

## **CERTI-VEX® PENSEAL 244 40% AIM**

### **WATER REPELLENT PENETRATING SEALER • BEST PROTECTION**

#### **DESCRIPTION**

**CERTI-VEX PENSEAL 244 40% AIM** is a premium low VOC high solids solvent base breathable clear water repellent sealer that penetrates into new (14 day minimum) or existing concrete and masonry surfaces. Surfaces treated with Certi-Vex Penseal 244 40% AIM have a totally natural appearance.

Certi-Vex Penseal 244 40% AIM prevents the penetration of water, salts, and deicing chemicals, which often result in efflorescence, mildew growth, corrosion, scaling, spalling, surface erosion and other costly damage to concrete and masonry surfaces.

Certi-Vex Penseal 244 40% AIM 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
- 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
- Low VOC
- Breathable - Prevents damage from within by maintaining vapor permeability of substrate
- Superior water repellency
- No masking of windows necessary
- Can be applied to damp surfaces
- Suitable for alkaline concrete surfaces
- Reduces on-going maintenance and repair costs
- Does not alter natural surface texture or appearance
- Keeps surface cleaner
- Apply to temperatures as low as 20°F (-6° C)

#### **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            | • Other reinforced concrete structures |
| • Bridge decks           |  |

#### **SHORT SPECIFICATION**

07 19 16: Low VOC water repellent. Meets or exceeds NCHRP 244 Series IV test, reducing water and salt penetration by minimum 90%. 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 Concrete Stripper**.
- B. Wet Cure

#### **PRE-INSTALLATION NOTES**

Precaution: Product contains blended solvent and should be handled accordingly. Do not use near fire or extreme heat and provide good ventilation to avoid buildup of solvent 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 solvent odors within the building.

- A test application should be performed on each surface to be treated to ensure compatibility and desired water repellency. Test areas are also useful in determining final application rate and application procedures.
- Following instructions below tests should be applied using the same equipment and techniques planned for job 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.

#### **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 may be applied before or after application of the sealer. Concrete should be properly cured, see Curing
- 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 absorbency, perform a mild chemical etch using **Certi-Vex Etch and Efflorescence Remover & StarSeal Neutralizing Rinse** or by mechanical means (shot, sand blasting or high power wash)

#### **APPLICATION**

- Do not dilute
- Application to still damp surfaces is acceptable however free standing water must be removed.
- 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.
- 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.

## 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.

## VERTICAL SURFACES

- Certi-Vex Penseal 244 40%AIM 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 surface (approximately 3-5 minutes) and apply in the same saturation manner.
- Apply 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.

## SPECIFICATION/COMPLIANCE

- Many state departments of transportation
- VOC - <250grams/liter or <2.08 #/gal
- Meets:
  - US EPA - Waterproofing Sealers and Treatments
  - OTC, LADCO/MRPO, CEPA/EC – Waterproofing Sealer
  - CARB, SCAQMD – Rule 1113 – Reactive Penetrating Sealer
- 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)
- Penetration (1 application) 0.150 - 0.26", depending on substrates
- ASTM E96 - Water Vapor Permeability 95%
- ASTM D2047 - Coefficient of friction 0.84 average – minimum required 0.50
- ASTM C642 - Water Absorption Reduction in Hardened Concrete - >98%
- CSI reference: 07 19 16

## PHYSICAL PROPERTIES

- Color Clear
- Dry time <2 hour
- Active Silane 40% minimum

Dry times are based upon 68-77°F (20-25°C) at 50% RH. Lower temperatures and the relative humidity will extend dry times.

## PACKAGING

Available in 55-gallon drums and 5-gallon pails. Contact Vexcon directly to discuss your customized packaging requirements.

## 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 PS106 AIM 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 your distributor or at [vexcon.com](http://vexcon.com)

## 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.
- Do not apply water repellent treatment on windy days.
- Protect plant life and landscaping from overspray.
- Line stripping can be done after application of sealer. Contact Vexcon Technical Service for additional information
- Inadvertent overspray should be immediately rinsed with water. If allowed to dry, clean with **Certi-Vex Equipment Cleaner**. Protect non-porous surfaces. Protect from spillage or overspray, specialty coated glass, plastic windows, bituminous roofing products and asphalt. Check compatibility before application.
- It is the responsibility of contractor/applicator to determine when the substrate is dry enough to safely open to traffic.
- 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 <sup>2</sup> /L)
Smooth Hard Troweled Concrete	200 - 400 sq.ft./gal. (6.5-11m <sup>2</sup> /L)
Bridge Decks/Ramps	125 - 250 sq.ft./gal. ( 3.1 – 8.1 m <sup>2</sup> /L)
Resealing Bridge Decks/Ramps	250 - 300 sq.ft./gal. (8.1 – 9.2 m <sup>2</sup> /L)
Concrete Pavers	120 - 140 sq.ft./gal. (3.1-3.5m <sup>2</sup> /L)
Brick	200 - 250 sq.ft./gal. (6.5m <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.f t./gal (2.4-3.5m <sup>2</sup> /L)
Brick	200 - 400 sq.ft./gal. (6.5-11m <sup>2</sup> /L)
Smooth Faced Block	200 - 400 sq.ft./gal. (6.5-11m <sup>2</sup> /L)

## CONTACT US @

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

- [vexcon.com](http://vexcon.com)
- [techservice@vexcon.com](mailto:techservice@vexcon.com)
- [customerservice@vexcon.com](mailto:customerservice@vexcon.com)
- [sales@vexcon.com](mailto:sales@vexcon.com)
- Voice: 888.839.2661
- 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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