

Helix PolySeal WB (Gloss or Matte)



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 PolySeal WB is a two-part, water-based polyurethane that forms a high-solids coating. Helix PolySeal WB is UV stable, non yellowing and forms a high build film that preserves and protects any interior or exterior concrete, masonry or stone surface. Helix PolySeal WB is an extremely durable, chemical-resistant barrier coating, without the odor typically found in solvent-borne sealers. Formulated to seal and protect concrete and masonry that is subject to heaviest use conditions, Helix PolySeal WB is chemically resistant and highly durable.

Product Benefits

- Helix PolySeal WB is an excellent coating for all interior or exterior architectural concrete surfaces.
- This product is ideal for high-traffic areas like interior lobbies, food service areas and porte cochères. Helix PolySeal WB is well-suited for concrete countertops. The product is compatible with all stone and masonry surfaces.
- Helix PolySeal WB will inhibit the passage of water or any other liquid, retard efflorescence, and will resist peeling, flaking, blistering of properly prepared substrates.
- Helix PolySeal WB will enhance the color of the substrate giving a “wet look) but will not discolor with age. Helix PolySeal WB inhibits the growth of mold and mildew.
- Helix PolySeal WB has excellent UV resistance and exterior durability.
- Helix PolySeal WB has excellent resistance to many common chemicals, stains and black tire marking.

Pre-Application

- 1. Surface preparation:** When using this sealer, 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. Surface also must be completely dry before application. If your surface is not clean or completely dry, the sealer may turn white or hazy, or the sealer may fail to form a proper film
- 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 sealer. 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 four pounds and below are acceptable. If measurements fall outside of this range, Helix PolySeal WB 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 PolySeal WB. Abrade with CSI Stain Pretreatment and

Concrete Cleaner*, Muratic acid or with 100 grit to 120 grit sanding screen to achieve this level of surface profile.

5. ChemSystems, Inc. utilizes the International Concrete Repair Institute (ICRI) Concrete Surface Profile (CSP) standards for specifying finished surface roughness prior to applying Helix PolySeal WB. For proper adhesion, the concrete must be a minimum #2 according to the ICRI CSP chart. Contact the ICRI at www.ICRI.org or ChemSystems, Inc. for more information on these surface profiles.

6. Helix PolySeal WB should only be applied to substrates above 50 °F and below 90 °F.

Application

Helix PolySeal WB should be applied only after concrete has fully cured, approximately 28 days.

Warning! Do not apply Helix PolySeal WB to fresh concrete.

- 1.** Helix PolySeal WB is not recommended for application over surfaces previously painted or sealed with other sealers.
- 2.** Before applying product, test Helix PolySeal WB in an inconspicuous area for desired results. For application questions, contact ChemSystems, Inc.
- 3.** The following mixing instructions for Helix PolySeal WB must be strictly adhered to. Helix PolySeal WB is packaged in pre-weighed ratios for easy mixing. Add the entire contents of Part B (cure) to the entire contents of Part A (resin) in an open container. Mix well. Helix PolySeal WB will initially turn white when mixed, but will dry clear after 4-8 hours, depending on application thickness, temperature and humidity. DO NOT mix more sealer than can be used in a 45-minute period. Before Helix PolySeal WB dries, clean equipment with water or solvent.
- 4.** Helix PolySeal WB is best applied with a high-quality, 1/4-inch short nap roller. Micro fiber applicator pad, or T bar applicator, followed by a spiked roller
- 5.** Helix PolySeal WB, should not be applied at film thicknesses greater than 5 mils wet (3 mils dry) per coat.
- 6.** If applying to extremely porous surface (like bead-blasted concrete), test a small amount of the sealer in an inconspicuous area to determine number of coats required for adequate coverage.
- 7.** For interior applications, final dry film thickness should not exceed 20 mils in thickness. For exterior applications, final dry film thickness should not exceed 6 mils in thickness.

Limitations and Precautions

- Do not apply Helix PolySeal WB 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 45-minute period. Pot life is 1 hour.
- Do not over apply Helix PolySeal WB (wet film thicknesses in excess of 6 mils). This may cause bubbling or foaming in the finish coat, creating a white, hazy appearance.
- For best results on porous surfaces, at least two coats of Helix PolySeal WB is recommended. The first coat should be a thin coat of Helix PolySeal WB cut 1:1 with water. Subsequent applications must be applied within four to eight hours of the previous coat to insure proper adhesion. If a primer is desired, water based epoxy primers can be used.
- **CAUTION:** Do not seal container after mixing parts A & B.

Shelf Life and Storage

Helix PolySeal WB 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, age and condition of the concrete, the application method, and other local conditions. We recommend applying two coats of Helix PolySeal WB

- *Smooth Finish* – Material usage is 600-800 square feet per gallon/coat.
- *Rough or Broom Finish* – Material usage is 400-600 square feet per gallon/coat

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

- *Recoat* – Surface can be recoated four to eight hours after each application, but less than 24 hours.
- *Light traffic* – light traffic can be allowed 24 hours after final coat.
- *Vehicle traffic* – Vehicle traffic can be allowed one to two days after final coat, depending on temperature.

Package Sizes

Helix PolySeal WB is available in pre-weighed quart, gallon and five gallon (actually 4.8) kits .

Applicable Standards

Helix PolySeal WB complies with the following regulations and requirements:

- ASTM D2047 – exceeds slip-resistance requirements
- ASTM D523 for gloss Gloss = 90, satin = < 10
- Helix PolySeal WB conforms to all California air quality requirements

Technical Data

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

Color.....	Liquid, clear
Odor.....	Mild
Solids Content (by wt.).....	High gloss = 60%. Satin =55%
Density	approx. 9 pounds per gallon when mixed
Flash Point.....	200 °F (93.3 °C)
Viscosity	50-100 cps.
Exterior Durability.....	Excellent
Water Resistance.....	Excellent
Chemical Resistance.....	Excellent

Property Comparison

	<u>Gloss Coating</u>	<u>Matte Coating</u>
Pendulum Hardness Development @23 °C/50% RH		
1 Day.....	37.3 Seconds.....	37.8 Seconds
5 Day.....	173.1 Seconds.....	154 Seconds
7 Day.....	183.9 Seconds.....	162 Seconds
Approx. Pot life at 23 °C...2 hrs. 30 mins.....45 mins.		
Approx. Dry Time.....7.5 hrs @23 °C/50% RH.....1 hr. 30 mins. @23 °C/50% RH		
Chemical Resistance.....Equal to solvent-borne.....Equal to solvent-borne		
VOC, g/L.....<10.....<10		
Approx. 60° Gloss.....90.....<10		

Product Handling

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

Warranty

Helix PolySeal WB, 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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