



1. Product Name

StarSeal EF Epoxy

2. Manufacturer

Vexcon Chemicals
7240 State road
Philadelphia, PA 19135
(215) 332-7709
www.vexcon.com

3. Product Description

StarSeal EF products are high performance building materials that are dedicated to reducing their environmental foot print by improving the environmental performance of buildings, the air quality of its inhabitant's and reducing the effects of volatile organic compounds (VOC's) on the environment.

StarSeal EF products can contribute points towards Leadership in Energy and Environmental Design (LEED) Green Building Rating System credits for certified projects in environmentally responsible new construction and building rehabilitation projects. Eco-Friendly attributes.

- Low odor
- Low VOC content
- LEED Points
- Safe to use
- Safe to store

StarSeal EF Epoxy floor coating is engineered to deliver superior performance and value for a wide range of environments in one easy system. This protective and decorative breathable coating is extremely tough, providing excellent resistance to damage from wear, abrasion, impact and chemical attack. StarSeal EF Epoxy system forms a waterproof, seamless, and breathable attractive surface that is highly durable, long-lasting and easy to clean and maintain.

BASIC USE

All StarSeal EF epoxies feature Vexcon's breathable technology which allows moisture vapor to pass through rather than becoming trapped, preventing whitening, blistering, loss of adhesion (peeling) and flaking.

Colored flakes can be blended to produce flooring that is both aesthetically pleasing and durable.

Recommended for commercial, industrial, institutional and decorative applications where a breathable, durable chemical and abrasion resistant aesthetically pleasing floor is desired.

BENEFITS

- Extremely durable
- Best chemical resistance including common acids, alkalis, solvents and salts
- Maximum hardness and adhesion
- Attractive, uniform appearance
- Available in clear gloss and semi-gloss/matte, concrete and French gray and custom colors.
- Vexcon's breathable technology
- Cures with minimum shrinkage or loss in film thickness
- Waterproofs and protects
- Apply to fresh concrete for fast track project completion

PACKAGING

COLOR:

PART A: Color: 2.2 gal. by volume in a 5 gallon pail; by wt. 55%.

PART B: Base: 1.8 gal. by volume in a 3 gallon pail; by wt. 45%.

YIELD: 4 gallons of finished coating.

CLEAR

PART A: Clear: 1.8 gal. by volume in a 5 gallon pail; by wt. 43%.

PART B: Base: 2.2 gal. by volume in a 3 gallon pail; by wt. 57%.

4 gallons of finished coating.

When using other containers to measure smaller volumes, the above ratios must be used.

YIELD

Apply StarSeal EF Epoxy at 150-250 sq.ft./gal (3.8-6.3 m²/L) depending on desired film thickness and porosity of concrete. Calculated dry film thickness is based on one coat.

Surface Coverage Rate Final Film Thickness

StarSeal EF Primer Note: After application surface must have an even sheen

	First Coat	Second Coat	
Porous	200 sq.ft./gal.	300 sq.ft./gal.	120 sq.ft./gal. 3 mils (76µm) DFT

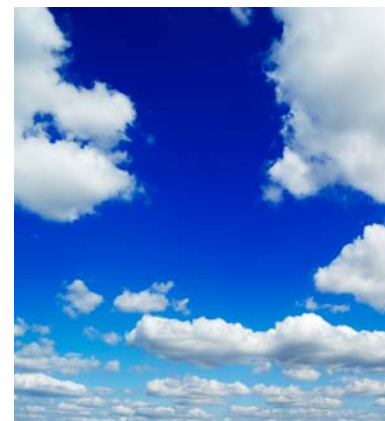
	First Coat	Second Coat	
Hard, Non-porous	300 sq.ft./gal.	400 sq.ft./gal.	170 sq.ft./gal. 2 mils (51µm) DFT

StarSeal EF Epoxy

	First Coat	Second Coat	
Porous	300 sq.ft./gal.	300 sq.ft./gal.	150 sq.ft./gal. 6.5 mils (165µm) DFT

Hard, Non-Porous	400 sq.ft./gal.	400 sq.ft./gal.	200 sq.ft./gal. 5 mils (127µm) DFT
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Hard, Non-Porous	500 sq.ft./gal.	500 sq.ft./gal.	250 sq.ft./gal. 4 mils (101µm) DFT
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SHELF LIFE

If properly stored in its original sealed container, one year. Rotate stock.

ACCESSORIES

- StarSeal EF Primer
- Even Flow Applicator, 1/2 " nap mohair roller or spray unit
- Vexcon specialty cleaning and surface preparation products.
- Certi-Vex Talc Release
- Certi-Vex Equipment Cleaner
- PowerCoat Epoxy Non-slip Additive
- Certi-Vex Deco Chips

LIMITATIONS

- StarSeal EF Epoxy has splash and immersion resistance to many chemicals and can be used in areas where splashed materials will be removed in reasonable times, usually 4-24 hours. For immersion test information, see product data sheet. Do not use in constant immersion applications without consulting with Vexcon Chemicals first if chemical is not on list.
- Do not induct
- Do not apply more than one coat without proper surface preparation including surface abrasion after full cure.
- Do not use spiked shoes during application.
- A second coat can be applied after 6 hours and within 48 hours without abrading the surface.
- For use by experienced applicators.
- Store at room temperature
- Manufacturer's Qualifications: Specialize in manufacture of epoxy coatings with a minimum of 10 years successful experience.
- Installation Qualifications: Firm certified in writing by manufacturer as an approved applicator.
- Source Limitations: Materials shall be products of a single manufacturer

4. Technical Data

APPLICABLE STANDARDS

- American Society for Testing Materials– ASTM
- United State Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED)
- United States Environmental Protection Agency (EPA)

APPROVALS

- VOC – 192 grams/liter or 1.60#/gal (Clear)
- VOC – 150 grams/liter or 1.25#/gal (Color)
- Meets:
 - USEPA AIM-Industrial Maintenance Coatings
 - OTC- Industrial Maintenance Coatings
 - CARB- Industrial Maintenance Coatings
- American Society for Testing Materials– ASTM
 - ASTM E 84 Standard Test Method for surface Burning Characteristics of Building Materials.
 - ASTM D 4541 Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers.
 - ASTM D 2047 Standard Test Method for Static Coefficient of Friction of Coated Flooring Surface as Measured by the James Machine.
 - ASTM G 53 Standard Practice for Operating Light-and Water Exposure Apparatus (Fluorescent UV-Condensation Type) for Exposure of Nonmetallic Materials.
 - ASTM D 2240 Standard Test Method for Rubber Property-Durometer Hardness
 - ASTM D 3363 Standard Test Method for Film Hardness by Pencil Test
 - ASTM D 4060 Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abrader.
 - ASTM D 523 Standard Test Method for Specular Gloss
 - ASTM F 1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Sub-floor Using Anhydrous Calcium Chloride
 - ASTM D 1653 Standard Test Methods for Water Vapor Transmission of Organic Coating Films
 - ASTM C 309 Standard Specification for Membrane Forming Curing Compounds
 - ASTM C 1315 Standard Specification for Liquid Membrane Forming Compounds having Special Properties for Curing and Sealing Concrete.
 - ASTM D 2369 Standard Test Method for Volatile Content of Coatings
- United State Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED)
 - New Construction and Major Renovations v2.2.
- United States Environmental Protection Agency (EPA)
 - Method 24 – Determination of Volatile Matter Content of Surface Coatings



PHYSICAL/CHEMICAL PROPERTIES

- Dry-tack free Less than 6 hours
- Curing time - Foot traffic 24 hours
- Curing time - Vehicle traffic One week
- Solids-Color 62% by volume, 72% by weight
- Solids-Clear 67% by volume, 77% by weight

Note: Dry and curing time depend on air and surface temperature, humidity and film thickness. All calculations based upon ambient temperature 68-77 °F (20-25 °C). See Dry Time section.

ENVIRONMENTAL CONSIDERATIONS

- Follow all manufacturer's written dry time instructions.
- Do not apply epoxy coating when surface temperatures are below 60°F
- Do not apply epoxy coating when surface temperatures are above 85°F
- Do not apply epoxy coating on windy days
- Keep from freezing
- Mechanically mix well before each use
- Coating when adverse weather conditions are expected within 12 to 24 hours of application should be avoided
- Do not apply to frozen, frost or snowy surfaces



5. Installation

METHODS

EXISTING FLOORS/NEW FLOORS

- Surfaces must be primed with StarSeal EF Primer and should be allowed to dry for at least 4 hours for existing and 72 hours for new concrete prior to application of StarSeal EF Epoxy. Product use instructions for StarSeal EF Primer must be followed before use of this product.
- Large cracks, repair using Powercoat Epoxy Joint Sealant.
- The coating is supplied in two parts, A and B, which are mixed together just prior to use.
- Separately mix with a Jiffy mixer the individual contents of each until uniform in consistency. When this is done, mix part B into part A.
- The product is supplied at the proper consistency for application and dilution will reduce efficiency.
- Same lot numbers should be used throughout the project. If lot numbers differ box-mix prior to use. If two different lots are used, apply a final thin coat to the entire area.
- Apply by industrial paint sprayer, lambs wool applicator or roller. If applying by roller for best results use Vexcon's EvenFlow Applicator or ¼ nap mohair solvent roller. Use a roller pan to take off excess product. Do not dip and roll or pour and spread
- If using a roller do not overwork the material. Coat in one lapping direction only, overworked material can affect the film properties.
- The mixed material has a pot life of approximately 4 to 6 hours.
- Two coats are required, second coat can be applied after the first coat has thoroughly dried. The dry time is dependent on temperature, air flow, film thickness and concrete conditions not a specific number of hours. Do not put on a second coat if the first coat is not dry.
- To protect your Powercoat floor from ongoing construction dust, dirt and debris, use Certi-Vex Talc Release until construction is completed.
- Clean application equipment daily with Certi-Vex Equipment Cleaner, then flush with water.
- To improve non-slip profile use Certi-Vex Grip or Certi-Vex Epoxy Non-Slip Additive.
- For a unique and custom floor use Certi-Vex Deco Chips.

PRECAUTIONS

- Refer to the Material Safety Data Sheet (MSDS) before using.

BUILDING CODES

Installation must comply with the requirements of all applicable local, state and federal code jurisdictions.

6. Availability & Cost

AVAILABILITY

Vexcon products are available nationwide. Contact Vexcon Chemicals for a distributor in your area.

COST

Consult Vexcon Chemicals for detailed pricing information.

7. Warranty

Complete warranty terms and conditions are available from the manufacturer. For details, contact Vexcon Chemicals.

8. Maintenance

Maintenance – clean regularly with StarSeal EF Super Degreaser & Cleaner

9. Technical Service

Technical assistance, including more detailed product information, product literature, MSDS, test results and project lists are available. Call 1-888 VEXCON-1, or visit www.vexcon.com

10. Filing Systems

- Product data sheet, 3-part specification, MSDS, test reports and additional product information is available at www.vexcon.com or by contacting Vexcon directly.
- Product code number: EFCP110

