exposure
- **Gel formula** - Optimal for vertical surfaces without loss of material
- **Water based** - Low VOC's, environmentally friendly
- **Seals cracks** up to 0.3mm
- **USGBC LEED Version 4/4.1** - Contributes to LEED credits
- **Unrivaled industry leading 100 year warranty** - Guaranteed to never delaminate, discolor, chip, degrade from UV light exposure flake or diffuse.

TYPICAL PROPERTIES

Appearance - Milky white to yellowish gel, dries clear

Packaging - 5 gallon (18.9 L) pails and 55 gallon (208 L) drums

VOC'S - <80g/L maximum

Flash Point - >165° F (74° C)



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TESTING DATA

TEST METHOD

ASTM E 303

Standard test method for measuring surface friction (BPT).

ASTM E 514

Standard test method for water penetration and leakage through masonry

Alberta DOT penetrating sealer, Type 1b

NCHRP

Series II

NCHRP

Series IV Southern Exposure

TYPE

Skid Resistance

370 ft² per gallon

185 ft² per gallon

Water Penetration of Masonry, % Reduction

370 ft² per gallon

185 ft² per gallon

Vapor Transmission

185 ft² per gallon

Waterproofing after surface abrasion (initial waterproofing performance)

185 ft² per gallon

Alkali resistance (final waterproofing performance)

185 ft² per gallon

Reduction in Water Absorption

370 ft² per gallon

185 ft² per gallon

Reduction in Chloride Ion Content

370 ft² per gallon

185 ft² per gallon

Accelerated Weathering Test

Resistance to UV light

Reduction in soluble chloride

370 ft² per gallon

Resistance to UV light

Reduction in soluble chloride

185 ft² per gallon

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.

RESULTS

BPN = 84 (dry), 70 (wet)

BPN = 92 (dry), 83 (wet)

BPN, Control = 83 (dry), 87 (wet)

90% reduction in leakage rate

89% reduction in leakage rate

70%

90.2%

87.2%

1 day: 82%, 5 days: 81%, 21 days: 79%, average: 81%

1 day: 83%, 5 days: 81%, 21 days: 77%, average: 80%

1 day: 79%, 5 days: 83%, 21 days: 86%, average: 83%

1 day: 81%, 5 days: 87%, 21 days: 83%, average: 84%

93% reduction in soluble chloride, no discoloration

95% reduction in soluble chloride, no discoloration



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TESTING DATA

TEST METHOD

AASHTO T-259 & T-260

Resistance of concrete to chloride ion penetration

ASTM E 96

Standard test method for water vapor transmission of materials

ASTM F 609

Standard test method for using a horizontal pull slip meter

ASTM C 672

Standard test method for scaling resistance of concrete surfaces exposed to deicing chemicals

TYPE

Resistance of concentrate to chloride ion penetration

370 ft² per gallon

185 ft² per gallon

Water Vapor Transmission

370 ft² per gallon

185 ft² per gallon

Surface Friction/Skid Resistance

370 ft² per gallon

Scaling Resistance to deicing chemicals

370 ft² per gallon

RESULTS

73%, 60%, 10% reduction in chloride penetration at each depth

74%, 52%, 10% reduction in chloride penetration at each depth

Up: 3 (untreated 3.5)
Down: 2.5 (untreated 3.3)

Up: 3 (untreated 3.5)
Down: 2.5 (untreated 3.3)

$f = 0.8$ (rubber/wet & dry)
 $f = 0.7-0.9$ (leather/dry resp. wet)

Control: 40 cycles
100 g/m²: 70 cycles
200 g/m²: 80 cycles

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.

8501

PRODUCT DATA

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APPLICATIONS // SUBSTRATES

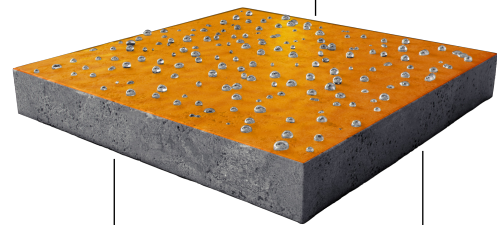
- Interior // exterior concrete
- Vertical substrates / Overhead concrete
- Reinforced concrete structures
- Bridge pilings
- Concrete barriers
- Parking garages
- Stadiums and buildings
- Concrete columns and spandrels
- Building restorations

- Concrete
- Brick and Masonry
- Stucco
- CMU

Untreated Concrete, Showing
Chloride Intrusion



Water-Soluble Deleterious Materials &
Chlorides Repelled By Ghostshield®



Concrete

ISO-TEK™ 8501
Dries Clear



Ghostshield dries completely clear protecting
the concrete from surface damage



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Surface Prep

1. New "green" concrete must be properly cured. Concrete should obtain 80% of design strength, typically achieved within 14-28 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. Allow for proper dry time before application. Do not apply if standing water is visible.
3. Iso-Tek™ 8501 is frost sensitive, surface and air temperatures must be above 32°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 before 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

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. Stir material thoroughly before and during application. Do not dilute or alter material for purposes other than specified.
3. Apply with a low-pressure non-atomizing sprayer. A lambskin roller or brush can be used in smaller areas. The exact amount depends on the absorbency of the substrate. If the substrate is of high quality and hence not very absorbent, do not apply more than roughly 185 ft² per gallon at 6-8 mils in one operation as it may take several hours to penetrate completely. At higher application rates, the impregnating film might liquefy because of the concrete's alkalinity and it might start to run off.

Application - (Continued)

Only impregnate concrete that has a uniformly dry surface with no damp patches. A second coat may be applied at any time, but is usually unnecessary. If it starts to rain, stop treatment and cover the impregnated areas.

Dry Time

Typical drying time is 24 hours at 70°F and 50% relative humidity. Cooler temperatures or higher relative humidity can extend the drying time. Water repellency will continue to develop within 7 days of application.

Clean Up

Clean equipment, tools and surfaces 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.

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.

Storage

Iso-Tek™ 8501 has a shelf life of at least 12 months when stored between 45°F and 85°F in the tightly closed original container. The best use before end date of each batch appears on the product label. Storage beyond the date specified on the label does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons.



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Best Performance

- Proper application is the responsibility of the user.
- Will not inhibit water penetration through unsound or cracked surfaces with defective flashing, caulking or structural waterproofing.
- Spills should not be allowed to sit for extended periods of time, clean all spills in a timely manner.
- Iso-Tek™ 8501 should not get into direct contact with bitumen. The resistance of insulant against Iso-Tek™ 8501 has to be determined dependent on temperature.
- Do not apply if rain is due on day of application
- Do not apply in direct sunlight resulting in temperatures outside of the application parameters.
- Do not apply in high wind conditions (applies if utilizing airless sprayer and winds exceed 35 mph)
- Make sure the most current versions of technical data sheets and safety data sheets are being used.

Coverage

1 coat: Up to 185 square feet per gallon at 6-8 mils. Variations in texture and porosity of substrate will affect the coverage and performance of the product.

KreteTek Industries Inc.

66 B River Rd
Hudson, NH 03051

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 Sheet 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 3/22



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