

MONOCHEM

TECHNICAL BULLETIN

AQUASEAL 40[®]



Modified Silane Water Repellent for Concrete & Masonry



MADE IN U.S.A.

PRODUCT DESCRIPTION:

ITEM NO. 2040

AQUASEAL 40 is a penetrating modified silane water repellent. It is a high quality specialty product designed to impregnate both normal and reinforced unsealed concrete.

AQUASEAL 40 is a unique impregnating emulsion that can be applied in one coat application using conventional spray equipment. The active silane ingredient penetrates the substrate creating a reaction that releases ethanol and is converted into a polymeric silicone resin. Impregnation with **AQUASEAL 40** does not clog the pores or capillaries, nor does it affect its ability to "breathe".

BASIC USES:

AQUASEAL 40 is designed to penetrate deep into concrete to provide optimum protection against the absorption of water, pollutants, and freeze/thaw cycles. **AQUASEAL 40** is used to protect precast and prestressed concrete, bricks, stucco, Dryvit, and other concrete and masonry surfaces. Common applications include walls, floors, walkways, ramps, bridges, parking decks, buildings, stadiums, airport aprons, etc.

ADVANTAGES:

- Deep penetrating
- Optimum resistance to alkali efflorescence
- Dramatic reduction in water absorption
- Comprehensive protection against freeze/thaw cycles
- Solvent-free, aqueous and environmentally compatible
- Breathable Low Volatility
- Provides good adhesion for paints
- Warranted to remain water resistant for ten years (vertical application)

Product Qualifications	
Cal Green	Yes
SCAQMD	Yes
CARB	Yes
LEED (New Construction)	Yes
LEED (New Schools / CHPS)	Yes

PREPARATION:

- All surfaces must be unpainted/unsealed, cured, clean and free of all adhesion affecting contaminants like curing compounds, dust, dirt, oils, release agents, loose aggregates, alkali, efflorescence, chemical films, etc.
- Repoint loose or missing mortar. Recaulk control and expansion joints. Make all repairs to concrete surfaces prior to application. Allow mortar, repair materials and sealants to cure per manufacturer specifications prior to application of **AQUASEAL 40**.

TECHNICAL DATA:

Composition.....	Modified Silane
Solids by weight (ASTM D2369).....	36% ± 2
Appearance.....	Milky liquid, dries clear
VOC Level (ASTM D3960).....	< 95 g/L
pH.....	8.5
Drying Time.....	1-2 Hours
Penetration.....	3/8" (0.95 cm)
Recoat Time (wet-on-wet).....	10-20 Minutes

TEST RESULTS

Reduction in Water Leakage (ASTM E514) [Wind Driven Rain]	
Brick:	100%
Split Face Block:	> 96%
MVP Breathability (ASTM D1653):	99%
Accelerated Weathering 2500 Hrs (ASTM G154):	No loss of water repellency
Scaling Resistance (ASTM C672) 100 cycles:	No Scaling
Water Absorption	
ASTM C140 (Max. 24 Hrs):.....	< 0.7%
ASTM C642 (Max. 48 Hrs):.....	.1%
Reduction in Water Permeance (ASTM C67):	98.9%
Reduction in Water Permeance (SS-W-110-C):.....	98%
NCHRP 244 Series II (AASHTO T259 & AASHTO T260)	
Reduction in Water Absorption (Minimum Required 75%):	Obtained 88%
Reduction in Chloride Ion (Minimum Required 75%):	Obtained 90.5%
Efflorescence Resistance (NBS 883).....	Rated Highest
Surface Appearance After Application.....	No Change
Warranty (Vertical Applications)	10 Years

PREPARATION:

1. The cause of the water infiltration must be determined. The substrate should be inspected to identify repairs or improvements which are necessary prior to application.
Excess Moisture: The source of moisture intrusion (ex. condensation, settling, cracks, plumbing leaks, hydrostatic pressure, settling cracks, earthquake movements, etc.) into the building must be corrected prior to the application of **AQUASEAL 40**.
2. **AQUASEAL 40** should not be used as a substitute for additional details which may be required by Model or applicable Building Codes or Industry Recommendations such as the use of flashing, screeds, weep holes, weep tubes, vents, or additional back-up moisture control systems. Relative to Masonry, it should be considered a water repellent only.
3. Caulk and fill cracks, holes, voids, etc. larger than hairlines (1/16").
4. Treat or clean alkali, lime or efflorescence on the surface with a proper neutralizing agent. Then allow 24 to 48 hours for the surface to dry before application.
5. All preparation, painting, and caulking of joints or cracks should be allowed to cure prior to application.
6. Cure new concrete 28 days before application.
7. Do not apply **AQUASEAL 40** to a wet surface. All surfaces must be dry for a minimum of 24 hours following rain.

THERMAL AND MOISTURE PROTECTION

WATER REPELLENTS 07190

MONOPOLE INC.
UPDATED APRIL 2013



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Moisture level should not exceed 15%.

8. In hot, dry weather it is recommended that the surface be slightly damp before application to improve material penetration.

LIMITATIONS:

AQUASEAL ME12 does not form a water-proofing membrane and does not seal inaccessible areas. It will not bridge cracks, fill large pores or compensate for flawed construction. Exposed walls must be capped and the backside of parapet walls must be sealed, flashings must be in place and weep holes and drains installed and functioning (where applicable).

APPLICATION:

Always conduct a test patch prior to doing the complete job to ensure the proper results and determine the approximate coverage and application methods. Allow the area to dry thoroughly before the architect and/or building owner inspects the application for approval.

- Apply with a brush, roller or, for best results, use spray equipment such as a compressor driven airless, pump or Hudson type sprayer. Use low pressure (not to exceed 25 PSI), allowing excess material to run down 10 to 12 inches (back rolling the run downs is not required but will maximize the performance) assuring enough product has penetrated the surface. TIP SIZE: .035 orifice.
- **HORIZONTAL APPLICATIONS:** Saturate the unsealed surface. If the surface is still moisture absorbent after the 1st coat, apply a lighter second coat wet-on-wet. Mop of all puddles 15-20 minutes after application.
- Allow **AQUASEAL 40** to dry prior to opening up to foot traffic. This takes approximately 24 hours.
- **VERTICAL APPLICATIONS:** Apply a light coat that fully wets the surface and breaks the surface tension, followed immediately with a liberal saturating coat, allowing 6"-8" rundowns, to achieve maximum penetration. Back rolling run downs is optional and will maximize the product performance. Do not allow puddles to dry.
- On very porous substrates, such as split face block, fluted blocks, lightweight blocks, scored blocks, etc. a second application should be applied if the surface is still moisture absorbant after the first coat. Apply the second coat wet-on-wet with the first (approximately 15 minutes after the first coat).
- Stir thoroughly before use to avoid settling.
- Clean equipment with mild detergent and clean water immediately after use (while the material is still wet).

CAUTIONS:

Do not apply more material than can be absorbed into the surface. Excess material may result in a blotchy or glistening appearance that can attract dust and alter the proper adhesion of subsequent applications of paints. Mop off all puddles 10-20 minutes after application.

PACKAGING:

AQUASEAL 40 is packaged in one-gallon cans and five-gallon pails.

ITEM NO. 2040-05: Five Gallon Pail

ITEM NO. 2040-01: One Gallon Can

COVERAGE:

Horizontal surfaces110-150 sq/ft/gallon
(concrete, brick, pavers, unglazed tiles)

Vertical surfaces120-180 sq/ft/gallon
(tilt ups, precast concrete, cast-in-place, brick, stucco, plaster, etc)

Split face block, CMU, Mexican pavers, sandstone, etc.
.....65-90 sq/ft/gallon

The above figures are approximations which will vary based on substrates and application methods. ALWAYS TEST for job specific spread ratios.

APPLICATION LIMITATIONS:

- **AQUASEAL 40** is not intended for below grade waterproofing or for use under hydrostatic pressure.
- Materials should not be applied when the surface temperature is below 50°F or above 90°F.
- Do not apply if rain is anticipated within 24 hours after scheduled application, or in windy conditions.
- Allow the surface at least 24 hours of dry time after rain until the surface moisture level is below 15%.
- Use "as-is"; do not dilute or alter the product.
- Do not use **AQUASEAL 40** as a clear sealer over wood products, in particular redwood, pine or cedar. It will create a reaction with the acidic resin and turn the surface darker. For best results, substitute **AQUASEAL 2** water base formula for all wood products.
- Protect shrubbery, plants, grass, glass, metal and other glazed surfaces during application. Clean drips, runs and overspray residue while still wet, using detergent and water. Dried material may require a solution of vinegar and water or a legally compliant solvent for removal.

CLEAN UP:

Clean all equipment and tools with detergent and water while the **AQUASEAL 40** is still wet.

SHELF LIFE:

AQUASEAL 40 is good for one year in well protected storage.

PRECAUTIONS:

Keep the container tightly closed when not in use. Do not ingest. Avoid contact with skin and eyes. See MSDS.

WARRANTY INFORMATION: MONOPOLE believes that the information in this publication is an accurate description of the typical characteristics and/or uses of the product or products. It is your responsibility to thoroughly test the product in your specific application to determine its safety and performance capabilities. Since use of this product is beyond our control, MONOPOLE, INC. cannot assume any risk or liability for results obtained when not used according to our specifications and directions. Unless MONOPOLE provides a specifically written statement of fitness for a particular use, MONOPOLE'S sole warranty is that the product will meet its current sales specifications. MONOPOLE disclaims any other expressed or implied warranties, including the warranty of merchantability and fitness for use. Your exclusive remedy and MONOPOLE'S sole liability for breach of warranty is limited to a refund of the purchase price or replacement of any product proven to be defective. In no event shall the seller be liable for any loss of profits or other consequential damages, including labor charges.