

# STARSEAL® PS CLEAR

PERMANENT PROTECTION • PERMANENT STYLE • PERMANENT CONCRETE

## DESCRIPTION

**StarSeal PS Clear** enhances the natural beauty of gray and decorative concrete and produces a wear-pattern free, shine retentive permanently sealed, low-maintenance concrete floor.

StarSeal PS Clear is a potassium silicate that rapidly penetrates without scrubbing and rinsing. Simply apply, re-distribute and re-apply until the concrete no longer absorbs and is fully densified. Once absorbed, StarSeal PS Clear reacts with the free lime and calcium hydroxide, producing a permanent chemical reaction that hardens, densifies and tightens the concrete surface. A fully densified concrete floor is the foundation for a stain-free floor. By adding both the StarSeal Fixative and StarSeal PS Finish Coat the concrete will resist motor oil, food acids and oils along with a variety of other typical hazards on concrete floors.

All three StarSeal PS products; StarSeal PS Clear, StarSeal Fixative, and StarSeal PS Finish Coat, must be used when installing a **StarSeal PS FSR** floor.

## STARSEAL PS CLEAR HB

Use **StarSeal PS Clear HB** when densifying soft or very porous concrete. This material is a high solids product that allows the pores to be plugged in one or two coats. After the StarSeal PS Clear HB has plugged up the concrete, apply the StarSeal PS Clear until the floor is fully densified to rejection.

## BENEFITS

- Permanently protected and sealed
- No scrubbing or rinsing required
- Eliminates or reduces waste stream during installation
- Odorless, non-hazardous, USDA approved
- LEED points
- Abrasion, wear resistant
- No topical film to wear through
- 20 year warranty
- Low maintenance, no waxing or resurfacing required

## PRIMARY APPLICATION AREAS

### **STARSEAL PS CLEAR System:**

#### **Product: StarSeal PS Clear**

Interior and exterior concrete surfaces such as warehouses, industrial floors, parking structures, driveways, entrances walkways, and stadiums where there is no exposure to food. Can be applied over neutralized acid stains, acetone based dyes, water based stains or integrally colored or shake on hardened concrete.

### **STARSEAL PS FSR System:**

#### **Products: StarSeal PS Clear, StarSeal PS Fixative, and StarSeal PS Finish Coat**

Concrete applications such as restaurants, shopping malls, kitchens, food courts, schools, pool decks, stadiums, counter tops, food markets and food handling areas. Can be applied over neutralized acid stains, acetone based dyes, water based stains or integrally colored or shake on hardened concrete.

## SYSTEM INSTALLATION

### **STARSEAL PS CLEAR and STARSEAL PS CLEAR FSR:**

For complete installation instructions, refer to data sheet #CT101A.

## WARRANTY SUMMARY

For a period of Twenty (20) years commencing from the date on which the concrete surface described herein is treated with StarSeal PS Clear. For a full explanation of our warranty consult warranty #W146.

## SURFACE PREPARATION

Clean the concrete making sure that all cures, cure & seals, other pore plugging or film forming products are removed. For removal of laitance and residual salts that may have occurred during the curing process, use Vexcon's **StarSeal Pre-densifier Floor Cleaner**. For complete floor cleaner instructions, refer to data sheet #OP134. When the concrete is clean, dry, and water absorbent, the concrete is ready for StarSeal PS Clear to be applied.

## APPLICATION – Existing Slab

Net Coverage Rate: 200-300 sq. ft./gallon. Apply in thin coats depending on the porosity of the concrete. The goal is to densify the concrete to rejection.

1. Apply an even coat of StarSeal PS Clear with a low pressure (20-50 psi) pump-up sprayer, Fastrak Applicator, EvenFlow Applicator or micro-fiber pad and tray at a coverage rate of 400 sq. ft/gallon for the first coat. Typically this coat will penetrate easily and be fully absorbed.
2. Apply additional StarSeal PS Clear at 400 sq. ft/gallon and allow the product to penetrate. If it absorbs fully, continue to apply StarSeal PS Clear at 400-500 sq. ft/gallon until the surface remains wet.
3. If most of the material has penetrated, redistribute the remaining product from the wetter areas to the drier areas. Add water to slick areas after 30 minutes.
4. If all material has absorbed in without a surface film, let the fully densified concrete dry overnight. Make sure there are no puddles or squeegee ridges; these should all be spread out evenly to dry.
5. To enhance shine, high speed propane burnish with a black pad the next day. This process should be a very slow walk, producing friction and heat; target initial floor temperature plus 20°F minimum.
6. Continue diamond polishing if required.

## APPLICATION – Freshly Placed Concrete

NOTE: Silicate solutions do not perform as liquid membrane-forming curing compounds for meeting ASTM C309, and do not adequately reduce water loss as tested by ASTM C156. Supplemental curing methods are recommended, such as water mist, cure & seals (Vexcon StarSeal 309), dissipating curing compounds (Vexcon Certi-Vex Envio Cure), or wetted curing blankets. For maximum curing results, the surface must be kept damp over 72 hours.

1. Apply StarSeal PS Clear at full strength to the concrete immediately after the final finishing and gauging water is

- absorbed, at 200-300 sq.ft./gal (5.0-7.5 m<sup>2</sup>/L) by sprayer or applicator. See Coverage Section.
- Keep the surface wet with StarSeal PS Clear by reapplying to dry spots, but do not puddle, or until the 200-300 sq., ft./gal is absorbed.
  - If gel forms on the surface, it should be flushed with clean water to remove excess material.
  - If applying membrane cure, follow instructions on StarSeal EF Concrete Cure and Strip System data sheet.
  - After the 72-hour curing period, the dry surface may be burnished, then if desired, diamond polished with appropriate polishing equipment to achieve desired level of gloss. The surface must be free of all standing water and dry.
  - Do not subject the floor to traffic until dry. The surface can be used as soon as it is totally dry.

### SPECIFICATIONS/COMPLIANCE

StarSeal PS Clear treated concrete is performance validated with the following standards:

- VOC 0 grams/liter or 0 #/gal
- Meets, US EPA AIM, OTC, LADCO, Canada, Carb and SCAQMD VOC requirements.
- LEED NC category/points: For detailed information visit [www.vexcon.com/green](http://www.vexcon.com/green)
- Balance Beam Mar Tester ASTM D5178: >50% harder
- ASTM D2486 Abrasive Scrub: 1200 Cycles
- Modified Taber Abrasion 600 Revolutions: 0.37% treated vs. 0.68% untreated
- ASTM G53/G154 5000 HR QUV: No fade, change or erosion
- Bonding ASTM D4541: Greater than 50 psi
- Absorbability ASTM C642: Reduction of 75% of Control
- Solids/ Non-Volatiles ASTM D2369: PS Clear 18% Min.
- Case Consulting Laboratories: Coefficient of Friction ASTM D2047:
  - StarSeal PS Clear– average – 0.54
  - StarSeal PS Finish Coat – average – 0.63
- CSI Reference: 03 35 00, 03 36 00

### MAINTENANCE

Spills should be removed promptly and cleaned with **StarSeal EF Degreaser and Cleaner** (product data sheet # OP 138) or a high quality commercial detergent. Floors should be cleaned as needed. For more details, see TN 215 StarSeal PS Clear Maintenance.

### SPECIAL NOTES/LIMITATIONS

- Do not apply to metal, glass or painted surfaces
- Not for use at temperatures below 40°F (4°C)
- Keep from freezing
- Do not dilute except as directed
- Cannot hide surface blemishes or cover construction error
- Use **StarSeal Fusion** to repair holes, cracks and similar surface imperfections
- Not recommended for epoxy terrazzo
- Not recommended for stamped concrete
- Shelf Life: If properly stored in its original sealed container, three years from date of manufacture. Rotate your stock.
- 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.

### PACKAGING

StarSeal PS Clear is available in 55-gallon drums and 5-gallon pails. Contact Vexcon to discuss your customized packaging requirements.

### CHEMICAL RESISTANCE CHART

Tested by ASTM D1308, “Standard Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes” for 1 hour.

CHEMICAL	RESULTS -CLEAR	RESULTS - FSR
Aluminum Chloride	S	NE
Ammonium Chloride	S	NE
Anti Freeze	NE	NE
Aviation Gasolines	SS	NE
Battery Acid 30% Sulfuric Acid	SS	M
Brake Fluid	SS	NE
Carbonic Acid 85%	NE	NE
Chromic Acid 10%	NE	NE
Cooking Oil	SS	NE
Ethyl Alcohol (Beer)	SS	NE
Gasoline	NE	NE
Grease	SS	NE
HCl (10%) hydrochloric acid	SS	NE
Iodine	SS	NE
Isopropyl Alcohol	NE	NE
Jet Fuel	SS	NE
Ketchup	S	NE
Lemon Juice – Citric Acid	SS	NE
Milk	S	NE
Motor Oil	SS	NE
Mustard	NE	NE
NaOH (10%) sodium hydroxide	NE	NE
Orange Juice – Citric Acid	SS	NE
Phosphoric Acid 85%	SS	NE
Potassium Dichromate	S	NE
Red Wine	S	NE
Salt Spray Resistance	SS	500 hr
Sodium Sulfate	NE	NE
Sodium Sulfite	NE	NE
Tannic Acid	S	NE
Transmission Fluid	SS	NE
Urine	S	NE
Vinegar Acetic Acid (10%)	S	NE
Zinc Sulfate	S	NE

\* S = Stain \* SS = Slight stain \* M = Minimal \* NE = No effect

The resistance is based upon proper application to saturation of StarSeal PS Clear & Clear FSR treated concrete. Results can differ where applications are compromised.

### VITAL STATISTICS

- Boiling Point (760 mmHg): 212°F / 100°C
- Flash Point: N/A
- Autoignition Temp: N/A

	<b>PS CLEAR</b>	<b>PS CLEAR HB</b>
Pounds/gal	9.38	10.8
Specific Gravity	1.126	1.282

### HEALTH AND SAFETY

Vexcon MSDS # CT101 is an integral part of the safety and application of our product. Before using this Vexcon product, obtain a copy of the MSDS from your distributor or by contacting Vexcon Chemicals.

### CONTACT US @

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

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

Vexcon warrants that the goods supplied hereunder shall be of its standard quality and shall conform in all material respects to the sample which has been made available for testing by buyer prior to sale. As the EXCLUSIVE REMEDY for any breach of this Limited Warranty, Vexcon 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 EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THOSE CONCERNING MERCHANT ABILITY 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 OR NEGLIGENCE, GROSS NEGLIGENCE, STRICT LIABILITY OR ANY OTHER TORT. IN NO EVENT SHALL VEXCON BE LIABLE FOR PERSONAL INJURY OR PROPERTY DAMAGE, REAL OR PERSONAL, ATTRIBUTED TO ITS PRODUCTS, NOR FOR ANY EXCAVATION, REMOVAL, REAPPLICATION, DOWNTIMES, CLEANUP, LOSS OF USE, LOSS OF OPPORTUNITY, LOSS OF MARKET VALUE, LOSS OF RENTAL VALUE OR FOR ANY LOSS OF PROFITS OR OTHER SPECIAL, INCIDENTAL, RESULTING, CONSEQUENTIAL OR EXEMPLARY DAMAGES. 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.