

PRODUCT DATA SHEET

Sikagard[®]-400 Enviroseal

(formerly MProtect H 400)

WATER-BASED 40% SILANE PENETRATING SEALER

PRODUCT DESCRIPTION

Sikagard[®]-400 Enviroseal is a water-based, 40% alkylalkoxysilane penetrating sealer. It provides long-lasting protection against moisture intrusion, freeze/thaw cycles, and chloride intrusion.

USES

- Interior or exterior
- Horizontal and vertical
- Above grade
- Parking garages
- Stadiums
- Bridge decks
- Concrete highway road surfaces
- Ramps and barrier rails
- Many other reinforced concrete structures

Substrates

- Concrete substrates:
 - architectural
 - glass-fiber-reinforced
 - precast
 - cast in place

CHARACTERISTICS / ADVANTAGES

- Excellent penetration protecting against damage from moisture intrusion and chloride ion penetration
- 40% silane
- Ideal for traffic-bearing surfaces
- Breathable to allow interior moisture to escape without damaging sealer
- Does not alter surface appearance
- One component for ease of application

APPROVALS / STANDARDS

Alberta DOT, Type 1b

PRODUCT INFORMATION

Chemical Base	water-based alkylalkoxysilane sealer.
Active content	40%
Packaging	5 gallon (19 L) pails 54 gallon (205 L) drums
Shelf Life	18 months when properly stored

Storage Conditions	Store in unopened containers in a clean, dry area between 35 and 110 °F (2 and 43 °C). Keep from freezing.	
Color	Milky white; dries clear	
Density	7.9 lbs/gal Specific Gravity 0.95 at 77 °F, (25 °C)	
Flash Point	> 200 °F (> 93 °C)	(ASTM D 3278, SETA)
Solid content by mass	40%	

TECHNICAL INFORMATION

Penetration Depth	0.24 in (6.1 mm)	
Water Absorption	48 hours	0.42 (ASTM C 642)
	50 days	1.2
Rapid Chloride Permeability	87% reduction – exceeds criteria	(NCHRP 244 Series II-cube test)
	99% reduction – exceeds criteria	(NCHRP 244 Series IV - Southern climate)
Rapid Chloride Permeability	Criteria of 1.5 at 1/2" (13 mm)	< 0.52 lbs/yd ³ (< 0.31 kg/m ³) (AASHTO T 259 and T 260)
	Criteria of 0.75 at 1" (25 mm)	0.00 lbs/yd ³ (0.00 kg/m ³)
Water resistance	Water weight gain	
	85 % reduction – exceeds criteria	(NCHRP 244 Series II-cube test)
	Water Repellent Performance	
	Initial performance	89% (Alberta Transportation and Utilities Procedures - Type 1b)
	Post-abrasion performance	89.4%
Freeze Thaw De-icing Salt Resistance	0 – No Scaling, for non-air-entrained concrete, 100 cycles treated concrete	(ASTM C 672)

APPLICATION INFORMATION

Coverage	Concrete: 100–200 ft ² /gal (2.4–4.8 m ² /L) Brick: 100–200 ft ² /gal (2.4–4.8 m ² /L) Always apply a test area to determine actual coverage rates. Coverage rates will vary greatly with the porosity of the substrate.
Drying Time	Typical drying time for Sikagard®-400 Enviroseal is 4 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.

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.

ENVIRONMENTAL, HEALTH AND SAFETY

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BUILDING TRUST



APPLICATION INSTRUCTIONS

- Keep material from freezing.
- Do not dilute Sikagard®-400 Enviroseal.
- Water repellents perform best when applied to a dry substrate, when power washing is performed, allow for a proper dry time before applying the water repellent.
- 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.
- Sikagard®-400 Enviroseal may leave a temporary slippery surface for up to several hours after application. Therefore, traffic-bearing surfaces should not be reopened until the treated surface is dry.
- Variations in the texture and porosity of the substrate will affect the coverage and performance of the product.
- Sikagard®-400 Enviroseal will not inhibit water penetration through unsound or cracked surfaces or surfaces with defective flashing, caulking, or structural waterproofing.
- Line striping can be done after the application of the sealer.
- 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 the substrate has properly cured. Concrete should obtain 80% of design strength, typically achieved within 14–28 days.
2. Clean concrete surfaces of all sand, surface dust and dirt, oil, grease, chemical films, coatings, and other contaminants prior to application. Power wash, sandblast, or shotblast as necessary to achieve the desired surface condition.
3. Surface, air, and material temperatures should be 40 to 110 °F (4 to 43 °C) during application. Do not apply Sikagard®-400 Enviroseal when temperatures are expected to fall below 40 °F (4 °C) within 12 hours.
4. A dry surface is suggested for maximum penetration of sealer; however, surfaces to be treated can be slightly damp. Do not apply Sikagard®-400 Enviroseal if standing water is visible on the surface to be treated.
5. Crack control, caulking, patching, and expansion joint sealants can be installed before or after the application of the sealer. Allow a minimum of 6–12 hours of curing time for caulking and sealant materials (or until they have skinned over) before applying Sikagard®-400 Enviroseal. Following the application, remove the excess product that might pond on a concave sealant joint.

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APPLICATION

1. Test a small area of the surface (generally a 5 by 5 ft [1.5 by 1.5 m] section) before starting the general application of any clear penetrating sealer to ensure desired performance results, aesthetics, and coverage rates. Allow 5–7 days for the product to fully react before evaluating.
2. Stir material thoroughly before and during application.
3. Apply to saturation. Apply by low-pressure non-atomizing spray or, if desired on horizontal surfaces, by pouring, followed by a squeegee or a broom for even distribution.

CLEANING OF TOOLS

Clean equipment and tools with hot soapy water. Overspray can be cleaned immediately with hot soapy water. Dried residue can be cleaned with a mild citrus-based cleaner or very hot water, then scrubbed with a soft-bristle brush.

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 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.**

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