

PRODUCT DATA SHEET

Sikagard[®]-706 Thixo

Thixotropic passive corrosion inhibitor/hydrophobic impregnation for reinforced concrete

DESCRIPTION

Sikagard[®]-706 Thixo is a one-component reactive silane based impregnation cream (high viscosity). It is a solvent free product with ~ 80% content of active substance. Sikagard[®]-706 Thixo complies with the highest requirements of EN 1504-2 for hydrophobic Impregnation (penetration depth class II & resistance to freeze and thaw salt stresses). Suitable to use in hot and tropical climatic conditions.

USES

Sikagard[®]-706 Thixo is used as water-repellent passive corrosion inhibitor (with hydrophobic characteristics) for absorbent, non watercontacted concrete in civil engineering structures or buildings subjected to heavy exposure to freeze/thaw cycles, carbonation, de-icing salts or chloride attack in marine environment

- 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

- Non-sag (thixotropic) consistency, allowing wastage free application of sufficient quantities and assuring deep penetration.
- Excellent and deep penetration.
- Transparent.
- Easy to use.
- Mitigates corrosion rate of depassivated reinforcement bars.
- Prevents chloride migration to reinforcement bars.
- Reduce corrosion even in cracked concrete.
- Effective against AAR.
- Can be used on new and corroding, old structures
- Open to water vapour diffusion.
- Increases electrical resistivity in concrete.

- Increases the resistance of concrete to freeze and thaw cycles.
- Resistant to sea water.
- Low VOC content.
- Complies with Dutch guidelines (RWS NEN-EN 1504-2) on CEM III.
- Reduces capillary water absorption, protects against mist 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).
- Ready to use.
- Long term durability.
- Reduced green growth.

APPROVALS / CERTIFICATES

- Conforms to the requirements of LPM-qualification test to SIA 162/5, Report A-20 450-1 of 19.04.1999. (Water absorption, penetration depth, alkali resistance, water vapour diffusion, resistance to freeze thaw cycles and de-icing salts).
- Conforms to the requirement of the "Bro 2002" Swedish National Road Administration (SNRA) publication No. VV2002:47 –report reference F507580 Arev
- Conforms to the requirements of the EN 1504-2 class II – Polymer Institute report P 5672-E dated 9th August 2007.
- Hydrophobic impregnation according to EN 1504-2, DoP 02 03 03 01 002 0 000003 1105; certified by Factory Production Control Body: 0921; certificate 0921-BPR-2050 and provided with the CE-mark.
- Evaluation of conformity according to the Dutch RWS Directive (11-01-2011).
- Prevention of chloride ingress - NT Build 515, CBI Sweden, dated February 2017.

PRODUCT INFORMATION

Composition	Silane
Packaging	18 kg and 180 kg containers
Appearance and colour	White paste / cream (transparent after application and drying)
Shelf life	12 months from date of production if stored in unopened, undamaged and original sealed packaging.
Storage conditions	Store in dry and cool conditions. Protect from moisture.
Density	~ 0.900 kg/l (at +20 °C)
Active content	~ 80%
Volatile organic compound (VOC) content	~319 g/l (ASTM D 3960)
Water absorption	< 7.5% (EN 13580)

TECHNICAL INFORMATION

Resistance to alkalinity	< 10%	(EN 13580)
Freeze thaw de-icing salt resistance	Comply	(EN 13581)
Penetration depth	≥ 10 mm Class II	(EN 1504-2)
	Note: Test performed on concrete with W/C 0.70	
Drying rate coefficient	Class I: >30%	(EN 13579)

SYSTEM INFORMATION

System structure	1–2 coats of Sikagard®-706 Thixo
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APPLICATION INFORMATION

Consumption	Dependent on substrate profile and porosity as well as the required penetration depth: ~ 200–300 g/m ² per coat. Normally, 1 coat is enough – preliminary trial shall be carried out to assess the penetration depth in the substrate.
Ambient air temperature	+5 °C min. / +40 °C max.
Substrate temperature	+5 °C min. / +35 °C max.
Substrate moisture content	<5-6% when measured with Tramex method
Waiting time to overcoating	Can be overcoated with water and solvent based polymer paint - contact the proposed paint manufacturer for recommendations. Sikagard®-706 Thixo can be used as 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. Waiting time: minimum 5 hours, maximum 1 week.
Curing treatment	Sikagard®-706 Thixo does not require any special curing but must be protected from rain for at least 3 hours at +20 °C.

BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

IMPORTANT CONSIDERATIONS

- Best results are achieved when Sikagard®-706 Thixo 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.
- Areas such as window frames which still need to be painted must be securely covered to avoid contact with Sikagard®-706 Thixo.
- Areas not to be impregnated such as window panes need to be protected from being accidentally contaminated with Sikagard®-706 Thixo.
- Sikagard®-706 Thixo can damage some coatings and bituminous products.
- Sikagard®-706 Thixo can lead to darkening of concrete, apply sample areas first.
- Cannot be overcoated with limewash or cement paint.
- Apply Sikagard®-706 Thixo onto a sample area to confirm consumption rates versus required penetration depth.
- In rare cases, Sikagard®-706 Thixo might lead to light darkening of concrete.
- Final appearance greatly depends from type of concrete substrate, so always apply sample area first.
- Due to incoherent composition of concrete substrate, it is recommended that applied sample size (mock-up) is not less than 10 m².
- Refer to the latest Method Statement for detailed information regarding surface preparation, application method, etc.

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

Free of dust, dirt, oil, efflorescence and existing paint coats.

Cracks in concrete more than 300 µm must be repaired prior to application of the hydrophobic treatment.

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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.

MIXING

Sikagard®-706 Thixo is supplied ready for use and must not be diluted.

APPLICATION

Sikagard®-706 Thixo is applied using a low-pressure spray, airless spray, brush or roller, in a single pass from bottom up taking care not to let the product run. Apply subsequent pass “wet on wet” until the required consumption is achieved.

On horizontal surface, use flooding technique but avoid excessive ponding on the surface.

CLEANING OF EQUIPMENT

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

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

LEGAL NOTES

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.

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All products are supplied under a management system certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and ISO 45001.

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