

# Micro-Seal® HD

Silane/Siloxane with MICRO-LOK™

## TECHNICAL DATA SHEET



High solids Silane / Siloxane water repellent provides protection from mold, mildew, and efflorescence. Clear long lasting formula designed to seal a variety of surfaces.

### Micro-Seal® CSI Reference

03 35 43 Concrete Finishing
04 40 00 Unit Masonry
09 61/96 Finishes
09 24/25 Finishes

\*standard warranty period is 20 years

### Description

Micro-Seal® HD is a solvent-free, 100% active solid, silane/siloxane repellent. Micro-Seal® HD self-emulsifies to form a high-performance and deep-penetrating, alkali-resistant water-repellent emulsion. When applied Micro-Seal® HD forms a long chain water-repellent barrier deep within the brick and masonry surface. This hydrophobic barrier repels water, yet remains highly vapor-permeable for moisture to escape. Micro-Seal® HD performance is unaffected by weathering, UV light, and wind-driven rain. Micro-Seal® HD uses MICRO-LOK™ to create a micro-molecular chemical and mechanical bond between the water-repellent chemicals and the substrate. Micro-Seal® HD penetrates deep into porous brick and masonry surfaces for long-lasting and virtually indestructible water-repellent protection that is unaffected by weather or sunlight. It helps prevent spalling, and cracking caused by freeze/thaw cycles. It also helps prevent chloride ion intrusion and efflorescence.

### Features & Benefits

- Mold and mildew inhibitor
- Acid and grease resistant
- Weathering, no change after 3,500 hours
- V.O.C. compliant; Contains no known carcinogens
- Breathable – does not trap moisture
- Can be used in cold temperature applications
- Will NOT yellow or turn cloudy
- UV Stable
- Penetrates deep – Perfect for use on brick porches, chimneys, and walkways
- Stain resistant to oil, gas and anti-freeze; great for concrete parking garages
- Great winterizing agent – Protects bricks from icing and salt infiltration
- Controls efflorescence on brick, block, and stucco surfaces
- Does not change the surface look or texture
- 100% vapor permeable
- Protects against wind driven rain
- Helps resist freeze/thaw damage

### Coverage Rate by Substrate (theoretical)

The coverage depends on the surface. Test the product on a small area of the substrate to estimate coverage. Extremely porous surfaces may require multiple coats.

Substrate	Sq Ft/ Gallon
CMU & Block	50 - 80
Adobe Block & Natural Stone	70 - 90
Clay Brick	125 - 150
Wood	150 - 200
EIFS	80 - 120
Stucco	100 - 150
Concrete	135 - 160
Concrete Curing	310 - 410

The use of fluted, scored block, raked joints, sandblasted or etched surfaces will result in greater absorption and lower coverage rates, by up to 40%. Test these areas for the expected coverage rate before general application. Allow for this increased surface area when determining material requirements.

### Surface Preparation

Prior to application, all surfaces shall be clean and dry with no oils, dirt, debris, or minerals such as efflorescence, lime and calcium. These stains, along with others, will prevent proper penetration of Micro-Seal® HD to sufficiently seal for the warranty period.

The use of Rainguard's Restore-N-Prep™ Concrete and Masonry Cleaner system is recommended as a pre-treatment to clean masonry surfaces. Once clean, allow the surface to fully dry before sealing or applying a top-coat (See the Restore-N-Prep™ TDS for details).

### Restore-N-Prep™ CSI Reference

03 01 40 Concrete Finishes
03 10 30 Concrete Finishes
03 10 50 Concrete Finishes
04 01 20 Unit Masonry
04 01 40 Unit Masonry



## Dilution

Only add fresh clean water to dilute any concentrates.

Standard dilution is 9 parts water:1 for the 1 gallon concentrate.

Ratio	Description
4 parts water to 1 part concentrate	Extra strength for surfaces that are highly porous
9 parts water to 1 part concentrate	Standard strength, ideal for most porous surfaces. Extra porous surfaces may require a second coat.
14 parts water to 1 part concentrate	Ideal for very dense surfaces. Also ideal for dustproofing applications.

DO NOT DILUTE if the product is Ready to Use. Refer to the product label for accurate dilution rates.

## Application Instructions

1. Apply Micro-Seal® HD using a hand pumped garden sprayer (do not atomize) or low-pressure airless spray equipment.
2. If using airless spray equipment we recommend a spray tip size of .035 to .051. Spray head should be held 8 to 12 inches from the surface.
3. Apply a fog coat quickly followed by a flood coat that runs down the wall approximately 6-12 inches below the point of application.
4. Apply material following the coverage rate previously listed (P.1).
5. Avoid application in windy weather.
6. Trigger gun off at the end of each pass to avoid using excessive materials.
7. Multiple coats may be applied. Whitening or yellowing will not occur.

## Concrete Curing

Micro-Seal® HD regulates the moisture content of the concrete at the curing stage. It prevents quick water evaporation. This alleviates cracking while the concrete is dries. Micro-Seal® is also breathable for the escape of moisture over time.

Apply Micro-Seal® HD at a rate of 300 - 400 sq. ft. / gallon to "wet" the fresh concrete. This is typically done the day after pouring the concrete, and after form release agents, oils and other products are properly prepared to receive a curing aid.

## Test Panel

Always apply Micro-Seal® HD onto a mock wall or test panel. Test the wall or an actual surface area to determine acceptable color, surface porosity, application rates and methods before starting general application.

## Safe Handling

Use product only with adequate ventilation and/or an appropriate cartridge type respirator. Avoid contact with skin and wear protective gloves. Read the Safety Data Sheet before using.

## Precautions

Use material in a well-ventilated area. Protect the work of other trades. Protect shrubbery and other plants with drop cloths. Protect automobiles and all other areas not to be coated from overspray. Remove overspray from any windows, automobiles, metal, etc. as soon as possible should it occur. To prevent permanent staining, clean spills or leaks in a timely manner.

All surfaces to be coated should be clean of any dirt and grime, efflorescence, lime run, form oils and release agents, grease, mud, excess mortar, and mold and mildew, etc. All cracks should be pointed or caulked. All voids, beeholes, masonry surface defects and openings such as conduits, pipes, drains, door frames, vents, air conditioner openings, electrical openings, control joints, or any dissimilar materials should be repaired using urethane or other approved patching.

Do not apply to surfaces if moisture content is greater than 25% as measured with an electronic moisture meter. Do not apply materials in climates where freezing temperatures have existed prior to application. Allow adequate time for surfaces to thaw. Establish that air, surface, and material temperatures are above 40°F (4.4°C) and at least 5°F above the dew point prior to painting. Do not apply at temperatures below 40°F when temperatures are expected to drop below 40°F within 48 hours of application. Do not apply if rain, snow, or lower temperatures are expected within 48 hours. Do not apply if relative humidity is greater than 90%.

Clear water repellents are not designed to waterproof horizontal masonry surfaces such as ledges, sills, cornices and parapet walls, etc.

Store materials in a well-protected area at 45°- 90°F. Avoid freezing temperatures, direct sunlight, and moisture. Keep away from heat sources.



## Approvals & Qualifications

LAUSD - OESH	Approved
USGBC - LEED Points	Up to 3 Points
LEED (New Construction)	Approved
LEED ( New Schools/CHPS)	Approved
CARB	Approved
SCAQMD	Approved
FDA	Meets Requirements
USDA	Meets Requirements

## Test Data

ASTM C666	2200 Cycles - No effect
ASTM C672 100 Cycles	No Mass Loss, No Scaling
ASTM D2243	Do Not Freeze
ASTM G154 2,500 HOURS	No Loss in Repellency
ASTM C672/C672M	No Scaling, 100 Cycles Treated Concrete
Wind Driven Rain	ASTM E-514-86., 98.7% Leak Red
Water Pen Fed Spec	SS-W-110C, 75% Min Req, 96.8 Leak Red Chloride Ion Intr
Salt Pounding NCHRP	No. 244 Series IV - 95% Red No. 244 Series II - 87% Red
Chloride Ion Absorption	No. 244 Series II - 87%
Water Abs CMU ASTM C140-75	98.6% Effective
Water Vapor Trans ASTM D-1653-71	100% Vapor Perm
Water Repellency ASTM C67-87	98.6% Effective
Weathering ASTM G-53	3,500 Hours - No Change
Surface Burning ASTM E84	Flame Spread 0, Smoke Development 0
Deicer Scaling ASTM C672	150 Cycles 0 Rating

## Technical Data

Material Type	Silane/Siloxane
Active Content	100%
Volume Solids	80%
Color of Material	Milky White
Odor	No Odor
V.O.C.	0 g/L V.O.C. Compliant
Flash Point	Non-Flammable
pH Value	6
Viscosity	9.6 Seconds No. 4 Ford Cup
Weight	Approximately 8.7 lbs./Gal.
Surface Dry/Recoat	Approx 1 Hour
Full Chemical Cure	5 to 7 days



## Warranties

Rainguard Brands, LLC guarantees that this product is free from manufacturing defects and complies with our published specifications. In the event that the buyer proves that the goods received do not conform to these specifications or were defectively manufactured, the buyer's remedies shall be limited to either the return of the goods and repayment of the purchase price or replacement of the defective material at the option of the seller. Rainguard Brands, LLC makes no other warranty, expressed or implied, and all warranties of merchantability and fitness for a particular purpose are hereby disclaimed. Manufacturer or seller shall not be liable for prospective profits or consequential damages resulting from the use of this product. Manufacturer shall not be liable for material used outside of its shelf life. For product dating, please refer to the batch number on the product or contact Rainguard Brands, LLC.

Surface conditions and application variables are out of the control of Rainguard Brands, LLC. As such, the applicator agrees to: Follow recommended application instructions, acknowledge limitations outlined in this technical data sheet, contact the manufacturer in the event there any uncertainties, perform a test panel to confirm fit and finish before any general application. The data on this sheet represent typical values. Since application variables are a major factor in product performance, this information should serve only as a general guide. Rainguard Brands assumes no obligation or liability for use of this information. Contact manufacturer at 888-765-7070 before bidding to confirm warranty provisions and procedures.

**SELLER'S LIABILITY UNDER THE SALE OF THIS PRODUCT IS LIMITED TO REPLACING DEFECTIVE PRODUCT. HOWEVER, IF SELLERS FAILS IN ITS ATTEMPT TO REPLACE THE DEFECTIVE PRODUCT, BUYER WILL BE ENTITLED TO A REFUND OF MONIES PAID TO SELLER UNDER THIS PRODUCT WARRANTY. SELLER IS NOT LIABLE FOR BUYER'S LOSS OF PROFITS, BUSINESS GOODWILL, OR OTHER CONSEQUENTIAL DAMAGES, DESPITE ANY FAILURE TO REPLACE THE PRODUCT. BUYER HAS ACCEPTED THIS RESTRICTION ON ITS RIGHT TO RECOVER CONSEQUENTIAL DAMAGES AS PART OF ITS BARGAIN WITH SELLER. BUYER REALIZES AND ACKNOWLEDGES THAT THE PRICE OF THE PRODUCT WOULD BE HIGHER IF SELLER WERE REQUIRED TO BE RESPONSIBLE FOR BUYER'S CONSEQUENTIAL DAMAGES."**

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