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888-839-2661 | sales@vexcon.com | 7240 State Road | Philadelphia, PA 19135 vexcon.com

POWERSEAL® 40

**NCHRP-244 • INCREASED EFFICIENCY • BEST PROTECTION • WATER REPELLENT
EXCLUSIVE PROTECTIVE COLLOID EMULSION**

DESCRIPTION

POWERSEAL 40 is a premium high performance industrial and commercial grade breathable, efficient waterborne penetrating water repellent sealer that deeply penetrates into new (14 day minimum) or existing concrete and masonry surfaces. Surfaces treated with PowerSeal 40 have a totally natural appearance.

PowerSeal 40 stops the intrusion of water, salts, deicer chemicals, and acids, which often result in efflorescence, mildew growth, corrosion, scaling, spalling, surface erosion, and other costly damage to hard surfaces.

PowerSeal 40 penetrates into the pores and capillaries of the cement based materials reacting with the moisture and chemicals in the substrate, polymerizing and sealing the pores, which prevents water, chemical and chloride ion penetration.

PowerSeal is specially formulated with a reduced evaporation rate so that more of the active ingredients react with the substrate rather than evaporate with the solvent or water as with similar products. Material efficiency is increased, making PowerSeal more effective than competitive products.

BENEFITS

- Extends the life of concrete and masonry surfaces
- Best long term protection against salt corrosion, deicing chemicals, mildew, water, wind driven rain, airborne contaminants, surface spalling from freeze/thaw cycles, and other severe weather conditions.
- Reduces corrosion of rebar and surface erosion in reinforced concrete
- An effective chloride screen
- Prolongs the surface life and prevents damage from within by maintaining vapor permeability of concrete
- Superior water repellency
- Can be applied to concrete surfaces that are slightly damp
- Suitable for alkaline concrete surfaces
- Water base - safer to use - low odor
- Does not alter natural surface texture or appearance
- Keeps substrate cleaner

RECOMMENDED FOR

Engineered for transportation, commercial, industrial, distribution and institutional structures.

- | | |
|--------------------------|----------------------|
| • Pre-cast concrete | • Parking structures |
| • Concrete block and CMU | • Concrete ramps |
| • Cast-in-place concrete | • Median barriers |
| • Tunnel walls | • Pavers |
| • Brick walls | • Athletic stadiums |
| • Bridge decks | • Sound walls |

EXCLUSIVE PROTECTIVE COLLOID EMULSION

PowerSeal water repellents are produced with Vexcon's proprietary protective colloid emulsion technology. This technology prevents premature hydrolysis of the silane with the water used as a carrier in the emulsion. Premature hydrolysis is a process that reduces the effectiveness of water repellents.

PRE-INSTALLATION NOTES

- A test application is necessary on each surface to be treated to ensure compatibility and desired water repellency. Test areas are also useful in determining final application rate and procedures.
- If the material in the test area does not fully penetrate due to coatings or inadequately cleaned surface, use one of Vexcon's cleaners and stain removal products to properly clean the surface prior to application.
- If a tacky residue remains after 24 hrs, the application rate must be modified. Material which remains tacky on the surface can usually be removed by washing with water or a vinegar solution.
- Tests should be applied using the same equipment and techniques planned for job application.
- Test areas should be available for inspection by the project engineer.
- Adjoining glass, metal and painted surfaces should be protected from overspray and splash. Inadvertent splashes should be removed using **Certi-Vex® Equipment Cleaner** before the solution has dried on the surface.

SURFACE PREPARATION

- All caulking, patching, and joint sealants should be installed and fully cured prior to application. Concrete should be properly cured; see Curing Recommendations section.
- All surfaces must be cleaned free of dust, dirt, surface materials, previous coatings, and contaminants.
- New concrete normally does not require etching. However, slick trowel finished concrete that has become heavily contaminated with surface dirt, tire marks, oil, etc., during construction may require thorough cleaning and a mild etch using **StarSeal® EF Safe Etch** for best performance.
- Older concrete surfaces should be power washed with high-pressure water and **StarSeal Brick & Masonry Cleaner** to assure removal of surface dirt, oil and contaminants that may have built up over the years; use **StarSeal EF Stripper** to remove old cure & seals, resin cures, acrylics, adhesives, floor waxes, and many urethanes and epoxies.
- To determine that the concrete is penetrable, perform a water absorbency test by applying water to a representative portion of the prepared surface. A properly prepared surface when dry will immediately absorb clean water without any surface beading effects.
- If required use StarSeal EF Safe Etch to improve sealer penetration.
- Surfaces to be treated may be damp but should be absorbent to assure good penetration.
- Application to still damp surfaces is acceptable; however, free standing water must be removed.

CURING RECOMMENDATIONS

- Concrete can be cured with **Certi-Vex Envio Cure**, an emulsion resin cure, which will dissipate. Allow to dissipate or remove with StarSeal EF Stripper.

B. Water cure-burlap

NOTE: Sodium Silicates should not be used to cure concrete.

COVERAGE RATES/ESTIMATING

Porosity and texture of the surface will affect the amount of material necessary for effective treatment. The following is a guide for estimating total material requirements. Always test on the actual surface to get precise consumption rates.

- **Concrete/Horizontal**
 - Broom finish 125-140 sq.ft./gal. (3.1-3.5m²/L)
 - Smooth Hard Troweled 200-250 sq.ft./gal. (6.5m²/L)
 - Older concrete (Porous) 95-140 sq.ft./gal. (2.4-3.5m²/L)
 - Pavers 125-140 sq.ft./gal. (3.1-3.5m²/L)
 - Tiles 200-250 sq.ft./gal. (6.5m²/L)
- **Concrete/Vertical**
 - CIP or Precast 150-200 sq.ft./gal (3.5-5m²/L)
 - Stucco 95-140 sq.ft./gal (2.4-3.5m²/L)
- **Architectural Concrete block**
 - Smooth-faced 95-140 sq.ft./gal (2.4-3.5m²/L)
 - Split-faced 50-100 sq.ft./gal (1.25-2.5m²/L)
 - Ground-faced 200-250 sq.ft./gal (5-6.25m²/L)
 - Ribbed 50-100 sq.ft./gal (1.25-2.5m²/L)

APPLICATION

- PowerSeal 40 should not be diluted or altered, see Coverage Rates.
- Apply with low-pressure (20-PSI) airless industrial spray equipment. Sprayer should be fitted with solvent resistant hoses and gaskets.
- If using brushes or rollers, care should be taken to ensure that enough solution is applied.
- Treated surfaces should be protected from rain and foot traffic for 4-6 hours following application.
- Protect from vehicular traffic for 24 hours
- Allow 5-7 days for the product to fully react before evaluation.

HORIZONTAL SURFACES

- PowerSeal 40 should be applied in a single saturating application with sufficient material applied so the surface remains wet for a few minutes before penetration into the surface.
- Surface residues, pools and puddles should be broomed or brushed out until they completely penetrate into the surface.

VERTICAL SURFACES

- PowerSeal 40 should be applied and absorbed on the substrate to the specified coverage rate.
- In the case of extremely dense, mirror finish architectural concrete and similar surfaces, it may be necessary to restrict the amount of material by first applying a light mist coat by the procedure listed below in order to prevent surface darkening.
- Allow the mist coat to penetrate the masonry surface (approximately 3-5 minutes) and apply in the same saturation manner.
- Apply PowerSeal 40 in a flooding application, from the bottom up with sufficient material applied to provide a 6" to 8" run down below the contact point of the new spray pattern with the masonry surface.

SPECIAL NOTES

- The product should be stored in sealed containers
- Do not apply water repellent treatment when surface temperatures are below or expected to fall below 40°F (4.4°C)
- Do not apply water repellent treatment when surface temperatures are above 85°F (29°C)
- Do not apply water repellent treatment on windy days
- Keep from freezing
- Mix well before each use and during application
- Do not apply if rain is expected within 8 hours after application
- Do not apply earlier than 24 hours after rain
- Do not apply to frozen surfaces
- Shelf Life: If properly stored in its original sealed container, six months. Rotate your stock.
- For use by experienced contractors
- Proper application of Vexcon material is the responsibility of the installer or user. Telephone consultation and/or field visits by Vexcon personnel are for the sole purpose of making technical recommendations only, and not for providing quality control or supervision on location
- Prior to use, contact Vexcon for warranty information.

PACKAGING

PowerSeal 40 is available in 55 gallon drums and 5 gallon pails. Contact Vexcon directly to discuss your customized packaging requirements.

SPECIFICATIONS/COMPLIANCE

PowerSeal has been tested according to the most current test procedures in the industry. Testing includes water absorption/repellency ratings, penetration, and salt spray resistance. Test reports are available.

- VOC – <100 grams/liter or <0.83#/gallon
- Meets:
- USEPA AIM-Waterproofing Sealers and Treatments
 - OTC - Waterproofing Concrete/Masonry Sealers
 - LADCO - Waterproofing Concrete/Masonry Sealers
 - Canada - Waterproofing Concrete/Masonry Sealers
 - CARB - Waterproofing Concrete/masonry Sealers
 - SCAQMD - Rule #1113 - Waterproofing Conc/Msry Sealers
- Meets NCHRP 244 Series II & IV
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 - Sor Testing Laboratories report #10-1988R
 - Water Loss Reduction, coated samples, 14 days at 50% RH: 86.7%
 - Water Loss Reduction, coated samples, 21 days in 15% NaCl: 93.2%, UV 92.6%
 - Reduction of Chloride Penetration into concrete:
 - 0-1": Coated 95.3%, - UV 94.6%
 - 0-2": Coated 93.8%, - UV 92.6%
 - NCHRP 244 Series II & IV; Sor Testing report #10-1582
 - Reduces water absorption (ASTM C67 and ASTM C642) by greater than 90%.
 - ASTM C672 Scale rating - 100 freeze thaw cycles-0 (no scaling). Sor Testing report #10-1842AA
 - Penetration (1 application) 0.150 -0.26", depending on substrates. Sor Testing report #10-1881
 - ASTM E96 - Water Vapor Permeability 95%. Sor Testing report #10-1804
 - ASTM D2047 - Coefficient of friction 0.84 average – minimum required 0.50. Case Laboratories report #6335
 - Efficiency test - PowerSeal yields 210% more silane than alcohol based products. See Technical Note #TN100 for more information.
 - Active Silane greater than 40%. CeWay Chemical Services report #10056
 - CSI reference: 07 19 16

SHORT SPECIFICATION

07 19 16: Low VOC water repellent. VOC content less than 89 grams/liter. Meets or exceeds NCHRP 244 Series IV test, reducing water and salt penetration by minimum 90%. Ten year warranty. Manufactured by Vexcon Chemicals.

PHYSICAL PROPERTIES

- Color wet Milky white
- Color dry Clear
- Dry time 4-5 hours
- Carrier Water/Emulsion
- Total Solids and active ingredients by wt. 40% minimum

Dry times are based upon 68-77°F (20-25°C). Lower temperatures and higher relative humidity will extend dry times.

HEALTH AND SAFETY

- Use only with adequate ventilation.
- Use of gloves, goggles and other protective clothing is advised when using this product.
- If swallowed, do not induce vomiting.
- Use of respirators is advised when using in confined areas.

Vexcon MSDS PS102 is an integral part of the safety and application of our product. A short synopsis is provided in this product data sheet. Before using this Vexcon product obtain a copy of the MSDS from your distributor or by contacting Vexcon Chemicals.

CONTACT US@

Additional product information, technical assistance, and customer services are available by contacting Vexcon Chemicals directly, or our distributors.

- vexcon.com
- techservice@vexcon.com
- customerservice@vexcon.com
- sales@vexcon.com
- Voice: 888.839.2661
- Fax: 215.332.9997