POWERSEAL® 40
WATER REPELLENT PENETRATING SEALER • BEST PROTECTION

DESCRIPTION
POWERSEAL 40 is a premium high performance breathable, efficient water base clear 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 prevents the intrusion of water, salts, deicing chemicals, and acid rain, which often result in efflorescence, mildew growth, corrosion, scaling, spalling, surface erosion, and other costly damage to concrete and masonry surfaces.

PowerSeal 40 penetrates into the pores and capillaries of concrete and masonry where it polymerizes sealing the pores, which prevents water and chloride ion penetration. Treatment of reinforced concrete reduces surface erosion and corrosion of rebar caused by attack of water and water borne salts and alkalis.

PowerSeal is specially formulated with a reduced evaporation rate allowing for more active ingredients to react with the substrate rather than evaporate as with similar products.

BENEFITS
• Extends the life of concrete and masonry
• 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 substrate
• Superior water repellency
• Can be applied to damp surfaces
• Suitable for alkaline concrete surfaces
• Water base - safe to use - low odor
• Does not alter natural surface texture or appearance
• Keeps substrate cleaner

RECOMMENDED FOR
Transportation, commercial, industrial, distribution and institutional structures.
• Pre-cast concrete
• Concrete block
• Cast-In-Place concrete
• Tunnel walls
• Bridge & Parking Decks

• Concrete ramps
• Median barriers
• Pavers
• Brick
• Other reinforced concrete structures

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.
• 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® Equipment Cleaner. Protect non-porous surfaces.

SURFACE PREPARATION
• All caulking, patching and water base joint sealants should be installed and fully cured prior to application. Hot poured and solvent based joint sealants maybe applied before or after application of the sealer. Concrete should be properly cured, see Curing Section.
• All surfaces to be sealed must be properly cleaned. As needed, power wash surface clean of dust and construction dirt. Use Vexcon’s New Construction & Restoration Cleaners to clean surface materials, previous coatings, atmospheric stains and other harder to clean contaminants.
• Surfaces to be treated may be damp but should be absorbent to assure good penetration.
• To determine that the concrete is absorbent 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.
• To improve material penetration, a mild etch using StarSeal EF® Safe Etch & StarSeal EF Neutralizing Rinse can be done or by mechanical means (shot, sand blasting or high power wash).

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. Wet Cure

SHORT SPECIFICATION
07 19 16: Low VOC water repellent. VOC content less than 100 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.

PACKAGING
PowerSeal 40 is available in 55 gallon drums and 5 gallon pails. Contact Vexcon directly to discuss your customized packaging requirements.
APPLICATION
- PowerSeal 40 should not be diluted or alter, see Coverage Rates.
- Can be applied within 14-28 days or sooner when 70-75% of concrete design strength is achieved.
- 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 material is applied.
- Allow 5-7 days for the product to fully react before evaluation.

HORIZONTAL SURFACES
- Apply 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.
- Treated surfaces should be protected from rain and foot traffic for 4-6 hours following application.
- Protect from vehicular traffic until the surface is dry.

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 to aid absorption.
- Allow the mist coat to penetrate the 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 surface.

COVERAGE RATES/ESTIMATING
The following is a guide for estimating material requirements. Actual coverage rates can vary based on substrate or transportation authority requirements.

Horizontal
- Broom Finish Concrete: 125 - 140 sq. ft./gal. (3.1-3.5m²/L)
- Smooth Hard Troweled Concrete: 200 - 400 sq. ft./gal. (6.5-11m²/L)
- Bridge Decks/Ramps: 125 - 250 sq. ft./gal. (3.1 – 8.1 m²/L)
- Resealing Bridge Decks/Ramps: 250 - 300 sq. ft./gal. (8.1 – 9.2 m²/L)
- Concrete Pavers: 120 - 140 sq. ft./gal. (3.1-3.5m²/L)
- Brick: 200 - 250 sq. ft./gal. (6.5m²/L)

Vertical
- CIP or Precast Concrete: 150 - 200 sq. ft./gal. (3.5-5m²/L)
- Un-Painted Stucco: 95 - 140 sq. ft./gal. (2.4-3.5m²/L)
- Brick: 200 - 400 sq. ft./gal. (6.5-11m²/L)
- Smooth Faced Block: 200 - 400 sq. ft./gal. (6.5-11m²/L)

PHYSICAL PROPERTIES
- Color wet: Milky white
- Color dry: Clear
- Dry time: 1-2 hours
- Carrier: Water/Emulsion
- Active Silane (ASTM D-6886): 40% minimum

Properly applied, dry times are based upon 50 -80°F (10-27°C) at 50% RH. Lower temperatures, wind, relative humidity and concrete finish can 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 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 SDS from your distributor or at vexcon.com.

SPECIFICATIONS/COMPLIANCE
- VOC – <100 grams/liter or <0.83#/gallon
- Meets:
  - USEPA AIM-Waterproofing Sealers and Treatments
  - OTC – LADC/MRPO – CEPA/EC - Waterproofing Concrete/Masonry Sealers
  - CARB – Reactive Penetrating Sealers
  - SCAQMD – Rule 1113 – Reactive Penetrating Sealers
- NCHRP 244 Series II and IV
  - Reduction of Chloride Penetration into Concrete
    - Series II – 95%
    - Series IV – 95%
  - ASTM C-642 – Water Absorption Reduction % by Wt.
    - Series II – 94%
    - Series IV – 93%
  - AASHTO T259/260 - Chloride Ion Analysis - 90 days salt ponding
    - 1/16" - 1/2" 0.52 #/cu.yd. avg. @125sq.ft./gal
    - 1/2" - 1" 0.21 #/cu.yd. avg. @125sq.ft./gal
  - ASTM C672 - Scale Rating 100 freeze thaw cycles-0 (no scaling)
  - ASTM C457 – Depth of Penetration - 0.150 -0.26", depending on substrate
  - ASTM E96 - Water Vapor Permeability 95% average
  - ASTM D2047 - Coefficient of friction 0.84 average
  - Efficiency test - PowerSeal yields 210% more silane then alcohol based products. See Technical Note #100 for more information
  - ASTM C642 - Water Absorption Reduction in Hardened Concrete ->98%
    - 24 hour immersion 0.21%
    - 48 hour immersion 0.50%
    - 24 hour boil 1.25%
    - 50 days immersion 1.28%
- See Technical Note TN500 for all test results
- CSI reference: 07 19 16

SPECIAL NOTES
- The product should be stored in sealed containers
- Do not apply unless substrate and ambient temperatures are 40°F (4°C) and rising at installation time and remain above 40°F (4°C) for at least 4 hours after installation.
- Do not apply above 85°F (29°C) or below 40°F (4°C).
- Do not apply water repellent treatment on windy days
- Keep from freezing.
- Do not apply on asphalt.
- Protect plant life and landscaping from overspray.
- Mix well with a jiffy type mixer before each use and during application.
- Do not apply in rain or when rain is expected within 8 hours after application.
- After rain, do not apply until the surface is no longer wet.
- Do not apply to frozen surfaces.
- Line stripping can be done after application of sealer. Contact Vexcon Technical Service for additional information.
- Shelf life: If properly stored in its original sealed container one (1) year for date of manufacturer. 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 available at vexcon.com.

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

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