

# CrownPrime™ WB Low Viscosity Epoxy Primer & Coating

## TECHNICAL DATA SHEET Product Number: 8201

Waterborne, Low Viscosity, High Performance Epoxy Primer and Coating

### DESCRIPTION

**CrownPrime No. 8201** is a high performance 2-component waterborne epoxy primer and coating. It is designed to bond to properly prepared concrete substrates that may have been contaminated by sodium silicate, potassium silicate or lithium silicate surface hardeners or curing agents. It contains no migratory plasticizers, phenols or unreacted amines that migrate out of competitors primers, leading to adhesion problems, especially when concrete moisture problems exist.

- It can be used as cure and seal over fresh concrete meeting ASTM C309, ASTM C1315 and ASSHTO M148.
- It is the only primer formulated for use under CrownShield MVB No. 8303 Moisture Vapor Barrier Epoxy.
- In addition, it can be used under all other Crown Polymers epoxy and polyurethane products and systems.

### TYPICAL USES

- General purpose primer with excellent wetting capabilities
- Can be used over properly prepared concrete that has been contaminated with sodium silicate, potassium silicate and lithium silicate surface hardener and curing agents
- Can be used as a pre-primer prior to placing CrownShield MVB No. 8303 Moisture Vapor Barrier Epoxy
- Can be used as an economical “light duty” thin mil coating system

### BENEFITS

- Complies with USDA, FDA, Food Safety Modernization Act. **See Crown Polymers Technical Bulletin: No. 3 Food and Beverage Compliance.**
- LEED<sup>®</sup> and Green Seal<sup>®</sup> requirements. **See Crown Polymers Technical Bulletin: No. 5 LEED and Green Seal Information.**
- VOC and EPA Compliant in all states and provinces in North America. Cures to an inert finish. **See Crown Polymers Technical Bulletin: No. 2 VOC Compliance.**
- Strong Adhesion
- Excellent Chemical Resistance
- Designed for new floors and for resurfacing old floors

### LIMITATIONS

- This product is best suited for applications in temperatures between 60°F to 90°F (16°C to 32°C). Do not apply when Relative Humidity exceeds 85%. **See Crown Polymers Technical Bulletin: No. 7 Temperature and Relative Humidity Limits**
- Higher temperatures will result in shortened working time and faster drying time.

### COLORS

- When used as a Primer “Clear Only”, do not pigment.
- When used as a Coating, the second coat can be pigmented with CrownPigment™ Epoxy No. 6300 Pigment-Pack™ \*See **Crown Polymers Standard Color Guide Acrylics, Epoxies, Polyaspartics, Polyurethanes (PigmentPack).**

### COVERAGE RATE PER GALLON

- Primer: 160 to 200 sq. ft. (14.9 to 18.9 sq. m.) 8 to 10 mils (WFT)
- Pigmented Coating over Clear Primer: 160 sq. ft. (14.9 sq. m.) 10 mils (WFT)
- Cure and Seal: Clear Primer for Curing Product and Clear or Pigmented second coat as Sealer at 200 sq. ft. (18.8 sq. m.) 8 mils (WFT)

### CONCRETE

Concrete must be structurally sound and free of curing agents, coatings, sealers, densifiers and other bond breakers.

#### New Concrete:

- Place concrete per ACI 302.2R Guide for Concrete Slabs that Receive Moisture-Sensitive Floor Materials.
- Water Cement Ratio 0.4 to 0.5, and an approximate 4,000 psi (28 MPa) strength level.
- Requiring a positive side moisture barrier in direct contact with the concrete meeting ASTM E1745 Standard Specification for Plastic Water Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs.

The moisture barrier needs to be placed per ASTM E1643 Standard Practice for Selection, Design, Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs, Class A 15 mils (0.38mm)

#### **Existing Concrete:**

If field tests or laboratory analysis reveals interior concrete flooring slabs containing contaminants from previously applied unreacted silicate materials that will interfere with the bond, use CrownPrime WBC No. 8201. See **Crown Polymers Technical Bulletin: No. 20 Selecting a Primer.**

- Contaminants include, but are not limited to organic hydrocarbon materials, calcium chlorides and aluminum stearates.
- Concrete flooring slabs can lose their structural strength over time, caused by conditions beyond the control of the flooring manufacturer or the installation contractor.
- If the concrete substrate deteriorates sufficiently, it will no longer support the bond of the remediation floor system.

Such conditions are detailed in ACI 201.2R “Guide to Durable Concrete” published by the American Concrete Institute. See **Crown Polymers Technical Bulletin: No. 1 Concrete Surface Preparation.**

#### **CHEMICAL RESISTANCE DATA**

See **Crown Polymers Technical Bulletin: No. 9 Chemical Resistance Guidelines and Chart.**

#### **CHECK CONCRETE MOISTURE**

Refer to appropriate Technical Data Sheet limits and **Crown Polymers Technical Bulletin: No. 6 Moisture Mitigation Negative Side Moisture Barrier.**

#### **CHECK TEMPERATURE AND HUMIDITY**

Floor and material temperature must be at or above the published Technical Data Sheet requirements. Dew point must be 5°F (3°C) or more below the surface temperature. Do not apply if humidity is at or above 85%. See **Crown Polymers Technical Bulletin: No. 7 Temperature and Relative Humidity Limits.**

#### **SURFACE PREPARATION**

Surface preparation in accordance with: ICRI Guideline No. 310.2R Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair. The pH of the concrete substrate should be at 9 or above. All bond-breaking material must be removed. See **Crown Polymers Technical Bulletin: No. 1 Concrete Surface Preparation.**

#### **APPLICATION EQUIPMENT**

Depending on system applied: Disposable 3” brush for cutting in, variable low speed drill (450 rpm) with Jiffy® type impeller mixing paddle, 3/8 inch nap non-shedding phenolic core roller, roller frame and V-notched rubber squeegee.

#### **OPTIONAL ANTIMICROBIAL**

The antimicrobial additive Silver® (sodium hydrogen zirconium phosphate) is a non-heavy metal biocide that can be added during the manufacturing process. (EPA Regulation Number 11631.2. and US Patent Number US 9,247,736 B2). The antimicrobial agent can be added to the top coat only for an economical application or it can be added to each step of the application, primer, body coat and top coat, which is recommended for abusive environments. See **Crown Polymers Technical Bulletin: No. 11 Understanding Silver® the Optional Antimicrobial Additive.**

#### **MIXING**

For ease of mixing and placement, the temperature of the “A” and “B” components should be between 70°F to 80°F (21°C to 27°C). Pre-mix the “A” and “B” component to ensure all raw material and pigments are dispersed uniformly. Box pigmented products if using different batch numbers for uniformity of color. See **Crown Polymers Technical Bulletin: No. 10 Mixing Guidelines.**

#### **APPLICATION**

After mixing all contents as instructed, immediately pour all liquid material on to the properly prepared concrete substrate or next epoxy lift in ribbons and squeegee the material out evenly Back-roll and cross rolling of material is critical. Check for desired wet film thickness with a WFT Gauge. Place all steps per **Crown Polymer Installation Instruction.**

### Physical Properties at 77°F (25°C)

<b>VOC (Volatile Organic Compounds)</b> , (VOC Calculated Per ASTM D3960)	0 gr./lt.
<b>Standard Viscosity Clear</b> , Mixed Epoxy and Hardener	200 - 250 cps
<b>Standard Viscosity Clear</b> , Mixed Epoxy and Hardener, at 50°F (10°C)	650 cps
<b>Percent Solids Clear by Volume</b> , (Pigmented Slightly Higher)	38% to 42%
<b>Mix Density Clear</b> , Mixed Epoxy and Hardener	9.23 lbs./gal
<b>Pot Life</b> , 1 gallon (3.79 liters) Mass, Pot Life is Reduced by Increases in Mass and Temperature	3 – 4 Hours
<b>Mix Ratio, by Volume</b>	2:1
<b>Dry to Touch</b> 40°F to 90°F (4°C to 32°C)	4 to 6 Hours
<b>Recoat Time</b> 40°F to 90°F (4°C to 32°C)	12 to 72 Hours
<b>Light Traffic</b> 40°F to 90°F (4°C to 32°C)	24 Hour Minimum
<b>Full Cure</b> 40°F to 90°F (4°C to 32°C)	5 to 10 Days
<ul style="list-style-type: none"> <li>Relative humidity in excess of 70% will retard cure times. Enhanced air movement will help flash off the moisture in the product.</li> <li>The higher the temperature and the lower the humidity the shorter the cure time.</li> <li>The lower the temperature and the higher the humidity the longer the cure time.</li> </ul>	
<b>Shelf Life</b> (shipped and stored) at 40°F to 100°F (4.4°C to 38°C)	1.5 Years
<b>Packaging</b> 3 gal, 15 gal (11.4 lt., 56.8 lt.)	

### Mechanical Properties at 77°F (25°C) 7 Day Cure

#### Surface Preparation ICRI Guideline No. 310.2R

Concrete Surface Profile (CSP 2 and above) Depending on System to be Installed and Condition of Concrete.

Resin and Hardener	Standard
<b>Adhesion ASTM D7234, Concrete Failure</b>	>400 psi
<b>Hardness (Shore D) ASTM D2240</b>	70 - 80
<b>Water Absorption, ASTM D570</b>	<0.1%
<b>Flame Test, ASTM E648</b>	Class 1
<b>Microbial (fungi) Resistance, ASTM G21</b> (Without the Anti-Microbial Agent)	Pass #1
<b>Liquid Membrane Forming Cure and Seal ASTM C309, Type I, Class A &amp; B3</b>	Passes
<b>Liquid Membrane Forming Cure and Seal ASTM C1315, Type I, Class A</b>	Passes
<b>Liquid Membrane Forming Cure and Seal ASSHTO M148, Type I, Class A &amp; B</b>	Passes
<b>Moisture Vapor Emission Rate, ASTM F1869*</b>	25 lbs.
<b>Moisture Relative Humidity, ASTM F2170*</b>	100% RH

Although testing is critical, it is not a guarantee against future problems. This is especially true if there is no vapor barrier or it is not functioning properly and/or concrete is contamination from oils, chemical spills, densifiers, excessive salts or other bond breakers.

## CLEAN-UP

Clean-up mixing station, tools and equipment as required. Use acetone, a VOC exempt solvent, for cleaning up. Observe all legal, and health and safety precautions when handling or storing solvents and materials, particularly in confined spaces. Make sure the working areas are well ventilated at all times during placement and curing time.

## DISPOSAL

Dispose of empty packaging and other waste in accordance with federal, state, provinces and local regulations.

## MAINTENANCE

Inspect the installed floor by spot cleaning and spot repairing the damaged or cracked areas. To prolong life of the flooring system, a daily maintenance program is highly recommended to ensure the floor is safe for its intended purposes. See **Crown Polymers Technical Bulletin: No. 8 Care and Maintenance.**

## TECHNICAL SUPPORT

For questions, contact a Crown Polymers Representative.

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## DISCLAIMER

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## LIMITED WARRANTY

Crown Polymers warrants its products to be free of manufacturing defects and meets all Crown Polymers current published physical properties. Crown Polymers' sole responsibility shall be to replace the portion of any product proved to be defective. There are no other warranties by Crown Polymers of any nature whatsoever expressed or implied, including any warranty of merchantability or fitness for a particular purpose in connection with this product. Crown Polymers shall not be liable for damages of any sort, including remote or consequential damages resulting from any claimed breach of any warranty whether expressed or implied. Crown Polymers shall not be responsible for the use of this product in a manner to infringe on any patent held by others. In addition, no warranty or guarantee pertaining to appearance, color, fading, chalking, staining, shrinkage, peeling, normal wear and tear or improper application by the applicator will be issued. Damage caused by abuse, neglect and lack of proper maintenance, acts of nature and/or physical movement of the substrate or structural defects are also excluded from the limited warranty. Crown Polymers reserves the right to conduct performance tests on any material claimed to be defective prior to any repairs by owner, general contractor, or applicator.

