



## PRODUCT DATA SHEET

# Sikagard® H 1000

(formerly MProtect H 1000)

HIGH-PERFORMANCE, CLEAR, BREATHABLE, 100% SILANE REACTIVE PENETRATING SEALER

### PRODUCT DESCRIPTION

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

### USES

- 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

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## ENVIRONMENTAL INFORMATION

This product cannot be used in the South Coast Air Quality Management District ("SCAQMD") unless the following criteria from SCAQMD Rule 1113(b)(54) are met:

- (A) Used only for reinforced concrete bridge structures for transportation projects within 5 miles of the coast or above 4,000 feet elevation or for restoration and/or preservation projects on registered historical buildings that are under the purview of a restoration architect.
  - (B) Penetrate into concrete and masonry substrates and chemically react to form covalent bonds with naturally occurring minerals in the substrate.
  - (C) Line the pores of concrete and masonry substrates with a hydrophobic coating, but do not form a surface film.
  - (D) Improve water repellency at least 80 percent after application on a concrete or masonry substrate. This performance must be verified on standardized test specimens, in accordance with one or more of the following standards: ASTM C67, or ASTM C97/97M, or ASTM C140.
  - (E) Provide a breathable waterproof barrier for concrete or masonry surfaces that does not prevent or substantially retard water vapor transmission. This performance must be verified on standardized test specimens, in accordance with ASTM E96/E96M or ASTM D6490.
  - (F) Meet the performance criteria listed in the National Cooperative Highway Research Report 244 (1981), surface chloride screening applications, for products labeled and formulated for vehicular traffic.
- Please review SCAQMD Rule 1113 for further information.**

## APPROVALS / STANDARDS

Alberta DOT, Type 1c

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**PRODUCT INFORMATION**

<b>Chemical Base</b>	100% silane
<b>Packaging</b>	5 gallon (18.9 L) pails 55 gallon (208 L) drums
<b>Appearance / Color</b>	Clear Surface appearance after application: Unchanged
<b>Shelf Life</b>	18 months when properly stored
<b>Storage Conditions</b>	Store in unopened containers in a clean, dry area between 35 and 110 °F (2 and 43 °C). Keep from freezing.
<b>Flash Point</b>	165 °F (62.7 °C) (SETA)

**TECHNICAL INFORMATION**

<b>Abrasion Resistance</b>	<b>Water repellency after heavy abrasion</b> 83.5% – exceeds criteria (Alberta DOT penetrating sealer, Type 1c (0.35 w/c ratio))
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<b>Shrinkage</b>	<b>Elevated Temperature Volatility</b>		
	30 min. at 85° F / 50% RH	<1% weight loss	(Sika Method)
	60 min. at 85° F / 50% RH	<1% weight loss	
	30 min. at 122 °F / 50% RH	2% weight loss	
	60 min. at 122 °F / 50% RH	6% weight loss	

<b>Water Vapor Transmission</b>	WVT	2.0 grains/h/ft <sup>2</sup>	(ASTM D 6490)
	Permeance	4.8 Perms	

<b>Penetration Depth</b>	0.35 in (9 mm) average depth, depending upon substrate
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<b>Skid / Slip Resistance</b>	<b>Broomed Concrete</b>	<b>BPN</b>	(ASTM E 303)
	Untreated	90	
	Treated	90	

<b>Water resistance</b>	<b>Water Absorption, %</b>		
	Brick	0.05%	(ASTM D 6532)
	Concrete	0.96%	
	<b>Water Exclusion, %</b>		
	Brick	99%	(ASTM D 6532)
	Concrete	90%	
	<b>Water weight gain, % reduction</b>		
	250 ft <sup>2</sup> /gal (6.1 m <sup>2</sup> /L)	90% reduction	(NCHRP 244 Series II-cube test)
	400 ft <sup>2</sup> /gal (9.8 m <sup>2</sup> /L)	85% reduction	

<b>Rapid Chloride Permeability</b>	<b>Absorbed chloride/salt</b>		
	250 ft <sup>2</sup> /gal (6.1 m <sup>2</sup> /L)	96% reduction	(NCHRP 244 Series II-cube test)
	400 ft <sup>2</sup> /gal (9.8 m <sup>2</sup> /L)	87% reduction	
	98% reduction – exceeds criteria		(NCHRP 244 Series IV - Southern climate)

<b>Resistance to wind-driven rain</b>	<b>Water Penetration of Masonry</b>		
	<b>Facing Brick</b>	<b>% Reduction</b>	(ASTM E 514)
	Dampness	100	
	Leakage	100	

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## APPLICATION INFORMATION

<b>Coverage</b>	250–400 ft <sup>2</sup> /gallon (6–10 m <sup>2</sup> /L) Coverage may vary greatly with the porosity of the substrate; extremely porous substrate may require two coats. Perform test panels to ensure desired results and coverage rates.
<b>Drying Time</b>	Typical drying time for Sikagard® H 1000 is 4–6 hours at 70 °F (21 °C) and 50% relative humidity. Cooler temperatures or higher relative humidity can extend the drying time.

## BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

## ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

## APPLICATION INSTRUCTIONS

- 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.
- • 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.

## 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 20 °F (-7 °C) 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 20 °F (-7 °C) within 12 hours or when rain is expected within 4 hours following application. Maximum application temperature is 95 °F (35 °C). 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 5 by 5 ft [1.5 by 1.5 m]) 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 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 8" (20 cm). In certain cases, a mist coat before the general application will

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help break the surface tension and ensure maximum penetration of the saturation coat.

#### CLEANING OF TOOLS

Clean equipment with xylene or SikaSwell®-990.

#### LEGAL DISCLAIMER

- KEEP CONTAINER TIGHTLY CLOSED
- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- FOR PROFESSIONAL USE ONLY

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at [usa.sika.com](http://usa.sika.com) or by calling SIKA's Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs. **NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.**

Sale of SIKA products are subject to the Terms and Conditions of Sale which are available at <https://usa.sika.com/en/about-us/terms-conditions-of-sale.html> or by calling 1-800-933-7452.

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