



**VEXCON**  
CHEMICALS, INC.

Concrete solutions for architects, engineers and builders since 1974

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## **POWERSEAL<sup>®</sup> 20**

**NCHRP-244 • INCREASED EFFICIENCY**

**EXCLUSIVE PROTECTIVE COLLOID EMULSION • COST EFFECTIVE**

### **DESCRIPTION**

**POWERSEAL 20** is a cost effective commercial and residential grade, high performance 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 20 have a totally natural appearance.

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 effective than competitive products.

### **BENEFITS**

- Extends the life of concrete and masonry surfaces
- Better long term protection against salt corrosion, deicing chemicals, mildew, water, wind driven rain, airborne contaminants surface spalling from freeze/thaw cycles and other harsh 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
- Excellent 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

### **RECOMMENDED FOR**

Commercial, institutional and residential applicators.

### **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.

### **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.
- The material in the test area does not fully penetrate due to coatings or inadequately cleaned surface, use one of Vexcon's cleaners 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 power washing with water or with a vinegar solution.
- Tests should be applied using the same equipment and techniques planned for job application.
- Inadvertent overspray should be immediately rinsed with water. If allowed to dry, clean with **Certi-Vex<sup>®</sup> Equipment Cleaner**. Protect non-porous surfaces.

### **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 to be sealed must be properly cleaned. Power wash surface clean of dust and construction dirt. Use Vexcon's Concrete and Masonry cleaners to clean surface materials, previous coatings, atmospheric stains and other harder to clean 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<sup>®</sup> EF Safe Etch**.
- 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**

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

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.
- Protect from vehicular traffic for 24 hours.
- Allow 5-7 days for the product to fully react before evaluation.

## 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.

## 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.

## 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.

### **Horizontal**

Broom Finish Concrete	125-140 sq.ft./gal. (3.1-3.5m <sup>2</sup> /L)
Smooth Hard Troweled Concrete	200-250 sq.ft./gal. (6.5m <sup>2</sup> /L)
Porous Concrete	95-140 sq.ft./gal. (2.4-3.5m <sup>2</sup> /L)
Concrete Pavers	125-140 sq.ft./gal. (3.1-3.5m <sup>2</sup> /L)
Tiles	200-250 sq.ft./gal. (6.5m <sup>2</sup> /L)
Brick	200-250 sq.ft./gal (6.5 m <sup>2</sup> /L)

### **Vertical**

CIP or Precast Concrete	150-200 sq.ft./gal (3.5-5m <sup>2</sup> /L)
Un-Painted Stucco	95-140 sq.ft./gal (2.4-3.5m <sup>2</sup> /L)
Brick	200-400 sq.ft./gal (6.5-11 m <sup>2</sup> /L)
Smoothed Faced Block	200-400 sq.ft./ gal (6.5-11 m <sup>2</sup> /L)

## 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) at 50% RH. Lower temperatures and the 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 SDS 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 SDS from vexcon.com.

## SPECIFICATIONS/COMPLIANCE

Powerseal 20 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/MRPO - Waterproofing Concrete/Masonry Sealers
  - CEPA/EC - Waterproofing Concrete/Masonry Sealers
  - CARB - Reactive Penetrating Sealer
  - SCAQMD - Rule #1113 - Reactive Penetrating Sealers
- NCHRP 244 Series II and IV
  - Reduces Water Absorption (ASTM C67 and ASTM C642)
    - Water Loss Reduction, coated samples, 14 days/50%RH >80%
    - Water Loss Reduction, coated samples, 21 days/15%RH >80%
    - Reduction of Chloride Penetration into concrete.
      - 0-1" - Coated - >80% - UV - >80%
      - 0-2" - Coated - >80% - UV - >80%
- ASTM C672 Scale rating - 40 freeze thaw cycles-0 (no scaling).
- Penetration (1 application) 0.150 -0.26", depending on substrates.
- ASTM E96 - Water Vapor Permeability >80%.
- ASTM D2047 - Coefficient of friction 0.84 average - minimum required 0.50.
- Efficiency test - Powerseal yields 210% more silane than alcohol based products. See Technical Note #TN100 for more information.
- CSI reference: 07 19 16

## 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
- Do not apply on asphalt.
- Mix well before each use and during application
- Do not apply if rain is expected within 8 hours after application
- After rain, do not apply until the surface is not longer wet.
- 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
- Warranty: All products are sold subject to Vexcon's published materials Limited Warranty and Terms and Conditions of Sale which are available at vexcon.com.

## PACKAGING

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

## CONTACT US@

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

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