

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).

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.
- Ready to use product for easy application.
- Excellent and deep penetration.
- Transparent after drying.
- Mitigates corrosion rate of depassivated reinforcement bars.
- Prevents chloride migration to reinforcement bars.
- Reduces corrosion even in cracked concrete.
- Effective against AAR (alkali aggregate reaction).
- 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).
- Long term durability.
- Reduced green growth.

APPROVALS / STANDARDS

- 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

Chemical Base	Silane
Packaging	18 kg and 180 kg containers
Appearance / Colour	White paste / cream (transparent after application and drying)
Shelf Life	18 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	~0.9 kg/l (at +20 °C)
Volatile organic compound (VOC) content	~319 g/l
Active content	~80 %

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	
Water Absorption	< 7.5%	(EN 13580)
Drying rate coefficient	Class I: >30%	(EN 13579)

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 trials should 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 / 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.

SYSTEM INFORMATION

System Structure	1–2 coats of Sikagard®-706 Thixo
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BASIS OF PRODUCT DATA

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.

LIMITATIONS

- Best results are achieved when Sikagard®-706 Thixo is applied on 28 day old concrete – however, due to its high alkali resistance, it is still possible to apply it at a very early stage.
- Areas such as window frames which have yet 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 to test 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.
- Refer to the latest Method Statement for detailed information regarding surface preparation, application method, etc.

ECOLOGY HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

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

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MIXING

Sikagard®-706 Thixo is supplied ready for use and should not be thinned or diluted.

APPLICATION

Sikagard®-706 Thixo is applied using airless spray, brush or long-hair roller (including automatic feed roller).

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.

CLEANING OF TOOLS

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

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.

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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