

KAUFMAN

PRODUCT
INFORMATION

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SilaneSeal 300

Description

SilaneSeal 300 is a clear, penetrating, breathable, and VOC-compliant surface treatment for use on concrete. Chemically engineered with isobutylalkoxy functional silanes, SilaneSeal 300 is rapid drying and offers superior performance on high quality mix designs typical of new bridge decks. SilaneSeal 300 acts by creating a deep hydrophobic layer in the concrete that prevents water and contaminants from entering the substrate and causing premature deterioration.

SilaneSeal 300 works by moving through the moisture boundary layer that lines the pore structure of the substrate to promote a more consistent level of protection throughout the entire depth of penetration. As a result, the proper use of SilaneSeal 300 leads directly to a longer treatment life, especially on wearing surfaces.

Uses

- For use on cast-in-place, precast, GFRC and high-strength concrete
- Protects the reinforcing steel from corrosion due to the effects of water, deicing salts, and other waterborne contaminants.
- To alleviate the deterioration of concrete due to alkali-silica reactivity.
- Bridge decks where fast drying is needed to minimize lane closures.
- Heavy-traffic wearing surfaces
- Areas that receive high salt concentrations (piers, coastal buildings), to provide a high-performance, long-lasting chloride screen.

SilaneSeal 300 Advantages

- Excellent resistance to chloride ion ingress
- 100% moisture vapor transmission
- Mitigation of AAR & ASR deterioration
- Deep penetration into substrate
- No change in surface appearance
- No change in surface friction after application
- High resistance to alkali attack
- Long service life
- Excellent performance on wearing surfaces
- Dry time 1 hour at 70°F (21°C)
- Will not inhibit adhesion of paints and line striping
- LEED credits for both new and existing construction projects.

SilaneSeal 300 PHYSICAL DATA

Color	Water White
Active Substance	100%
	Isobutylalkoxysilane
Solvent	None
Flash Point	145.4°F
Density	7.3 lbs./gal
VOC Content	385 g/l

SilaneSeal 300 TEST DATA

Alberta DOT Penetrating Sealer Type 1c
(0.35 w/c ratio)

Water Repellency After	
Heavy Abrasion	88.4%

NCHRP #244 Series II

Reduction in Water Absorption

@ 125 ft ² /gal	88%
@ 250 ft ² /gal	86%
@ 400 ft ² /gal	75%

Reduction in Chloride Ion Ingress

@125 ft ² /gal	88%
@ 250 ft ² /gal	87%
@ 400 ft ² /gal	84%

NCHRP #244 Series IV

Reduction in Chloride Ion

@ 150 ft ² /gal	99%
@ 250 ft ² /gal	99%
@ 400 ft ² /gal	93%

Water Absorption of Concrete (ASTM C-642)

24 hours	0.03%
48 Hours	0.04%
50 Days	0.20%

Deicer Scaling (ASTM C-672)

100 Cycles	0 Rating
(non-air-entrained concrete)	

90 Day Salt Ponding (AASHTO T259)

Non Abraded Specimen 1/2" to 1"	0.34 lbs/yd ³ Cl ⁻
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Skid Resistance of Paved Surfaces (ASTM E 274)

Dry	No change
Wet	No change

Water Absorption of Concrete (ASTM D-6489)

48 hours	95% reduction
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Penetration (OHD L-34)

Concrete 0.5 w/c ratio	3/8-5/8"
Concrete 0.42 w/c ratio	3/8-1/2"

Application

Generally, concrete must be allowed to cure for a minimum of twenty-eight (28) days, however there are instances in which the cure time might be shortened. Please consult your local Kaufman Products sales representative for the criteria needed to apply sealer before the 28 day cure time.

Concrete repair and replacement must be completed prior to application of SilaneSeal 300. Patching materials, caulking, sealing materials and traffic paint must be fully cured prior to application. All surfaces must be cleaned to remove all traces of dirt, dust, efflorescence, mold, salt, grease, oil, asphalt, laitance, curing compounds, paint, coatings, and other foreign materials. Acceptable surface cleaning methods include shotblasting, sandblasting, water blasting and using specialty chemical cleaners.

SilaneSeal 300 should be applied using low-pressure (15 to 25 psi) pumping equipment with a wet fan type spray nozzle. Alternate methods include using a spray bar or apparatus equipped with multiple nozzle tips which will apply a uniform coat across the concrete surface. Power rollers with a 1" nap or brushes are permitted, however using these will result in additional labor and costs. Do not alter or dilute the material. Do not apply to a wet or damp substrate.

On vertical surfaces, apply SilaneSeal 300 in a flooding application from the bottom up, so the material runs down 6 to 8 inches below the spray pattern. Coverage rates on horizontal concrete surfaces are between 100 to 350 ft²/gal. Coverage rates on vertical surfaces depend on the type of substrate to be treated.

Packaging

5.00 gallon pail
55.00 gallon drum
250.00 gallon tote

Precautions

SilaneSeal 300 is not intended for below-grade waterproofing. SilaneSeal 300 should not be applied if the surface temperature is below 20°F (-7°C) or above 110°F (43°C), if rain is expected within two hours following application, or if high winds or other conditions prevent proper application. If rain has preceded the application, the surface should be allowed to dry for at least twenty-four hours.

SilaneSeal 300 is a combustible liquid and should be kept away from heat, sparks, open flame, and other sources of ignition. SilaneSeal 300 containers should be kept closed when not in use, should be stored at temperatures between 0°F (-18°C) and 120°F (50°C), and kept away from rain and standing water. When working in an enclosed area, an air respirator should be used. Please refer to the complete Safety Data Sheet prior to use.

Technical Information

The results were achieved under laboratory conditions. Statistical variations will occur based upon mixing methods, temperature & humidity, test methodology, site conditions, curing conditions, application methods, and equipment.

For professional use only. Not for sale to or use by the general public.

LIMITED WARRANTY We warrant our products to be of good quality and will replace material proved defective. Satisfactory results depend not only upon quality products, but also upon many factors beyond our control. Therefore, except for such replacement, Kaufman Products, Inc makes no warranty or guarantee, expressed or implied, including warranties of fitness or merchantability, respecting its products, and Kaufman Products, Inc shall have no other liability with respect hereto. User shall determine the suitability of the product or the intended use and assume all risks and liability in connection thereto. Our salespeople, distributors, and their salespeople have no authority to change the printed recommendations concerning the use of our products.