

## 8105 CrownSeal™ Acrylic Polyurethane Primer/Sealer

### TECHNICAL DATA SHEET Product Number: 8105

Acrylic Polyurethane Primer and Concrete and Masonry Sealer

#### DESCRIPTION

**8105 CrownSeal Acrylic Polyurethane Primer/Sealer** is a low viscosity, two-component acrylic polyurethane designed as a primer for 8110 CrownSeal CRU and as a concrete sealer. It is a film-forming sealer that leaves the surface with a wet look. It is a non-yellowing UV stable sealer that is available in clear gloss and clear satin. It cures to an inert, tough, concrete sealer. The recoat window, different than all other polyurethanes, is limitless, just make sure the surface is clean and free of contaminants. It is ideal for use as an irregular surface sealer, such as cementitious knock-downs, where an acrylic sealer is unacceptable. For added durability, place a second sealer coat. Do not apply at less than 300 sq. ft. (27.9 sq. m.). (Not intended for use as an epoxy coating or flooring overlay primer.) It is VOC Compliant in all states and provinces in North America.

#### TYPICAL USES

- Primer for polyurethanes, such as 8110 CrownSeal CRU
- Interior and exterior concrete, cementitious overlayment, and sealer
- Ideal for textured concrete, cementitious overlayments, and masonry where recoating does not require abrasive surface preparation.
- Unlimited recoat window

#### BENEFITS

- Excellent adhesion to concrete unlike other polyurethanes
- Concrete adhesion promoter/primer for polyurethanes, such as 8110 CrownSeal CRU
- Slip Resistance (ADA) See Crown Polymers Technical Bulletin: 4 Coefficient of Friction.
- LEED® and Green Seal® requirements. **See Crown Polymers Technical Bulletin: 5 LEED and Green Seal Information.**
- VOC and EPA Compliant all states and provinces in North America. Cures to an inert finish. **See Crown Polymers Technical Bulletin: 2 VOC Compliance.**
- Longer lasting gloss retention, more durable, and tougher than acrylic floor sealers
- As a sealer, it is ideal for textured concrete and cementitious overlayments, because the recoat window is limitless

#### LIMITATIONS

- Polyurethane primer only, not for other coating and flooring chemistries. For example, not for epoxy.
- 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: 7 Temperature and Relative Humidity Limits.**

- CrownSeal Acrylic Polyurethane Clear Satin finish coat must be applied over CrownSeal Acrylic Polyurethane Clear Gloss
- Higher temperatures will result in shortened working time and drying time.

#### COLORS

- Clear Gloss and Clear Satin only.

#### COVERAGE RATE PER GALLON

- Clear Gloss Finish Coat: 300 to 350 sq. ft. (27.9 to 32.5 sq. m) WFT 4.6 to 5.3 mils (0.12 to 0.13 mm)
- Clear Satin Finish Coat: 400 to 450 sq. ft. (37.2 to 41.8 sq. m) WFT 4 to 3.6 mils (0.10 to 0.9 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, 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. **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 slab 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

Physical Properties at 77°F (25°C)	
VOC (Volatile Organic Compounds), (VOC Calculated Per ASTM D3960)	<100 gr./lt.
Viscosity, Mixed	250 cps
Solids Content, by weight	38.5%
Mix Density, Mixed	9.2 lb./gal
Pot Life, 1 gallon (3.79 liters) Mass, Pot Life is Reduced by Increases in Mass & Temperature	45 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)	2 to 6 Hours
Recoat Time 50°F to 90°F (10°C to 32°F)	6 to 12 Hours
Light Traffic 50°F to 90°F (10°C to 32°F)	24 Hour Minimum
Full Cure 50°F to 90°F (10°C to 32°F)	4 to 7 Days
Shelf Life (shipped and stored) at 40°F to 100°F (4.4°C to 38°C)	1 Years
Packaging 1.5 gal, 15 gal. (5.7 lt., 56.8 lt.)	

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.	
Gloss Index, 60 Degrees Clear Gloss, ASTM D523	90 - 95
Gloss Index, 60 Degrees Clear Stain, ASTM D523	40 - 70
Adhesion, ASTM D7234, Concrete Failure	>400 psi
Tensile Strength, ASTM D882	5,000 psi
Tensile Elongation, ASTM D882	10%
Pencil Hardness, ASTM D3363	3H
abrasion Resistance, ASTM D4060 500 cycles, Wheel No. CS17, 1000 gr. Load	0.03 gr.
Flexibility, Bend Mandrel Coating Test, ASTM D522	Pass 1/8 Inch
Microbial (fungi) Resistance, ASTM G21 (Without the Anti-Microbial Agent)	Pass #1
Wet Dynamic Coefficient of Friction, ASNI 326.3 Depends on texture of system selected, ranging from smooth or aggressive. Measured with BOT 3000E equipment.	>0.45 (inclines) >0.42 (level)
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 Crown Polymers Technical Bulletin: 6 Moisture Mitigation Negative Side Moisture Barrier.	

**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.

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°F) or more below the surface temperature. Do not apply if humidity is at or above 85%. **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: Variable low-speed drill (450 rpm) with Jiffy® type impeller mixing paddle, disposable 3” brush for cutting in, 3/8 inch nap non-shedding phenolic core roller, and rubber squeegee for spreading 8105 CrownSeal CRU 8105. Pour, squeegee, and back-roll are suggested because Dip-n-Roll can be challenging for inexperienced installers resulting in unattractive lap lines.

#### 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 lift in ribbons and squeegee the material out evenly. Back-roll and cross-rolling of material. Check for desired wet film thickness with a WFT Gauge. If broadcasting aggregate, such as 60 mesh or 90 mesh, broadcast a sprinkle (not full broadcast) into the wet material. 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: 12 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, provide 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.



Crown Polymers Corp. • Tel: 847.659.0300 • Fax: 847.659.0310  
info@crownpolymers.com • www.crownpolymers.com  
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