

Technical Data Sheet

Sections

07 07 19 16
Water Repellents

ISO-TEK® 8100

NANOTECHNOLOGY DRIVEN, SUPERCHARGED
100% ACTIVES, CLEAR, BREATHABLE
PENETRATING SEALANT

Description

A new supercharged nano-technology driven, breathable, deep penetrating, clear, 100% active, water, and chloride repellent that provides exceptional penetrating power and water repellency.

Iso-Tek® 8100 is a deep penetrating water repellent that protects against water-soluble deleterious materials, and freeze/thaw cycles. With it's long established hydrophobic agents, and through the latest advances in nanotechnology, its intelligent nano particles provide even deeper penetration adding an extra layer of protection.

Once applied the change of the surface tension creates a surface

environment that is hydrophobic forming an effective shield that aides in a dramatic reduction of chloride and water absorption.

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.

Actives

100% wt%

Appearance/color

Clear, colorless

Coverage

200-600 ft²/gallon

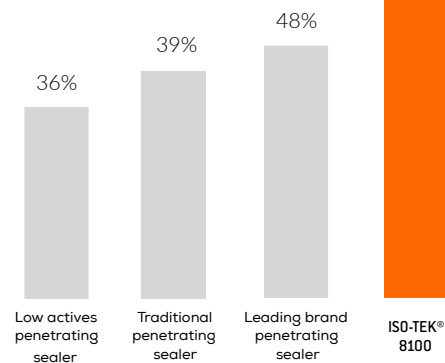
DEPTH OF PENETRATION WATER REPELLENCY AND WEATHERING

Meets the requirements of:

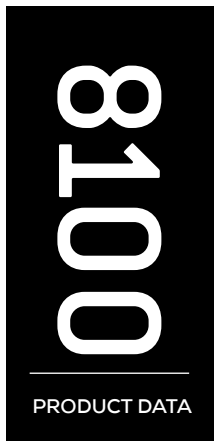
ASTM E-514, ASTM E-96, ASTM C-672,
ASTM E-303, ASTM C-642,
ASTM D-5590, D 6532, D 6490
AASHTO T-259, T-260, ASTM G-154
NCHRP 244 (Series 2 & 4)
OHD L-34



56%



Percentage improvement vs. control



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TECHNOLOGY // ADVANTAGES

- **Composition** - 100% actives nano-derived proprietary sealant
- **Exceptional waterproofing** - Penetrates deep within the concrete chemically reacting within the pores and capillaries creating a long-lasting hydrophobic surface that beads water
- **Dramatic reduction in chloride and water absorption**
- **100% breathable** - Non-film forming. Allows moisture within the concrete to escape without adverse effects to the sealer. Does not trap moisture
- **Abrasion resistant** - Reduces concrete dusting. Provides ease of maintenance, resists ASR / Alkali attack
- **Protects against chloride ion penetration** - Forms an effective chloride screen dramatically reducing chloride ion ingress preventing deicing salt / chloride damage
- **Resist oxidization** - Inhibits rust and corrosion of rebar in reinforced concrete
- **Stops moisture intrusion** - Stops wind-driven rain, prevents freeze-thaw damage, spalling, pitting and cracking.
- **Resist organic growth** - Mold, mildew and lichen
- **Department of Transportation** - Meets or exceeds DOT specifications
- **Provides excellent adhesion for paints**

- **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
- **Can be applied to cured, honed and polished concrete** - Ideal for horizontal surfaces exposed to pedestrian and vehicle traffic, compatible with silicate densifiers
- **100% Neat** - Excellent for cold weather applications, low volatility, high resistance to alkalis
- **Unrivaled industry leading 100 year warranty** - Guaranteed to never delaminate, flake, discolor, chip, degrade from UV light exposure or diffuse

TYPICAL PROPERTIES

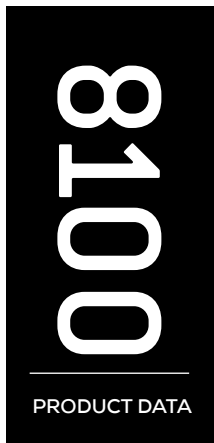
Appearance - Clear, colorless

Packaging - 1 gallon (3.78 L), 5 gallon (18.9 L) pails and 55 gallon (208 L) drums

VOC'S - less than 350g/L maximum

Flash Point - 107° F (42° C)

Specific gravity - 0.76 **Density** - 8.8 lb/gal



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TESTING DATA

TEST METHOD

ASTM E 303

Standard test method for measuring surface friction (BPT).

ASTM D 6532

Standard test method for evaluation of clear water repellents on water absorption in concrete.

ASTM D 6490

Standard test method for water vapor transmission or non film forming agents

ASTM E 514

Standard test method for water penetration and leakage through masonry

ASTM D 6532

Standard test method for evaluation of clear water repellents on water absorption in concrete

ASTM C642

Standard test method for density, absorption and voids in hardened concrete

ASTM C672

Standard Test Method for Scaling Resistance of Concrete Surfaces Exposed to Deicing Chemicals

Alberta DOT penetrating sealer, Type 1c
(0.35 w/c ratio)

NCHRP

Series II-Cube test

NCHRP

Series II-Cube test

NCHRP

Series IV - Southern climate

TYPE

RESULTS

Skid Resistance Troweled Concrete

| | |
|-----------|----|
| Untreated | 90 |
| Treated | 90 |

Water Absorption, %

| | |
|----------|------|
| Concrete | 0.96 |
| Brick | 0.05 |

Water Vapor Transmission

| | |
|--------------------|-----|
| WVT (grains/h/ft²) | 2.0 |
| Permeance (perms) | 4.8 |

Water Penetration of Masonry, % Reduction

| | |
|----------|-----|
| Dampness | 100 |
| Leakage | 100 |

Water Exclusion, %

| | |
|----------|----|
| Concrete | 90 |
| Brick | 99 |

Water Absorption, %

| | |
|----------|------|
| 48 hours | 0.26 |
| 50 days | .70 |

Scaling resistance rating, non-air-entrained concrete

| | |
|------------|-------------------------|
| 100 cycles | 0-No scaling |
| | 83.5 (exceeds criteria) |

Water Repellency After Heavy Abrasion, %

Water Weight Gain, % Reduction

| | |
|-------------|----|
| 250 ft²/gal | 90 |
| 400 ft²/gal | 85 |

Absorbed Chloride, % Reduction

| | |
|-------------|----|
| 250 ft²/gal | 96 |
| 400 ft²/gal | 87 |

Absorbed Chloride, % Reduction

98 (exceeds criteria)

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.

8100

PRODUCT DATA

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ISO-TEK™ 8100 // INTEGRAL WATERPROOFING

Processing as a Concrete Admixture (Water Resisting Admixture)

Iso-Tek™ 8100 is approved as a water resisting admixture under EN 934-2:2009

The recommended admixture range is 0.1 % to 1.0 % of the cement content. A significant reduction in water uptake can already be achieved at a concentration of 0.2 % of the cement.

Iso-Tek™ 8100 is added either simultaneously with or immediately after the mixing water – it should never be added along with other additives. We recommend testing compatibility with other concrete admixtures separately. A longer mixing time will thoroughly distribute the product within the overall system, which in turn will make it highly effective.

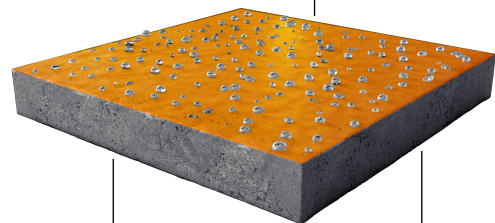
An initial test according to DIN Technical Report 100, section 9.5, (alternative: EN 206-1 and EN 1045-2) must be conducted for each new concrete composition. Finer adjustment of the fresh and set concrete properties by, for instance, varying the binder content pursuant to EN 206-1 and EN 1045-2 is recommended on a case-by-case basis. The concrete may harden more slowly during the first days in isolated cases.

When used in concrete goods or similar concrete products according to EN 1338, 1339 or EN 1340, an initial-type test (cf. section 6.2 of the respective standard) is recommended.

Untreated Concrete, Showing
Chloride Intrusion



Water-Soluble Deleterious Materials &
Chlorides Repelled By Ghostshield

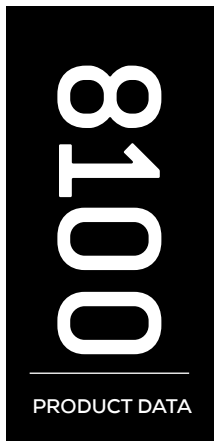


Concrete

ISO-TEK® 8100
Dries Clear



Ghostshield's dries completely clear protecting
the concrete from surface damage



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Application

1. Prior to application always test a small inconspicuous area of the substrate to ensure desired performance results, aesthetics and coverage rates. Allow the test area to fully dry and cure (5-7 days) before evaluating and determining suitability.
2. The concrete substrate must be structurally sound, thoroughly dry and clean. Wait at least 12 hours after rain and/or pressure washing before sealing; concrete should be visibly dry.
3. New concrete should obtain at least 80% of its design strength, normally achieved within 14-28 days.
4. Remove all paints, previous sealers and/or adhesives before application. The substrate must be clean of oil, grease, dirt, wax, curing compounds, efflorescence and other contaminants that might interfere with the penetration of the sealer. If acid is used to clean the concrete, neutralize the surface completely and rinse it with water prior to application. Then wait for the concrete to dry out for at least 12 hours.
5. The surface-zone moisture content of the concrete should not exceed 5%wt, by method of a Tramex concrete moisture meter.
6. Surface, air and product temperature should be 40 -110 F during application. Do not apply when temperatures are expected to fall below 40 F within 12 hours of application
7. Cover all surrounding areas not intended to be coated.
8. Iso-Tek® 8100 is ready to use right out of the container. Stir extremely well before use. Pour the Iso-Tek® 8100 into a low pressure non-atomizing sprayer, paint tray or bucket and dip a 3/8" nap roller into the tray or bucket. Spray or roll one coat onto an area of approximately 100 square feet (10x10 area).
9. A second coat on extremely porous substrates will provide exceptional performance; apply a second coat to the same 100 square foot area, while the first coat is still wet (wet on wet applications improves penetration). Apply until the surface is saturated but not to the point of puddling (Since the Iso-Tek® 8100 is a hydrophobic product if you try to apply a second coat after the first coat has dried, the first coat may try to repel the second coat). Roll or broom out any puddles until the sealer penetrates the substrate thoroughly.

10. After the first area has been treated move on to the next 100 square foot section, if applying two (2) coats follow the wet-on-wet application method.
11. When the entire application has been treated, let the concrete dry for at least four (4) hours before walking, 12 hours before driving, and protect the concrete from rain for at least 12 hours after sealing.
12. Avoid contact with skin, eyes and clothing. Wash hands after use and do not take internally. Please refer to the product Safety Data Sheet (SDS) before using. Application process should be followed to ensure adequate penetration and optimum performance.
13. Do not use on concrete that has been previously sealed without testing for suitability, coverage rate, absorption and desired performance.
14. Water repellency generally develops within 3- 7 days.
15. Clean equipment and tools with mineral spirits or denatured alcohol. Unused or old material may be disposed of in a waste disposal site in accordance with local, state and federal laws.

The data presented in this leaflet are in accordance with the present state of our knowledge, but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials may also be used. The recommendations do not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the products for a particular purpose. KreteTek Inc. warrants this product to be free from defects. Where permitted by law, KreteTek Inc. makes no other warranties with respect to this product, express or implied warranties of merchantability or fitness for particular purpose. Satisfactory results depend not only on quality products but also upon many factors beyond our control. KreteTek Inc. makes no there warranty or guarantee, expressed or implied, including warrantied 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 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 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 Inc.'s present knowledge and experience. However, KreteTek 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 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. This warranty may not be modified or extended by representatives of KreteTek Inc., its distributors or applicators.

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