8505 CrownFlex™ Semi-Rigid Epoxy LV

TECHNICAL DATA SHEET **Product Number: 8505**

Semi-Rigid Epoxy Low Viscosity Membrane, and Static Joint Sealant and Crack Filler

DESCRIPTION

8505 CrownFlex is a two-component, 1:1 ratio low viscosity, 100% solids, semi-rigid epoxy membrane, and joint sealant and cracks filler. It features a combination of excellent adhesion and elongation not available in general-purpose epoxy. It is formulated to provide the armoring of concrete joint edges and minimizing the deterioration of concrete joint/crack edge to impact. It is available in standard cure and fast cure. It is used for embedding detector wire loops for a traffic signal, electric gates, and robotics. It is VOC Compliant in all states and provinces in North America.

CONTROL JOINT COVERAGE RATE

Installation coverage will vary with the application method, width, and depth of control joint to be filled. There are 231 cubic inches per gallon of 8505 CrownFlex. (Theorical coverage does not address wastage.)

Approximate Yield per Gallon				Approximate Yield per Gallon		
Width Per Inch	Depth Per Inch	Linear Feet Per Gal		Width Per Inch	Depth Per Inch	Linear Feet Per Gal
1/8	1/8	1200		1/2	1/8	300
1/8	1/4	600		1/2	1/4	150
1/8	1/2	300		1/2	1/2	75
1/8	3/4	200		1/2	3/4	50
1/8	1	150		1/2	1	37
1/4	1/8	600		1	1/8	150
1/4	1/4	300		1	1/4	75
1/4	1/2	150		1	1/2	37
1/4	3/4	100		1	3/4	25
1/4	1	75		1	1	19

TYPICAL USES

- FAA P-606 Runway Sealant for Wires and Lights
- Detector Wire Loops for Traffic Signal, Electric g Gates and Robotics
- Control Joints and Crack Semi-Rigid Sealant
- Concrete and Polymer Floor Joint Edge Reinforcement

BENEFITS

- Complies with USDA, FDA, Food Safety Modernization Act. **See Crown Polymers Technical Bulletin: 3 Food and Beverage Compliance.**
- LEED® and Green Seal® requirements. **See Crown Polymers Technical Bulletin: 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: 2 VOC Compliance.**
- Chemical and Abrasion Resistance
- Designed for new and existing concrete slabs

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: 7 Temperature and Relative Humidity Limits**
- 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.

COLORS

- Clear Amber and Concrete Gray

Physical Properties at 77°F (25°C)	
VOC (Volatile Organic Compounds), (VOC Calculated Per ASTM D3960)	0 gr./lt.
Standard Viscosity Clear, Mixed Epoxy and Hardener	1250 cps
Standard Viscosity Clear, Mixed Epoxy and Hardener, at 50°F (10°C)	1900 cps
Mix Density Clear, Mixed Epoxy, and Hardener	9.23 lbs./gal
Pot Life, Standard Cure,1 gallon (3.79 liters) Mass, Pot Life is Reduced by Increases in Mass and Temperature*	30 Minutes
*Pot Life is reduced by Increases in Temperature and increased by reductions in Temperature	
Mix Ratio, by Volume	1:1
Dry to Touch 40°F to 90°F (4°C to 32°F)	4 to 6 Hours
Recoat Time 40°F to 90°F (4°C to 32°F)	12 to 72 Hours
Light Traffic 40°F to 90°F (4°C to 32°F)	12 Hour Minimum
Full Cure 40°F to 90°F (4°C to 32°F)	4 to 14 Days
Shelf Life (shipped and stored) at 40°F to 100°F (4.4°C to 38°C)	1.5 Years
Packaging 1 ½, 3, and 15 gals. (5.7, 11.4, and 56.8 liters)	

Mechanical Properties at 77°F (25°C)	
Surface Preparation ICRI 310.2R Concrete Surface Profile (CSP 2 and above) Depending on System to be Installed and Condition of Concrete.	
Compressive Strength, ASTM D695, 7 Days	2,500 psi
Tensile Strength, ASTM D638	1,000 psi
Tensile Elongation, ASTM D638	60%
Tensile Elongation, ASTM D412	140%
Adhesion, ASTM D7234, Concrete Failure	>400 psi
Hardness (Shore D) ASTM D2240	55 - 60
Water Absorption, ASTM D570 Resin & Hardener	0.1%
Abrasion Resistance, ASTM D4060 Resin & Hardener 500 cycles, Wheel No. CS17, 1000 gr. Load	0.02 gr.
Moisture Vapor Emission Rate, ASTM F1869*	3 lbs.
Moisture Relative Humidity, ASTM F2170*	80% RH

Note: Although 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.

HANDLING and SAFETY
Warning! Eye and skin irritant. May cause dermatitis and sensitization. Always read and follow the product SDS. Avoid contact with eyes, skin, and clothing. Avoid breathing vapors, mist, and spray. Use good ventilation.

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. **See Crown Polymers Technical Bulletin: 7 Temperature and Relative Humidity Limits.**

SURFACE PREPARATION
Surface preparation per: 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 frame, and V-notched rubber squeegee.

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 (21°C to 27°C). Pre-mix the “A” and “B” components to ensure all raw material and pigments are dispersed uniformly. Box pigmented products if using different numbers for uniformity of color. **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. Check for desired wet film thickness with a WFT Gauge. If broadcasting aggregate, broadcast into the wet material. Place all steps per Crown Polymer Installation Instruction.

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, 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 per 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 or contact Crown for additional resources.

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.

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