



POWERSEAL[®] 20

NCHRP-244-INCREASED EFFICIENCY EXCLUSIVE PROTECTIVE COLLOID EMULSION

VOC Content: 250 gr./liter or 2.07 #/gal. – Water Repellent

DESCRIPTION

POWERSEAL 20, is a high performance breathable, efficient waterborne penetrating water repellent sealer. Powerseal is a silane V.O.C. compliant emulsion that deeply penetrates into new (14 day minimum) or existing concrete and masonry surfaces. Surfaces treated with Powerseal 20 have a totally natural appearance. Engineered for bridges, parking structures, athletic stadiums, highways along with many other above grade vertical and horizontal substrates including: concrete, brick, block, and other masonry surfaces. Powerseal 20 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 20 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 the active ingredients react with the substrate rather than evaporate with the solvent or water as in competitive products. Material efficiency is increased, making Powerseal more powerful than competitive products.

PERFORMANCE TEST DATA/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. Results are listed below and independent test reports are available on request.

- Meets EPA and AIM VOC regulations
- Meets NCHRP 244
- Chloride screen test using NCHRP 244 series IV (1 application at 125 sq.ft. /gal.) min 76%
- Reduces water absorption (ASTM C 67 and ASTM C 140) by greater than 83%.
- Scale rating-ASTM C 672-84: 75 freeze thaw cycles-0 (no scaling).
- Penetration (1 application) .16" avg., depending on substrate
- Moisture Vapor Permeability 101%
- ASTM 2047 – Case Lab Report #6335 coefficient of friction .84 average – minimum required .50
- Efficiency test-Powerseal yields 210% more silane than alcohol based products. See technical note #tn100 for more information.

BENEFITS

- Protects brick, concrete and masonry from wind-driven rain
- 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 which are slightly damp
- Suitable for alkaline concrete surfaces
- Water base - safer to use - low odor
- Greatest depth of penetration
- Does not alter natural surface texture or appearance

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 concrete cleaners and stain removal products** to properly clean the surface prior to application. Use **Certi-Vex[®] Concrete Stripper** to remove old sealers, epoxies, urethanes, adhesives, curing compound and floor waxes. If required use **Certi-Vex Etch & Efflorescence Remover** to improve sealer penetration. 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 over spray and splash of Powerseal 20. 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 of Powerseal 20. Concrete should be properly cured, see Curing Recommendations below. 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 **Certi-Vex Etch & Efflorescence Remover** for best performance. Older concrete surfaces should be power washed with high-pressure water and appropriate Vexcon cleaners to assure removal of surface dirt, oil and contaminants that may have built up over the years and use **Certi-Vex Concrete Stripper** to remove old cure and 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. Application to still damp surfaces is acceptable however free standing water must be removed. Surfaces to be treated may be damp but should be absorbent to assure good penetration.

CURING RECOMMENDATIONS

- A. Concrete can be cured with **Certi-Vex® Envio Cure**, an emulsion resin cure, which will dissipate. Allow to dissipate or remove with Certi-vex Concrete Stripper.
- B. Water cure-burlap
- NOTE: Sodium Silicates should not be used to cure concrete

APPLICATION

Powerseal 20 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 of Powerseal 20. Protect from vehicular traffic for 24 hours.

HORIZONTAL SURFACES: Powerseal 20 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 20 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 20 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.

EXCLUSIVE PROTECTIVE COLLOID EMULSION TECHNOLOGY

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.

PHYSICAL PROPERTIES

- Color wet: Milky white
 - Color dry: Clear
 - Dry Time: 4-5 hours
 - Solvent: Water/Emulsion
 - Total Solids and active ingredients by wt. 20%
- Dry times are based upon 68-77 °F (20-25°C). Lower temperatures and the relative humidity will extend dry times.

VITAL STATISTICS

- Flash Point: >212°F Tag closed cup
- Boiling Point: 210°F, 760 mm Hg
- Autoignition Temp: ND
- Extinguishing Media: Foams, Dry Chemical, CO2, Water Fog, spray.

SPECIAL NOTES

- The product should be stored in sealed containers
- Can apply to 40°F
- Protect from freezing
- If properly stored in its original sealed container, six months. Rotate your stock
- For use by professional applicators only

PACKAGING

Powerseal 20 is available in 55-gallon drums and 5-gallon pails. Contact Vexcon directly to discuss your customized packaging requirements.

COVERAGE RATES

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

• **Concrete/Horizontal:**

Broom finish	125-140 sq.ft./gal. (3.1-3.5 m ² /L)
Slick trowel finish	250 sq.ft./gal. (6.25 m ² /L)
Older concrete (porous)	95-140 sq.ft./gal. (2.4-3.5 m ² /L)

• **Concrete/Vertical:**

CIP or Precast	150-200 sq.ft./gal (3.5-5 m ² /L)
Stucco	95-140 sq.ft./gal (2.4-3.5 m ² /L)

• **Architectural Concrete block:**

Smooth-faced	95-140 sq.ft./gal (2.4-3.5 m ² /L)
Split-faced	50-100 sq.ft./gal (1.25-2.5 m ² /L)
Ground-faced	200-250 sq.ft./gal (5-6.25 m ² /L)
Ribbed	50-100 sq.ft./gal (1.25-2.5 m ² /L)

• **Brick:**

Smooth	125-140 sq.ft./gal (3.1-3.5 m ² /L)
Wire cut	50-100 sq.ft./gal (1.25-2.5 m ² /L)

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 #PS101 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 it is advisable to obtain a copy of the MSDS, #PS101, from your distributor or by contacting Vexcon Chemicals.

CONTACT US @

Additional product information, technical assistance and customer service is available by contacting Vexcon Chemicals or our distributors.

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