

Sikagard®-705 L

Silane based reactive water repellent impregnation

Construction

Product Description

Sikagard®-705 L is a one part low viscosity, solvent free, reactive impregnation for concrete and cementitious substrates based on silane 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 and thaw salt stresses)

Uses

Sikagard®-705 L is used as water-repellent impregnation (hydrophobic treatment) for absorbent substrates such as concrete in civil engineering or building concrete structures subjected to heavy stress due to freeze and thaw cycles and de-icing salts, chloride attack in marine environment, etc...

- Suitable for protection against ingress (Principle 1, method 1.1 of EN 1504-9),
- Suitable for moisture control (Principle 2, method 2.1 of EN 1504-9)
- Suitable for increasing the resistivity (Principle 8, method 8.1 of EN 1504-9)

Characteristics / Advantages

- Excellent penetration (~100% active content)
- Economic 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)
- No change in water vapour permeability
- Long term efficiency, deep penetration
- Increases the resistance of concrete to freeze and thaw cycles and de-icing salts
- Resistant to sea water
- Low VOC content
- Ready to use

Tests

Approvals / Standards

Conforms to the requirements of LPM: Suitability test to SIA 162/5, Report No. 1-21'699-6.

Conforms to the requirement of the "Bro 2002" Swedish National Road Administration (SNRA) publication No. VV2002:47 Report ref: F507580 B rev

Conforms to the requirements of the EN 1504-2 class II – Polymer Institute report P 5634-E dated 5th April 2007

Active content - Polymer Institute Ref P5634-E dated 27th June 2008

Product Data

Form

Appearance / Colour Water like liquid, colourless

Packaging 18 kg pail and 170 kg drum



Storage

Storage Conditions / Shelf Life 12 months from date of production if stored in unopened, undamaged and original sealed packaging in dry and cool conditions Protect from moisture.

Technical Data

Chemical Base Silane (99% active ingredient)

Density ~ 0.900 kg/l (at +25°C)

Viscosity ~9 mm²/s (at 25°C)

VOC ~100 g/l (~1% w/w)

Resistance to Freeze-Thaw-Salts Stress Comply (EN 13581)

Depth of Penetration Class II: ≥ 10 mm Test performed on concrete with a W/C = 0.70

Water Absorption <7.5% (EN 13580)

Drying Rate Coefficient Class I: > 30% (EN 13579)

Resistance

Alkali Resistance < 10% (EN 13580)

System Information

System Structure 2 - 3 coats applied "wet on wet"

Application Details

Consumption Dependent on absorbency of the substrate as well as the required penetration depth: ~ 150 g/m² per coat

Substrate Quality Free of dust, dirt, oil, efflorescence and existing paint coatings.
Cracks in concrete more than 300 microns must be repaired first prior to carry out the hydrophobic treatment.

Substrate Preparation Cleaning is best done with suitable detergents or by light blastcleaning, steam cleaning etc.
Best results are obtained on dry, very absorbent substrates. The substrate must look dry with no damp patches.

Application Conditions / Limitations

Substrate Temperature +5°C min. / +35°C max.

Ambient Temperature +5°C min. / +40°C max.

Application Instructions

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

Application Method / Tools 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. Avoid ponding on the surface.

Cleaning of Tools Clean all tools and application equipment with Colma Cleaner immediately after use. Hardened / cured material can only be mechanically removed.

Overcoatability	<p>Can be overcoated with water and solvent based polymer paint - contact the proposed paint manufacturer for recommendations.</p> <p>Sikagard®-705 L can be used as a water repellent primer under many Sikagard® protective coatings. 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.</p> <p>Waiting time: minimum 5 hours, maximum 1 week.</p>
Notes on Application / Limitations	<p>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.</p> <p>Areas such as window frames which still need to be painted must be securely covered to avoid contact with Sikagard®-705 L.</p> <p>Areas not to be impregnated such as window panes need to be protected from being accidentally contaminated with Sikagard®-705 L.</p> <p>Sikagard®-705 L can damage some coatings and bituminous products.</p> <p>Sikagard®-705 L can lead to darkening of concrete, apply sample areas first.</p> <p>Cannot be overcoated with limewash or cement paint.</p> <p>Refer to the latest Method Statement for detailed information regarding surface preparation, application method, etc.</p>
Curing Details	
Curing Treatment	Sikagard®-705 L does not require any special curing but must be protected from rain for at least 3 hours at +20°C.
Value Base	All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.
Local Restrictions	Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.
Health and Safety Information	For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.
Legal Notes	<p>The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.</p>



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