

Helix PolySpartic VOC

Technical Data Sheet



Helix Color Systems is a premier line of specialty decorative concrete admixtures manufactured by ChemSystems Inc. Helix Color Systems is manufactured for the discriminating installer or designer who values service and quality. Specializing in custom colors, specialty products, and superior service, Helix Color Systems offers an innovative alternative in the decorative concrete industry.

Description

Helix PolySpartic VOC is an odorless fast-curing two-part polyaspartic aliphatic polyurea sealer/finish coating for both decorative and protective applications. The material is applied in single or multiple coats by brush, roller or squeegee varying thicknesses to a variety of substrates including concrete and metal. It can be applied as a top coat employed within seamless multi-build chip/quartz seamless flooring systems. Important characteristics of Helix PolySpartic VOC are its rapid-cure capabilities, tremendous bond strength, UV resistance and excellent color/ gloss retention.

Helix PolySpartic VOC provides excellent impact, abrasion, and chemical resistance characteristics. Suitable for high traffic interior or exterior applications, the material is ideal for clear topcoat sealer applications over decorative concrete, walkways, commercial applications, industrial facilities, swimming pool decks and garage floors.

Product Benefits

- Walk-on in hours, 24-hour return to service
- No Odor, No VOCs
- Excellent abrasion, impact & wear resistance
- UV-Resistant; retains optical clarity of clear sealer/finish
- Maximum Re-coat time: 48 hours
- Low temperature cure (25°F)
- Excellent chemical & stain resistance, resistant to skydrol
- Resistant to hot-tire pickup
- Micro-Media agents can be introduced as traction additives
- Tolerant to 300°F for random, incidental heat contact
- Meets FDA/CFSAN, U.S. Food Code, physical facilities criteria as outlined in 6.100.11 Surface Characteristics USDA acceptable. Not intended for 21 CFR food contact.

Common Uses

- Multi-coat high traffic commercial and industrial solid color concrete flooring system consisting of multiple pigmented coats and clear top coat(s).
- Multi-coat residential garage floor coating consisting of multi-build simulated granite paint chip or quartz flooring systems.

- Two-coat blasted steel coating application consisting of 1 zinc-rich primer coat followed by one-coat of Helix PolySpartic VOC.
- Clear sealer or finish coating over decorative concrete surfaces. Includes acid stained and semi polished concrete, polymer modified overlays and stamped concrete.
- UV-resistant sealer for exterior applications

Pre-Application

1. Helix PolySpartic VOC is not intended for direct to concrete applications, but rather as an intermediate or top coating in conjunction with other CSI products.
2. Surfaces to be coated must be free of grease and any other contaminants that may impede adhesion. Always check the surface for any bond inhibitors prior to application. Any repairs must be addressed prior to application and should be repaired in accordance with ICRI standards.

Application

1. A moisture emission measurement system is necessary to assess the moisture drive of a concrete slab prior to installation of any toppings or coatings. The transmission rate must not exceed three pounds per 1,000 square feet per 24 hours. The relative humidity of the slab must not exceed 80%. If there is a moisture emission situation in excess of the above rate, consult ChemSystems, Inc. for vapor control flooring application systems. The application process will depend on the system being installed, reference appropriate specification for details.
2. Helix PolySpartic VOC must be stored a room temp and applied at room temp. If the material is too warm, pot-life will be shortened. If the material is too cold, viscosity will increase and make the material difficult to work with. Mix part A and part B in equal parts (1:1) using a clean, dry working vessel. Stir gently, avoid over-mixing or creating a vortex that would introduce moisture. Do not mix below the dew point, which will shorten the pot life. No induction time is required prior to use. If micro-media agents are to be incorporated, they are to be added after thoroughly mixing A and B.

3. Suggested application thickness is 8 mils or 200 ft per coat, per gallon. Contact ChemSystems, Inc. directly for specifics on effective application techniques. Maximum application mil thickness in a single application is 10-12 mils.

Coverage Rates and Dry Times

Coverage rates may vary depending on the texture, porosity, age and condition of the concrete, the application method, and other local conditions. Consult appropriate specification for system thickness and coating application.

Thickness	Sq. Ft per Coat/Gallon
4 Mil	401
5 Mils	321
6 Mils	267
7 Mils	229
8 Mils	200
9 Mils	178
10 Mils	160

Dry Times Material will be dry to the touch 6-8 hours after application, dependent on ambient temperature, slab temperature and humidity. Product may be re-coated within 8-12 hours following application. Light foot traffic is acceptable 12-hours following application and vehicular traffic is acceptable 24-hours after application.

Shelf Life and Storage

Helix PolySpartic VOC if sealed and unopened is under warranty for one year. Store at 40 °F to 100 °F in a covered area (out of the sun).

Colors and Package Sizes

- Helix PolySpartic VOC is available in a water-clear gloss finish as well as all standard CSI colors, including safety colors.
- Helix PolySpartic VOC is available in 2- and 5-gallon kits

Technical Data

Please refer to the corresponding MSDS for hazard-related information.

Type of Material: Polyaspartic Aliphatic Polyurea
VOC Content: 0 g / L
Recommended Dry Film Thickness: 4 to 8 mils per coat
Pot Life:* 15 to 20 minutes
Minimum Re-coat:* 4-5-Hours, minimum
Light Foot Traffic:* 4-5-Hours minimum
Maximum Re-coat:* 48 hours (contact manufacturer)
Mixing Ratio:* 1.0 part A; 1.0 part B

Tensile Strength: ASTM D 638: 4,500 to 5,000 psi
Impact Resistance: Direct/Reverse 160/160
Falling Sand Abrasion Resistance ASTM D 968:
Clear 30 liters sand/1 dry mil
Pigmented 38 liters sand/1 dry mil
Mandrel Bend, ASTM D 522:
Passes, no cracking, 1/8" mandrel bend

Product Handling

Polyaspartic aliphatic polyurea products contain chemical ingredients that are considered hazardous. Read the container label warning and Material Safety Data Sheet prior to use.

Warranty

Helix PolySpartic VOC a proprietary product, is warranted to be of uniform quality within manufacturing tolerances. Since control is not exercised over its use, no warranty, expressed or implied, is made as to the effects of such use. Seller's and manufacturer's obligation under this warranty shall be limited to refunding the purchase price of that portion of the material proven to be defective. The user assumes all other risks and liabilities resulting from use of this product. If you have any questions, please contact ChemSystems, Inc.



*For complete information on all CSI products—including product information catalogs, product brochures, color charts, technical specifications, sales aids and more—contact ChemSystems, Inc.

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