

# Helix Epoxy Primer

## Technical Data Sheet



*Helix Color Systems are 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 Epoxy Primer is a two component, water-based epoxy primer designed as an adhesion promoter between clear Helix polymer coatings and sealers, and hard surface substrates. Helix Epoxy Primer acts as a thin build primer, at the same time penetrating the surface of the substrate to promote strong adhesion.

### Product Benefits

- Helix Epoxy Primer is an excellent adhesion promoter for all interior overlay and opaque coating applications.
- Reduces the effects of moisture vapor transmission (MVT).
- Helix Epoxy Primer has excellent adhesion and flexibility.
- Helix Epoxy Primer has a long pot life (minimum 2 hours) with short open time for fast application of sealers and coatings.
- Helix Epoxy Primer is a water based formulation, with low odor, water cleanup, and is VOC compliant in all 50 states.
- Helix Epoxy Primer has a mix ratio of 1:1, and can be diluted with water to reduce solids.

### Pre-Application

- 1. Surface preparation:** When using Helix Epoxy Primer, the surface must be structurally sound and clean—free of dirt, grime and other foreign substances like oils, silicones, all other waterproofing materials, form release agents, curing and parting compounds, and any sign of efflorescence. Helix Epoxy Primer will tolerate a moist substrate.
- 2.** Mixing ratios, surface moisture, application method, and temperature at time of application play a large role in the integrity and long-term durability of this primer. We strongly recommend sampling and testing this material prior to large-scale application.
- 3.** If aggressive moisture movement on interior concrete is suspected, exact moisture movement levels can be measured using a moisture test kit in accordance with ASTM D4263 standards, following the manufacturer's instructions. Moisture measurements of six to eight pounds and below are acceptable. If measurements fall outside of this range, Helix Epoxy Primer should not be applied.
- 4.** Hard troweled burnished concrete must be chemically or mechanically prepared to promote proper adhesion. Extremely dense or burnished surfaces should be slightly abraded to better accept Helix Epoxy Primer.
- 5.** ChemSystems, Inc. utilizes the International Concrete Repair Institute (ICRI) Concrete Surface Profile (CSP) standards for specifying finished surface roughness prior to applying Helix Epoxy Primer. For proper adhesion, the concrete must be a minimum #1 according to the ICRI CSP chart. Contact the ICRI at [www.ICRI.org](http://www.ICRI.org) or ChemSystems, Inc. for more information on these surface profiles.
- 6.** Helix Epoxy Primer should only be applied to substrates above 50 °F and below 90 °F.

### Application

Helix Epoxy Primer should be applied only after concrete has fully cured, approximately 28 days.

**Warning!** Do not apply Helix Epoxy Primer to fresh concrete.

- 1.** Helix Epoxy Primer is not recommended for application over surfaces previously painted or sealed with other sealers.

- 2.** Before applying product, test Helix Epoxy Primer in an inconspicuous area for desired results. For application questions, contact ChemSystems, Inc.
- 3.** The following mixing instructions for Helix Epoxy Primer must be strictly adhered to. Helix Epoxy Primer has a mix ratio of 1 part A to 1 part B. Add one Part of B (cure) to one Part of A (resin) in an open container. Mix well. Helix Epoxy Primer will initially turn white when mixed, but will dry clear after 4-8 hours, depending on application thickness, temperature and humidity. Before Helix Epoxy Primer dries, clean equipment with water.
- 4.** Helix Epoxy Primer is best applied with a high-quality, 1/4-inch short nap roller.
- 5.** Roll out the primer so it soaks into the surface without puddles.
- 6.** If applying to extremely porous surface (like bead-blasted concrete), test a small amount of the primer in an inconspicuous area to determine number of coats required for adequate coverage. Porous surfaces may require two coats.
- 7.** Apply clear top coatings once Helix Epoxy Primer dries clear and dry to the touch. If dry time exceeds 24 hours, re apply another coat of Helix Epoxy Primer before applying topcoat.

### Limitations and Precautions

- Do not apply Helix Epoxy Primer if the surface or ambient temperature is below 45 °F, above 95 °F, or if the temperature is expected to fall below freezing (32 °F) within the 24-hour curing cycle.
- Failure to remove dirt and debris from the surface or failure to properly clean the surface before application will result in poor adhesion.
- DO NOT mix more sealer than can be used in a 4-hour period.
- Do not over apply Helix Epoxy Primer.
- **CAUTION:** Do not seal container after mixing parts A & B.

### Shelf Life and Storage

Helix Epoxy Primer has a shelf life of one year. Store product indoors, away from heat or direct sunlight. Do not allow product to freeze.

### Coverage Rate and Drying Times

**Coverage rates** may vary depending on the texture, porosity and condition of the concrete, application method, and other local conditions.

- *Smooth Finish:* Material usage is 350-400 square feet per gallon/coat.
- *Rough or Broom Finish:* Material usage is 250-300 square feet per gallon/coat.

**Drying times** below will vary depending on surface porosity, temperature, humidity and local conditions.

- *Recoat:* Surface can be recoated within 24 hours of first coat.

### Package Sizes

Helix Epoxy Primer is available in quart, 1 gallon, 5 gallon and 55 gallon containers.

### Applicable Standards

Helix Epoxy Primer complies with the following regulations and requirements:

- ASTM D523 for gloss = 9
- Helix Epoxy Primer conforms to all California air quality requirements

## Technical Data

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

Color..... Liquid, clear  
Odor..... Mild  
Solids Content (by wt.)..... 33%.  
Density ..... approx. 8.5 pounds per gallon when mixed  
Flash Point.....200 °F (93.3 °C)  
Water Resistance..... Excellent  
Chemical Resistance..... Excellent

## Property Comparison

Pendulum Hardness Development @23 °C/50% RH

1 Day .....37.3 Seconds

5 Day .....173.1 Seconds

7 Day .....183.9 Seconds

Approx. Pot life at 23 °C.... 2 hrs.

Approx. Dry Time.....12 hrs @23 °C/50% RH

Chemical Resistance.... ..Excellent

VOC, g/L.....<10

## Product Handling

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For complete instructions on handling and use, consult the corresponding Material Safety Data Sheet before using product.

## Warranty

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Helix Epoxy Primer 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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