

## PRODUCT DATA SHEET

# Sikagard® H 1100

(formerly MProtect H 1100)

100% Silane based water repellent for concrete protection

### DESCRIPTION

Sikagard® H 1100 is a ready to use, one component, colourless, 100% alkylalkoxysilane based water repellent designed for protecting concrete. It penetrates deeply into the substrate and chemically reacts within the cementitious substrate.

### USES

Sikagard® H 1100 is a clear penetrating water repellent to protect both vertical and horizontal concrete surfaces exposed to weathering effects and chloride ions.

Sikagard® H 1100 can be used on old and new (cured) structures, like:

- Bridge decks, piers columns and beams.
- Multi-Storey car parks, building facades and balconies.
- Chimneys, cooling towers.
- Concrete pavements and pedestrian ways.
- Airport runways and taxiways.
- Exposed concrete surfaces (e.g. building façades).
- Precast concrete elements.
- Marine structures and jetties.

### CHARACTERISTICS / ADVANTAGES

- Improves the aesthetics by reducing efflorescence, algae growth and dirt build-up.
- Surface appearance remains unchanged.
- Penetrates deep into the concrete, penetration depth class II according to EN 1504-2.
- Prevents water and chloride ion penetration into the concrete and protects it from freeze-thaw effects.
- Ready for use, no dilution on the site, which means constant quality.
- Single layer application possible.
- CE-certified according to EN 1504-2 as hydrophobic impregnation

### PRODUCT INFORMATION

<b>Packaging</b>	Sikagard® H 1100 is available in 20 l plastic jerry cans.
<b>Shelf Life</b>	12 months after date of production if stored in undamaged, unopened containers at below mentioned storage conditions
<b>Storage Conditions</b>	Sikagard® H 1100 should be stored dry and cool, under cover and clear of the ground and stacked not more than two layers high. No permanent storage over +30 °C. Sikagard® H 1100 is a combustible liquid and should be kept away from heat, sparks, open flame and other sources of ignition.
<b>Appearance / Colour</b>	Clear liquid
<b>Density</b>	approx. 0.88 kg/l

<b>Flash Point</b>	≥ +63 °C	(EN ISO 2719)
<b>Viscosity</b>	At +20 °C	0.95 mPa·s (DIN 53015)

## TECHNICAL INFORMATION

<b>Penetration Depth</b>	13 mm	(EN 1504-2 Table 3, No. 19)
<b>Water Absorption</b>	compared to untreated sample	3.5 % (EN 13580)
	in alkaline solution compared to untreated sample	6.3 %
<b>Drying rate coefficient</b>	18.5 %	(EN 13579)
<b>Freeze Thaw De-icing Salt Resistance</b>	Loss of mass after freeze-thaw salt stress	≥ 20 cycles later than not impregnated specimen (EN 13581)

## APPLICATION INFORMATION

<b>Consumption</b>	Approx. 0.2 to 0.6 liter/m <sup>2</sup> (depending on the substrate porosity).	
<b>Ambient Air Temperature</b>	+1 °C to +40 °C	
<b>Substrate Temperature</b>	+1 °C to +40 °C	
<b>Waiting Time / Overcoating</b>	Wait at least for 3 days after application before applying eventual subsequent coatings.	

## 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

- Do not apply at temperatures below +1 °C or over +40 °C.
- Sikagard® H 1100 should not come into contact with asphalt as it would dissolve.
- Allow concrete surfaces to dry for between 24 and 72 hours after heavy rain or cleaning with water before applying Sikagard® H 1100.
- Do not apply if rain is expected within 4 hours.
- Do not alter or dilute the material as supplied.

## 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 Material Safety Data Sheet (MSDS) containing physical, ecological, toxicological and other safety-related data.

## APPLICATION INSTRUCTIONS

### SUBSTRATE PREPARATION

New cured concrete surfaces should be cleaned of all sand, surface dust / dirt, oil, grease, chemical films / coatings and other contaminants before application. A complete water-jetting, sandblasting or shot blasting may be needed to achieve the desired surface condition. Crack control, caulking, patching and expansion joint sealants must be installed before the application of Sikagard® H 1100 and allow to cure in accordance with the manufacturer's instructions.

Any type of cementitious material (e.g. concrete, repair mortars) must have completely cured prior to treatment. For instance, allow minimum 28 days for conventional fresh concrete before treating with Sikagard® H 1100.

### MIXING

Sikagard® H 1100 is a ready to use product, no mixing required.

## APPLICATION

Temperature of the surface, the air and the material should be over +1 °C and below +40 °C during application. Do not apply Sikagard® H 1100 when temperatures are expected to fall below +1°C within 24 hours or rain is expected within 4 hours of completed application.

Surfaces to be treated can be slightly damp, but for best results a dry surface is suggested for maximum penetration. Test a small area of concrete surface before starting general application of any clear, penetrating sealer to assure desired results and coverage rates.

Apply to saturation, with a controlled rundown of maximum 20 cm on vertical surfaces. Low pressure, non-atomizing spray application is recommended or poured followed by brooming for even distribution on horizontal surfaces.

When working in an enclosed area, an air respirator should be used during application.

Sikagard® H 1100 only reacts with mineral based substrates. Therefore, it does not react inside the container or application pump. As long as it is kept in its original container or inside a clean sealed pump, it can be used when ever needed during its shelf life.

## CURING TREATMENT

It is recommended that any surface treated with Sikagard® H 1100 be left undisturbed for a minimum of 4 hours in order to allow proper penetration.

Sikagard® H 1100 may leave a temporarily slippery surface for several hours after application. Therefore, vehicle traffic areas should not be reopened until the treated surface is dry.

## CLEANING OF TOOLS

Application equipment should immediately be cleaned with any organic solvent after use.

## 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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

### SIKA HONGKONG LTD.

Rm.1507-12, Blk A, New Trade Plaza,  
6 On Ping Street, Shatin, N.T., H.K.  
Phone: +852 26868108  
Fax: +852 26453671  
Mail: marketing@hk.sika.com  
Website: www.sika.com.hk



### Product Data Sheet

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