CERTI-VEX® PENSEAL 244 100% PLUS
OIL - STAIN - WATER REPELLENT • HIGH SOLIDS

DESCRIPTION
CERTI-VEX PENSEAL 244 100% PLUS is an advanced, breathable, deep penetrating 100% 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 244 100% Plus stops penetration of water, salts, deicer chemicals, and acid rain, which often result in efflorescence, mildew growth, corrosion, staining, scaling, spalling, surface erosion, and other costly damage to concrete surfaces. Certi-Vex PenSeal 244 100% Plus 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
- Keeps surfaces clean
- Easy to clean - Reduces maintenance costs
- Maximum 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
- Excellent depth of penetration
- No masking of windows necessary

RECOMMENDED FOR
Engineered for transportation, commercial, industrial, distribution and institutional structures where greater stain resistance is required.
- Pre-cast concrete
- Cast-in-place concrete
- Bridge decks
- Food Courts
- Pavers
- Parking decks
- Stadiums
- Plazas

PRE-INSTALLATION NOTES
Precaution: Certi-Vex PenSeal 244 100% Plus should be handled accordingly. Do not use near fire or extreme heat and provide good ventilation to avoid buildup of fumes. 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 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 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).

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
- Application to still damp surfaces is acceptable however free standing water must be removed.
- 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.

SHORT SPECIFICATION
07 19 16: Low VOC oil, water and stain repellent. Meet or exceed NCHRP 244 Series II & IV & ASTM C642 tests, reducing water and salt penetration by 98%. Ten year warranty. Manufactured by Vexcon Chemicals.
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.

VERTICAL SURFACES
- Certi-Vex PenSeal 244 100% 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
- VOC - < 250 grams/liter or <2.08 #/gal
- USEPA AIM-Waterproofing Sealers and Treatments
- OTC, LADCO/MRPO, CEPA – Waterproofing Sealer
- CARB, SCAQM-D Rule 1113- Reactive Penetrating Sealer
- NCHRP 244 Series II and IV – Reduction of Chloride Penetration into Concrete
  - Series II – 98%
  - Series IV – 98%
- ASTM C642 – Water Loss Reduction % wt.
  - NCHRP 244 Series II – 94%
  - NCHRP 244 Series IV – 94%
- ASTM C672 Scale rating - 100 freeze thaw cycles - 0 (no scaling)
- ASTM C457 Penetration (1 application) 0.150 -0.26”, depending on substrate
- AASHTO T259/260- Chloride Ion Analysis – 90 day Salt Ponding
  - 1/16” – 1/2” 0.63 #/cu.yd. avg. @ 250 sq.ft./gal
  - 1/2” – 1” 0.35 #/cu.yd. avg. @ 250 sq.ft./gal
- ASTM D2047 - Coefficient of friction 0.84 average - minimum required 0.50
- ASTM C642 - Water Absorption Reduction in Hardened Concrete - Various Sections
- NY Test Method – 717-01E
  - 21 days - % MVT – 93.5%
- CSI reference: 07 19 16

PHYSICAL PROPERTIES
- Color Clear
- Dry time Vehicle traffic 1 hour
- Total active hydrophobic(silane) & oleophobic > 99%
- 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 244 100% Plus 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 time of 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 before or 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 to windows or other non-absorbent surfaces 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.
- 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.
- Warranty: All products are sold subject to Vexcon’s published materials Limited Warranty and Terms and Conditions of Sale available at vexcon.com.

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 material requirements. Always test on the actual surface to get precise consumption rates.

Horizontal
- Porous Concrete 125-140 sq.ft./gal.(3.1-3.5m²/L)
- Smooth Hard Towede Concrete 200-400 sq.ft./gal. (6.5-11m²/L)
- Bridge Decks/Ramps 200-300 sq.ft./gal. (4.91-7.36m²/L)
- Concrete Pavers 125-140 sq.ft./gal. (3.1-3.5m²/L)
- Resealing Bridge Decks/Ramps 250 - 300 sq.ft./gal. (8.1 – 9.2 m²/L)
- Brick 200-250 sq.ft./gal. (6.5m²/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 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.

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

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