



Concrete solutions for architects, engineers and builders since 1974
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CERTI-VEX® PENSEAL 244 O/W

OIL-WATER-STAIN REPELLENT • NCHRP-244 • BEST PROTECTION

DESCRIPTION

CERTI-VEX PENSEAL 244 O/W is an advanced, breathable, deep penetrating high solids, clear silane sealer that combines hydrophobic and oleophobic technologies, providing greater protection over standard water repellents by sealing out water, oil, grease and food staining from concrete and masonry surfaces. When properly applied the treatment does not produce a surface build up, darkening or other effect on the natural color or texture of the surface. The material's small molecular structure allows for maximum penetration into new concrete (14 day minimum) or existing concrete and masonry surfaces.

Certi-Vex Penseal 244 O/W stops the penetration of water, salts, deicer chemicals, and acid rain, which often result in efflorescence, mildew growth, corrosion, scaling, spalling, surface erosion, and other costly damage to concrete surfaces.

Certi-Vex Penseal 244 O/W 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 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.

BENEFITS

- Extends the life of concrete and masonry surfaces
- Reduces staining caused by motor oils, grease, and food
- 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
- An effective chloride screen
- Contains long alkyl groups especially suitable for alkaline concrete surfaces
- Prolongs the surface life and prevents damage from within by maintaining vapor permeability
- Can be applied to surfaces which are slightly damp
- Quick formation of surface repellency and chemical resistance
- Does not alter natural surface texture or appearance
- Deep penetration
- No masking of windows necessary
- Keeps substrate cleaner

RECOMMENDED FOR

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

- | | |
|--------------------------|--|
| • Pre-cast concrete | • Concrete ramps |
| • Cast-in-place concrete | • Median barriers |
| • Bridge decks | • Pavers |
| • Parking decks | • Other reinforced concrete structures |

PRE-INSTALLATION NOTES

Precaution: Certi-Vex Penseal 244 O/W should be handled accordingly. Do not use near fire or extreme heat and provide good ventilation to avoid buildup of fumes. Applicators should wear NIOSH/MSHA approved respirators. When applying to the exteriors of occupied buildings all exterior air conditioning vents should be covered during application and air-handling equipment should be turned off during application to avoid odors within the building.

- A test application is necessary on each surface to be treated to ensure compatibility and desired performance. 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.
- 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 **Certi-Vex Etch and Efflorescence Remover & StarSeal Neutralizing Rinse** can be done or by mechanical means (shot, sand blasting or high power wash).

SHORT SPECIFICATION

07 19 16: VOC compliant oil, water and stain repellent. Meet or exceed NCHRP 244 Series IV & ASTM C642 tests, reducing water and salt penetration by minimum 94%. Ten year warranty. Manufactured by Vexcon Chemicals.

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 Super Degreaser & Cleaner**.
- B. Wet Cure

APPLICATION

- Do not dilute.
- 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 solution is applied.
- Protect from spillage or overspray with specialty coated glass, plastic windows, bituminous roofing products and asphalt. Check compatibility before application.
- Treated surfaces should be protected from rain and foot traffic for 4 hours following application.
- Protect from vehicular traffic for 4 hours or less until the surface is dry.

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.
- Protect from vehicular traffic until the surface is dry.

SPECIFICATION/COMPLIANCE

- VOC - < 600 grams/liter or 5.0 #/gal
Meets:
 - USEPA AIM-Waterproofing Sealers and Treatments
- NCHRP 244 Series II and IV
 - Reduction of Absorbed Chloride into Concrete
 - Series II – 93%
 - Series IV – 94%
- NCHRP 244 Series II Water Weight Gain % Reduction – 87%
- ASTM C672 Scale rating - 100 freeze thaw cycles - 0 (no scaling)
- ASTM D457 Depth of Penetration - 0.150 -0.26", depending on substrate
- ASTM E96 - Water Vapor Permeability 95%
- ASTM D2047 - Coefficient of friction 0.84 average - minimum required 0.50
- 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 C642 - Water Absorption Reduction in Hardened Concrete - >98%
- CSI reference: 07 19 16

PHYSICAL PROPERTIES

- Color Clear
- Dry time 4 hours
- Carrier Aliphatic

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.

PACKAGING

Certi-Vex Penseal 244 O/W is available in 55-gallon drums and 5-gallon pails. Contact Vexcon directly to discuss your customized packaging requirements.

SPECIAL NOTES

- The product should be stored in sealed containers and kept away from extreme heat.
- Do not apply unless substrate and ambient temperatures are 20°F (-6°C) and rising at installation time and remain above 40°F (4°C) for at least 4 hours after installation.
- Do not apply above 90°F (32°C) or below 20°F (-6°C).
- Do not apply in rain or when rain is expected within 4 hours after application.
- After rain, do not apply until the surface is no longer wet.
- 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, 3 years from date of manufacture. Rotate your stock.
- For use by experienced contractors.
- Storage/ Handling: Store in tightly sealed original factory container. Keep from freezing and exposure to moisture. Store at room temperature prior to use. Care should be taken to keep dirt, water and contaminants away from the opening of containers.
- Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- 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.

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.(3.1-3.5m ² /L)
Smooth Hard Troweled Concrete	200 - 400 sq.ft./gal. (6.5-11m ² /L)
Bridge Decks/Ramps	125 - 250 sq.ft./gal. (3.1 – 8.1 m ² /L)
Resealing Bridge Decks/Ramps	250 - 300 sq.ft./gal. (8.1 – 9.2 m ² /L)
Concrete Pavers	120- 140 sq.ft./gal. (3.1-3.5m ² /L)
Brick	200 - 250 sq.ft./gal. (6.5m ² /L)

HEALTH AND SAFETY

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

Vexcon SDS PS120 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 at vexcon.com

CONTACT US @

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

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

WARRANTY

LIMITED WARRANTY: Vexcon warrants for a period of one (1) year from the date of manufacture that the goods supplied hereunder shall be of its standard quality and free of defects, and conforms to (a) Vexcon's published specifications in force on the date of acceptance by Vexcon of the order and (b) the sample which has been made available for testing by buyer prior to sale. Any claim under this warranty must be made in writing to Vexcon Chemicals within sixty (60) days after such non-conformity is first discovered. As the EXCLUSIVE REMEDY for any breach of this Limited Warranty, Vexcon at its option shall replace nonconforming goods or refund the purchase price. Since methods of use and application are beyond Vexcon's control, this Limited Warranty IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THOSE CONCERNING MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THIS LIMITED WARRANTY IS ALSO IN LIEU OF ANY OTHER POSSIBLE LIABILITIES OF VEXCON, WHETHER ALLEGED TO ARISE BY AGREEMENT OR BY OPERATION OF LAW, RESPECTING THE SALE, APPLICATION, USE OR FUNCTION OF VEXCON'S PRODUCTS, INCLUDING BUT NOT LIMITED TO CLAIMS OF NEGLIGENCE, GROSS NEGLIGENCE, MISUSE, STORAGE DAMAGE, MISAPPLICATION, ACCIDENT, STRICT LIABILITY OR ANY OTHER TORT. No person is authorized by Vexcon to assume for it any other liability of any kind in connection with the sale or use of products manufactured and sold by it, and there are no oral agreements or warranties collateral to or affecting any sale or use. All of the foregoing arises under the substantive law of Pennsylvania without regard to principles of conflicts of laws.

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