



PRODUCT DATA SHEET

Sikagard® H 1000

(formerly MProtect H 1000)

High performance, clear, breathable, 100 % silane penetrating sealer

PRODUCT DESCRIPTION

Sikagard® H 1000 is a clear, breathable, high-performance, 100 % silane, water-repellent sealer that achieves the highest depth of penetration.

WHERE TO USE

- Interior and exterior
- Horizontal and vertical
- Above grade
- Traffic-bearing concrete substrates
- Bridge decks and substructures
- Concrete highway surfaces
- Ramps and barrier rails
- Parking garages
- Buildings
- Stadiums
- Many other reinforced concrete structures

Substrates

- Concrete
- Brick and masonry
- Stucco

CHARACTERISTICS / ADVANTAGES

- No masking of windows is necessary and requires no cleaning after application
- No residue, will not harm glass windows, metal frames, or painted surfaces
- Protects against chloride ion/salt penetration
- Excellent depth of penetration
- Breathability allows interior moisture to escape without damaging the sealer
- Solvent-based, excellent for cold weather applications
- Protects the structure from damage caused by wind-driven rain
- Does not alter surface appearance
- Surface sealer helps reduce efflorescence, atmospheric staining, and mildew
- Superior water repellence so it penetrates deeply and chemically reacts within the pores of concrete to provide long-lasting protection
- Abrasion resistant so it provides long-lasting protection to horizontal substrates subject to traffic, such as bridge decks and highway surfaces

APPROVALS / CERTIFICATES

- Alberta DOT, Type 1c

PRODUCT INFORMATION

CSC MasterFormat®	07 19 16 SILANE WATER REPELLENTS
Composition / Manufacturing	100 % silane
Packaging	18.9 L (5 US gal.) pails 208 L (55 US gal.) drums
Shelf Life	18 months when properly stored, in original, unopened packaging.

Storage Conditions	Store in unopened containers in a clean, dry area between at temperatures between 2 °C and 43 °C (35 °F and 110 °F). Protect from freezing.	
Appearance / Colour	Clear Surface appearance after application: Unchanged	
Flash Point	62.7 °C (165 °F)	(SETA)

TECHNICAL INFORMATION

Abrasion Resistance	Water-repellency after heavy abrasion 83.5 % – exceeds criteria (Alberta DOT penetrating sealer, Type 1c (0.35 w/c ratio))	
Shrinkage	Elevated temperature volatility 30 min. at 29 °C and 50 % RH <1 % weight loss (Sika Method) 60 min. at 29 °C and 50 % RH <1 % weight loss 30 min. at 50 °C and 50 % RH 2 % weight loss 60 min. at 50 °C and 50 % RH 6 % weight loss	
Skid / Slip Resistance	Broomed concrete Untreated Treated	BPN 90 90 (ASTM E303)
Penetration Depth	9 mm (0.35 in) Average depth, depending upon substrate	
Resistance to wind-driven rain	Water penetration of masonry Facing Brick Dampness Leakage	% Reduction 100 100 (ASTM E514)
Water Vapour Transmission	WVT Permeance	2.0 grains/h/ft ² 4.8 Perms (ASTM D6490)
Chloride Ion Diffusion Resistance	Absorbed chloride/salt 6.1 m ² /L (250 ft ² /gal) 9.8 m ² /L (400 ft ² /gal) 98 % reduction – exceeds criteria	96 % reduction 87 % reduction (NCHRP 244 Series II-cube test) (NCHRP 244 Series IV - Southern climate)
Water Resistance	Water absorption, % Brick Concrete Water exclusion, % Brick Concrete Water weight gain, % reduction 6.1 m ² /L (250 ft ² /gal) 9.8 m ² /L(400 ft ² /gal)	0.05 % 0.96 % 99 % 90 % 90 % reduction 85 % reduction (ASTM D6532) (NCHRP 244 Series II-cube test)

APPLICATION INFORMATION

Yield	6–10 m ² /L (250–400 ft ² /US gal.)
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Note: Coverage may vary greatly with the porosity of the substrate; extremely porous substrate may require two (2) coats. Perform test panels to ensure desired results and coverage rates.

Drying time

4–6 hours at 21 °C (70 °F) and 50 % RH

Note: Cooler temperatures or higher relative humidity can extend the drying time.

BASIS OF PRODUCT DATA

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.

LIMITATIONS

Proper application is the responsibility of the user. Field visits by Sika personnel are for the purpose of making technical recommendations only and are not for supervising or providing quality control on the jobsite.

- Do not apply during inclement weather or when inclement weather is anticipated within 12 hours.
- To prevent damage to nearby shrubbery and landscaping, cover or protect with drop cloth.
- Protect asphalt-based products such as roofing materials or plastic products from overspray.
- Caution should be taken with specialty-coated glass. Small areas should be tested prior to application to ensure the product does not discolor the coating. Plastic windows will turn opaque when sprayed with this product.
- Sikagard® H 1000 will not inhibit water penetration through unsound or cracked surfaces or surfaces with defective flashing, caulking, or structural waterproofing.
- Variations in the texture and porosity of the substrate will affect the coverage and performance of the product.
- Paint line striping after the application of Sikagard® H 1000.
- Windows or other non-absorbent substrates subject to overspray should be clean and contaminate-free at the time of application. Cleaning may be required after application if dirt or dust is present for the silane to react with.
- Make certain the most current versions of the product data sheet and SDS are being used.

ENVIRONMENT, HEALTH & 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 PREPARATION

1. Verify substrate has properly cured. Concrete should obtain 80 % of design strength, typically achieved within 14–28 days.
2. Clean all surfaces of all sand, surface dust and dirt, oil, grease, chemical films and coatings, and other contaminants prior to application. Power wash, sandblast, or shotblast as necessary to achieve the desired surface condition. Repoint any loose, disintegrated, or cracked mortar and allow a minimum of 72 hours of drying time before application.
3. Air, substrate, and material temperatures should be -7 °C (20 °F) and rising at the time of the application. The substrate must be frost-free. Do not apply sealer when temperatures are expected to fall below -7 °C (20 °F) within 12 hours or when rain is expected within 4 hours following application. Maximum application temperature is 35 °C (95 °F). May be applied to slightly damp surfaces.
4. Crack control, caulking, patching, and expansion joint sealants can be installed before or after the application of the sealer. Allow adequate curing time following the sealant manufacturer's recommendations. Following the application, remove the excess product that might pond on a concave sealant joint.

APPLICATION

1. Test a small area of the surface (minimum 1.5 m x 1.5 m [5 ft x 5 ft]) before general application to ensure desired performance results, aesthetics, and coverage rates and to verify application technique. Allow 5–7 days for the product to fully react before evaluation. Contact Sika Canada Technical Service for details.
2. Stir material thoroughly before and during application.
3. For horizontal surfaces, apply with a flooding action. The sealer may be applied with low-pressure spray, followed by brooming for even distribution.
4. For vertical surfaces, apply by low-pressure, non-atomizing sprayer. Apply from the bottom up for uniform distribution of the sealer. Apply to saturation, with a controlled rundown of 200 mm (8 in). In certain cases, a mist coat before the general application will help break the surface tension and ensure maximum

penetration of the saturation coat.

CLEAN UP

Clean equipment with xylene or SikaSwell®-990. Cured product can only be removed mechanically.

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 recommendations, or from any other advice offered. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. 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 or may be downloaded from our website at: www.sika.ca

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Product Data Sheet

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