

PRODUCT DATA SHEET

Sikagard[®]-705 L

SILANE BASED REACTIVE WATER REPELLENT IMPREGNATION.

PRODUCT DESCRIPTION

Sikagard[®]-705 L is a one-component low viscosity, solvent free, reactive impregnation for concrete and cementitious substrates based on silane technology with 99% active ingredient. Sikagard[®]-705 L complies with the highest requirements of EN 1504-2 for hydrophobic Impregnation (penetration depth class II & resistance to freeze-thaw cycles and chloride ion penetration) and is tested in accordance with NCRHP 224 Series II & IV.

USES

Sikagard[®]-705 L is used as water-repellent penetrating sealer (hydrophobic treatment) for absorbent substrates such as:

- Parking decks
- Bridge decks
- Concrete highway surfaces
- Ramps and Barriers
- Cooling Towers
- Stadiums
- Natural stone substrates
- Many other traffic bearing/reinforced concrete substrates and structures

CHARACTERISTICS / ADVANTAGES

- Excellent penetration (~100% active content).
- Economical and easy to use.
- Reduces capillary water absorption, protection against driving rain and splashing on vertical areas.
- Reduction of absorption of aggressive or deleterious agents dissolved in water (i.e. de-icing salts or chloride from marine environment).
- Non vapor barrier.
- Long term efficiency, deep penetration.
- Increases the resistance of concrete to freeze and thaw cycles and de-icing salts.
- Low VOC content.
- Resistant to sea water.
- Ready and easy to use

PRODUCT INFORMATION

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| Chemical Base | Alkoxy silanes (~100 % active ingredient) |
| Packaging | 5 gal. (19 kg) pail, 55 gal. (180 kg) drum |
| Appearance / Color | Water like liquid, colorless. |
| Shelf Life | 2 years from date of production if stored in unopened, undamaged and original sealed packaging |
| Storage Conditions | Store in dry and cool conditions. Protect from moisture. |

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| Flash Point | 104 °F (40 °C) | | |
| Active Content | ~100 % | | |
| Viscosity | ~9 mm ² /s (at 25 °C) | | |
| Product Declaration | Alberta DOT Type 1c | | |
| | Water Repellence | 85.3% | |
| | Alkali Resistance | 84.8% | |
| | Vapor Transmission | 106.9% | |
| | NCHRP 224 Absorbed Chloride | | |
| | Series II | 88% | |
| Series IV | 98% | | |
| Water Absorption | .06 % (24 h)/.1 % (48 h) | ASTM C-642 | |

TECHNICAL INFORMATION

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|--------------------------------------|---------------------|----------------|-------------|
| Freeze Thaw De-icing Salt Resistance | Scaling Resistance | None | ASTM C672 |
| | 90 Day Salt Ponding | 82.6% (0.5-1") | AASHTO T259 |
| Penetration Depth | > 0.4 in. (10 mm) | Class II | OHD L-34 |

SYSTEM INFORMATION

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| System Structure | 2–3 coats either as stand-alone or combined with surface applied corrosion inhibitor and/or protective coating. |
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APPLICATION INFORMATION

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| Coverage | Dependent on absorbency of the substrate as well as the required penetration depth: 240–360 sq.ft./gal per coat |
| Substrate Moisture Content | < 5–6 % when measured with Tramex |
| Waiting / Recoat Times | Can be overcoated with water and solvent based polymer paint - contact the proposed paint manufacturer for recommendations. Sikagard®-705 L can be used as a water repellent primer under many Sikagard® protective coatings inclusive of water based dispersion. Penetration of water is thus prevented at possible weak spots or in the event of damage to the top coat and the risk of consequential damages such as paint flaking can be reduced. Waiting time: Minimum 5 hours, maximum 1 week. |
| Curing Treatment | Sikagard®-705 L does not require any special curing but must be protected from rain for at least 4 hours at 68 °F (20 °C). |

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

Free of dust, dirt, oil, efflorescence and existing paint coatings, salt deposits or any contaminants that may affect the penetration of the chemical. Remove all grease, curing compounds, surface treatments, coatings, oils, etc.
Best results are achieved when Sikagard® 705 L is

applied on 28 days old concrete – however, due to its high alkali resistance, it is still possible to apply as early as 3 days. Testing should always be done to ensure proper penetration depth. Best results are achieved on a dry, very absorbent substrate. All surfaces to be sealed must be dry, clean, sound before application.
Preparation Work: Concrete, masonry and natural stone surfaces must be prepared using mechanical means (sandblast, shot blast, pressure wash, etc.). Cracks in concrete more than 12 mils must be repaired prior to



application of the hydrophobic treatment. If using water to clean, substrate should be visibly dry (i.e. no damp/dark patches) before coating.

MIXING

Sikagard®-705 L is supplied ready for use and must not be diluted.

APPLICATION

Sikagard®-705 L is applied using a low-pressure spray, brush or roller, in a single pass from bottom up taking care not to let the product run. Apply subsequent coats “wet on wet”. On horizontal application, avoid ponding on the surface.

LIMITATIONS

- Best results are achieved when Sikagard® 705 L is applied on 28 days old concrete – however, due to its high alkali resistance, it is still possible to apply it at a very early age as 3 days. Testing should always be done prior to application on early age concrete to ensure sufficient penetration depth.
- Areas such as window frames which still need to be painted must be securely covered to avoid contact with Sikagard® 705 L.
- Areas not to be impregnated such as window panes need to be protected from being accidentally contaminated with Sikagard® 705 L.
- Sikagard® 705 L can damage some coatings and bituminous products.
- Sikagard® 705 L can lead to darkening of concrete, apply sample areas first.
- Cannot be over-coated with limewash or cement paint.
- For use in the South Coast Air Quality Management District (SCAQMD): This product shall be used only for reinforced concrete bridge structures for transportation projects within 5 miles of the coast or above 4,000 feet elevation or for restoration and/or preservation projects on registered historical buildings that are under the purview of a restoration architect.
- Penetrates into concrete and masonry substrates and chemically react to form covalent bonds with naturally occurring minerals in the substrate.
- Lines the pores of concrete and masonry substrates with a hydrophobic coating, but does not form a surface film.
- Improves water repellency at least 80 percent after application on a concrete or masonry substrate. This performance has been verified on standardized test specimens, in accordance with one or more of the following standards: NCHRP 244 Series II & IV.
- Provides a breathable waterproof barrier for concrete or masonry surfaces that does not prevent or substantially retard water vapor transmission. This performance has been verified on standardized test specimens in accordance with ASTM E96/E96M.
- Meets the performance criteria listed in the National Cooperative Highway Research Report 244 (1981), surface chloride screening applications, for products

labeled and formulated for vehicular traffic.

SCAQMD Rule 1113

(A) Used only for reinforced concrete bridge structures for transportation projects within 5 miles of the coast or above 4,000 feet elevation; or for restoration and/or preservation projects on registered historical buildings that are under the purview of a restoration architect.

(B) Penetrates into concrete and masonry substrates and chemically react to form covalent bonds with naturally occurring minerals in the substrate.

(C) Lines the pores of concrete and masonry substrates with a hydrophobic coating, but do not form a surface film.

(D) Improves water repellency at least 80 percent after application on a concrete or masonry substrate. This performance must be verified on standardized test specimens, in accordance with one or more of the following standards: ASTM C67, or ASTM C97/97M, or ASTM C140.

(E) Provides a breathable waterproof barrier for concrete or masonry surfaces that does not prevent or substantially retard water vapor transmission. This performance must be verified on standardized test specimens, in accordance with ASTM E96/E96M or ASTM D6490.

(F) Meets the performance criteria listed in the National Cooperative Highway Research Report 244 (1981), surface chloride screening applications, for products labeled and formulated for vehicular traffic.

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

OTHER RESTRICTIONS

See Legal Disclaimer.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

LEGAL DISCLAIMER

- KEEP CONTAINER TIGHTLY CLOSED
- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- FOR PROFESSIONAL USE ONLY

Product Data Sheet

Sikagard®-705 L

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