

Micro-Seal®

Silane/Siloxane with MICRO-LOK™

TECHNICAL DATA SHEET



Silane / Siloxane water repellent provides protection from mold, mildew, and efflorescence. Clear long lasting formula designed to seal 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 5 years

Description

Micro-Seal® is a solvent-free, 100% active solid, silane/siloxane repellent. Micro-Seal® forms a high-performance, deep-penetrating, alkali-resistant, and water-repellent emulsion. When applied, Micro-Seal® forms a deep water-repellent barrier within the brick and masonry surface. This hydrophobic barrier repels water, yet remains highly vapor-permeable and allows moisture to escape. The performance of Micro-Seal® is not affected by weathering, UV light, or wind-driven rain. Micro-Seal® uses MICRO-LOK™ to create a micro-molecular chemical and mechanical bond between the water-repellent chemicals and the substrate. Micro-Seal® 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, cracking caused by freeze/thaw cycles, chloride ion intrusion, and efflorescence.

Features & Benefits

- Does not change the surface look or texture
- Penetrates deep – use on commercial buildings, retaining walls, and other projects
- Weathering, no change after 3,500 hours
- V.O.C. compliant; Contains no known carcinogens
- 100% vapor permeable
- Breathable – does not trap moisture
- UV stable
- Can be used in cold temperature applications
- Will NOT yellow or turn cloudy
- Prevents growth of mold and mildew
- Protects against wind driven rain
- Resists hot-tire pick up, which is great for concrete parking structures
- Stain resistant to oil, gas and antifreeze
- Strong winterizing agent – Protects surface from icing and salt infiltration
- Helps resist freeze/thaw damage
- Controls efflorescence on concrete, brick, block, and stucco surfaces

Color & Finish

| Color | Finish |
|-------|---------|
| Clear | Natural |

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 Precision Block | 60 - 70 |
| Split Block | 50 - 70 |
| Scored / Fluted | 65 - 80 |
| Lightweight | 40 - 55 |
| Clay Brick | 125 - 150 |
| Stucco | 100 - 150 |
| Dense Masonry Surfaces | 125 - 150 |
| Wood | 150 - 200 |
| Clay Block | 50 - 60 |
| EIFS | 80 - 120 |
| Concrete Curing | 300 - 400 |
| Concrete | 125 - 150 |

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.

Test Panel

Always apply Micro-Seal® 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.



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® to sufficiently seal for the warranty period.

The use of RainguardPro'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

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|----------------------------|
| 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® 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 0.035 to 0.051. Hold the spray head 8 to 12 inches from the surface.
3. Apply enough product so that it runs down the wall approximately 6-12 inches below the point of application.

4. Apply the product following Coverage Rate suggestions previously listed on Page 1.
5. Avoid application in windy weather.
6. Trigger the gun OFF at the end of each pass to avoid using excessive product runs.
7. Multiple coats may be applied. Whiting or yellowing will not occur.

PLEASE NOTE:

Elevation Sealing - We recommend sealing the entire elevation of porous surfaces with Micro-Seal® before applying our VandIGuard® products. This ensures the wall has a consistent look during rains, and moisture will not get behind the VandIGuard® Anti-Graffiti Coating in the future.

Concrete Curing

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

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, bee-holes, 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.

**Precautions continued on next page.*



Precautions (Continues)

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, & moisture. Keep away from heat sources.

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%.

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 |

Test Data

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|----------------------------------|--|
| 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 | 100 Cycles 0 Rating |



Technical Data

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|--------------------|--------------------------------|
| Material Type | Silane/Siloxane |
| Active Content | 100% |
| Volume Solids | 40 or 80%(Depends on Dilution) |
| Color of Material | Milky White |
| Odor | Slight 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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