

## 8328 CrownShield<sup>®</sup> Metallic Decorative LV Epoxy Binder

### TECHNICAL DATA SHEET    Product Number: 8328

Self-Priming, Low Viscosity Epoxy Binder Designed for Use with CrownMetallic Pigments

#### DESCRIPTION

**8328 CrownShield Metallic LV Epoxy Binder** is a two-component, low viscosity, 100% solids, self-priming epoxy binder designed to be used with CrownMetallic Pigments SP710 and finish coated with 8110 CrownSeal CRU or 8175 CrownPro Polyaspartic. CrownMetallic employs a decorative mineral mica (igneous, metamorphic, and sedimentary) ranging in a wide variety of naturally occurring colored crystals that are mechanically cleaved into extremely thin elastic platelets. It is ideal for use in automotive showrooms, garages, foyers, laboratories, museums, restaurants, retail outlets, schools, universities, wine, and spirit processing facilities. It can be applied directly over Crown Polymers 8303 CrownShield MVB (moisture mitigation primer). It is VOC Compliant in all states and provinces in North America.

#### TYPICAL USES

- Automotive Show Room and Repair Floors
- Hospital and Health Care Facility Floors
- Laboratory and Research Floors
- Museums
- Pharmaceutical Floors
- Restaurants
- Retail Outlets
- Schools and Universities
- Wine and Spirits
- \*Note: Use appropriate Top Coat and Finish Coat

#### BENEFITS

- Complies with USDA, FDA, Food Safety Modernization Act. **See Crown Polymers Technical Bulletin: 3 Food and Beverage Compliance.**
- Slip Resistance (ADA) **See Crown Polymers Technical Bulletin: 4 Coefficient of Friction.**
- LEED<sup>®</sup> and Green Seal<sup>®</sup> requirements. **See Crown Polymers Technical Bulletin: 5 LEED and Green Seal Information.**
- 100% Solids, Zero VOC and EPA Compliant, and low odor during installation. Cures to an inert finish. **See Crown Polymers Technical Bulletin: 2 VOC Compliance.**
- Strong and Tough Floor.
- 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).
- Scratches in certain colors may appear white, such as blue pigmented products.
- Higher temperatures will result in shortened working times and faster drying time.
- Color may vary due to batch-to-batch variation, always “box” different batches to avoid it.

- Do not use as a primer when concrete slab exceeds 3 lbs. or 80% RH.

#### COLORS

- Clear Resin and Hardener
- Standard Metallic Colors: Black Cherry, Blush, Chestnut, Chocolate, Cinder, Deep Sea, Dark Steel, Fawn, Midnight, Ocean, Opal, Red Wood, Rust, Silver, Sunset, Suntan
- Special Order Metallic Colors: Caramel, Winter Sky, Magenta, Canary, Yellow /gold, Jade, Moss Green, Olive Green, Tangerine, Brass, Sky Blue, Blue Slate, Champagne, Pewter, Blonde, Violet

**\*See Crown Metallic Color**

#### COVERAGE RATE PER GALLON

- Metallic Binder: 50 to 100 sq. ft. (4.6 to 9.3 sq. m) WFT  
32 to 16 mils (0.81 to 0.41 mm)

#### 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,

Physical Properties at 77°F (25°C)	
VOC (Volatile Organic Compounds), (VOC Calculated Per ASTM D3960)	<5 gr./lt.
Viscosity, Mixed Epoxy, and Hardener	200 to 300 cps
Solids Content, by Weight	100%
Solids Content, by Volume	100%
Mix Density, Mixed Epoxy, and Hardener	9.2 lb./gal
Pot Life, 16 oz. (0.47 liters) Mass, Pot Life is Reduced by Increases in Mass & Temperature	20 Minutes
Mix Ratio, by Volume	2:1
Minimum Application Surface Temperature	50°F
Dry to Touch 50°F to 90°F (10°C to 32°F)	5 to 12 Hours
Recoat Time 50°F to 90°F (10°C to 32°F)	12 to 24 Hours
Light Traffic 50°F to 90°F (10°C to 32°F)	44 Hour Minimum
Full Cure 50°F to 90°F (10°C to 32°F)	7 to 14 Days
Shelf Life (shipped and stored) at 40°F to 100°F (4.4°C to 38°C)	1.0 Year
Packaging 3 and 15 gals (11.4 and 56.8 liters)	

Mechanical Properties at 77°F (25°C)	
Surface Preparation ICRI Guideline No. 310.2R Concrete Surface Profile (CSP 2 and above) Depending on System to be Installed and Condition of Concrete.	
Compressive Strength, ASTM D695	14,000 psi
Tensile Strength, ASTM D638	6,500 psi
Tensile Elongation, ASTM D638	6.7%
Adhesion, ASTM D7234, Concrete Failure	>400 psi
Hardness (Shore D) ASTM D2240	65 – 75
Water Absorption, ASTM D570 Resin & Hardener	0.15%
Moisture Vapor Emission Rate, ASTM F1869*	3 lbs.
Moisture Relative Humidity, ASTM F2170*	80% RH
*If moisture or relative humidity exceeds the limits consult the Crown Polymers representative and refer to <b>Crown Polymers Technical Bulletin: 6 Moisture Mitigation Negative Side Moisture Barrier.</b>	

**Note:** though testing is critical, it is not a guarantee against future problems. This is especially true if there is not a positive side vapor barrier or it is not functioning properly and/or concrete has contamination from oils, chemical spills, densifiers, excessive salts or other bond breakers.

Class A 15 mils (0.38mm)

### Existing Concrete:

If field tests or laboratory analysis reveals inferior concrete flooring slabs containing contaminants from previously applied unreacted silicate materials that will interfere with the bond, use 8201 CrownPrime WBC Primer. **See Crown Polymers Technical Bulletin: 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: 1 Concrete Surface Preparation.**

### CHEMICAL RESISTANCE DATA

**See Crown Polymers Technical Bulletin: 9 Chemical Resistance Guidelines and Chart.**

### CHECK CONCRETE MOISTURE

The concrete must be dry before application of this floor coating material. Concrete moisture tests are required, either ASTM F1869 (calcium chloride) or ASTM F2170 (in situ RH probe). **Refer to appropriate Technical Data Sheet limits and Crown Polymers Technical Bulletin: 6 Moisture Mitigation Negative Side Moisture Barrier.**

### CHECK TEMPERATURE & HUMIDITY

Floor and material temperature must be at or above the published Technical Data Sheet. Dew Point must be 5°F (3°C) or more below the surface temperature. Do not apply if humidity is at or above 95%. **See Crown Polymers Technical Bulletin: 7 Temperature and Relative Humidity Limits.**

### SURFACE PREPARATION

Surface preparation following: 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: 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, and V-notched rubber squeegee for spreading neat epoxy and gauge rake or trowels for thicker

applications.

### OPTIONAL ANTIMICROBIAL

The antimicrobial additive is a non-heavy metal biocide that can be added during the manufacturing process. The antimicrobial agent can be added to the topcoat only for an economical application or it can be added to each step of the application, primer, body coat, and topcoat, which is recommended for abusive environments. **See Crown Polymers Technical Bulletin: 11 Understanding 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 (20°C to 26°C). Pre-mix the “A” and “B” components to ensure all raw material and pigments are dispersed uniformly. **See Crown Polymers Technical Bulletin: 10 Mixing Guidelines.**

### APPLICATION

After mixing all contents as instructed, immediately pour all liquid material onto the properly prepared concrete substrate, or next epoxy lift in ribbons and squeegee the material out evenly. Back-roll and cross rolling of material are critical for receiving coat, lock coat, grout coat, top coat, and finish coat. Check for desired wet film thickness with a WFT Gauge. If broadcasting aggregate, broadcast into the wet material. Place trowel mortar mix within installation sequence. Place all steps per Crown Polymer Installation Guidelines.

### SKID-RESISTANCE

Skid-Resistance – Field (in situ) Wet Dynamic Coefficient of Friction (DCOF), ANSI A326.3. **See Crown Polymers Technical Bulletin: 4 Coefficient of Friction.**

### SHIPPING and STORAGE

Ship and store material between 40°F to 90°F (4°C to 32°C). Store in a dry environment and out of direct sunlight.

### SHELF LIFE

Shelf life is 1 year from the date of manufacturer, provided the containers are unopened.

### 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 following federal, state, province, and local regulations.

## MAINTENANCE

Inspect the installed floor by spot cleaning and spot repairing the damaged or cracked areas. To prolong the 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: 8 Care and Maintenance.**

## TECHNICAL SUPPORT

For questions, contact a Crown Polymers Representative. Additional Support Documents are available from Crown Polymers, including brochures, application guidelines, videos and more. Visit [Crownpolymers.com](http://Crownpolymers.com) or contact Crown for additional resources.

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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.



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