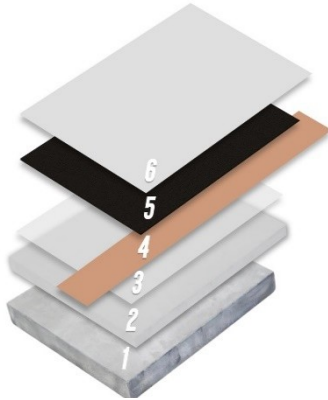


CrownCrete-U™ 814 CrownCrete-U™ Cementitious Urethane 8601 Conductive Primer, and 8602 Conductive Mortar 250 Mil (6.35 mm) System, 1/4 Inch.

DESCRIPTION

CrownCrete-U™ 814 Cementitious Urethane, 8601 Conductive Primer, and 8602 ESD Conductive Mortar 250 Mil (6.35 mm) Flooring System, 1/4 inch. It meets ANSI/ESD 2020 and ANSI/ESD STM7.1 Standards. It is electrically active within the resistance range of Static Dissipative 25 thousand to 1 million ohms (2.5E4-1E6) and per ANSI/ESD Association ANSI/ESD STM 7.1. It is also available with an optional suppression membrane. It is VOC Compliant in all states and provinces in North



- CrownCrete-U™ 814 CrownCrete-U™ Cementitious Urethane, 8601 Conductive Primer, and 8602 ESD Conductive Mortar Flooring System, 1/4 Inch.**
1. Concrete Substrate Profile – ICRI Concrete Surface Profile CSP 2 to CSP 4
 2. 814 CrownCrete-U™ Pigmented or Neutral 30 sq. ft. (2.8 sq. m.) 3/16 inch (4.8 mm) per kit (A Component 8 lbs., B Component 8 lbs., and Component 39 lbs.).
 3. Insulation Coat – 320 CrownShield® Clear placed at 160 sq. ft. (10 mils) per gallon.
 4. Conductive Copper Tape Strip
 5. Conductive Primer Black – 8601 CrownPro™ StaticShield™ placed at 160 sq. ft. (10 mils) per gallon.
 6. Static Dissipative Coat – 8602 CrownPro™ StaticShield™ placed at 100 sq. ft. per gallon.

OPTION COMPONENTS

- Moisture Mitigation Primer - 8303 CrownShield® Clear 100 sq. ft. (9.3 sq. m) 16 mils (0.41 mm)
- Waterproofing & Crack Suppression Membrane - 8502 CrownFlex™ Clear 40 sq. ft. (3.72 sq. m) 40 mils (1.0 mm)

Note: See individual Technical Data Sheets for information about each product.

TYPICAL USES

- Aero-space and Avionics Manufacturing
- Automotive Manufacturing
- Biotechnology Research and Manufacturing
- Computer Rooms
- Cosmetics Research and Manufacturing
- EV Battery Production
- Flammable Chemicals Production, Storage and Use
- High-Tech Electronics
- Hospital and Healthcare Facilities
- Lazer and Optical Systems
- Medical Equipment Manufacturing
- Munition and Fireworks Production
- Oil and Chemical Production
- Pharmaceutical Research and Manufacturing

- Powdered Foodstuffs Production
- Semi-Conductor Production

BENEFITS

- Meets ANSI/ESD 2020 and ANSI/ESD STM7.1 Standards
- 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® and Green Seal® requirements. See Crown Polymers Technical Bulletin: 5 LEED and Green Seal Information.
- VOC and EPA Compliant, and low odor during installation. Cures to an inert finish. See Crown Polymers Technical Bulletin: 2 VOC Compliance
- Excellent Chemical and Abrasion Resistance
- Designed for new floors and for resurfacing old floors

LIMITATIONS

- The system is best suited for applications in temperatures between 60°F to 90°F (16°C to 32°C).
- Higher temperatures will result in shortened working time and faster drying time.

COLORS



8602 CrownPro™ StaticShield™ Epoxy is available in Contact with Earth or Granular Fill Under Light Gray, Medium Gray, and Dark Gray Concrete Slabs, Class A 15 mils (0.38mm).

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 an approximately a 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

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 bonding.
- 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.

Mechanical Properties at 77°F (25°C) 7 Day Cure (814 CrownCrete-U™ SL) For Complete Details See 814 CrownCrete-U™ Technical Data Sheet	
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 C579	6,500 psi (60.7 MPa)
Tensile Strength, ASTM C307	1,450 psi (10 MPa)
Flexural Strength, ASTM C580	5,000 psi (34.5 MPa)
Adhesion, ASTM D7234, Concrete Failure	>400 psi (2.8 MPa)
Hardness (Shore D) ASTM D2240	80
Water Absorption, ASTM C413	0.01%
Impact Resistance, ASTM D2734	>160 in./lbs.
Abrasion Resistance, ASTM D4060	70 mg. Loss
Flame Spread/NFPA, ASTM E648	Class 1
Coefficient of Thermal Expansion (73°F to 210°F), ASTM C531	1.1 x 10⁻⁵ in./in. °F
Dynamic Coefficient of Friction, ASNI 326.3 Depends on texture of system selected, ranging from smooth to aggressive. BOT 3000E This test must be run in the field after placement of the Finish Coat by a BOT 3000E Third Party Testing Firm to Validate.	>0.45(inclines) >0.42(level)
Moisture Vapor Emission Rate, ASTM F1869*	20 lbs.
Moisture Relative Humidity, ASTM F2170*	99% 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: Although testing is critical, it is not guaranteed against future Problems. This is especially true if there is not a positive side vapor barrier installed per ACI 302.2R and ASTM F1754. Concrete must be sound and durable per ACI 201.2R and be free of bond breaking properties and/or concrete contamination from oil, chemical spills, densifiers, excessive salts and other bond breakers.	

CHEMICAL RESISTANCE DATA

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

CHECK CONCRETE MOISTURE

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 and HUMIDITY

Floor and material temperature must be at or above the published Technical Data Sheet. Relative Humidity must be 5°F (3°F) below the dew point. 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 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: 1 Concrete Surface Preparation.

MIXING CROWNCRETE-U™

Pour Part A (resin) into a 5-gallon pail. Make sure the entire content of Part A (resin) is completely drained.

- a. Add Part B (hardener) to Part A (resin).
- b. Mix Part A (resin) and Part B (hardener) together use a high speed drill (800 RPM) with a 5" Jiffler type-blade for at least 30 seconds.
- c. Gradually add Part C (aggregate) and mix continuously for at least 2 minutes until a homogeneous mix is attained. Move the blade around continuously to ensure the mixture is completely mixed and uniform.
- d. The application tool must be kept as clean as possible to avoid excessive buildup of old material. Utilize new squeegees or rakes as necessary to avoid disrupting the application work flow. Avoid dripping solvent into the material during application. Check the floor for proper thickness frequently to ensure your tools are still delivering proper coating thickness.
- e. Allow the installed coatings to fully cure. A minimum of eight (8) hours is needed for light foot traffic when applied at 75°F or above. A minimum cure time of 24 hours may be required

for temperature below 75°F. Material should not be applied at temperatures below 50°F. Additional cure time is needed for heavy traffic loads, such as for fork lifts and heavy machinery.

MIXING – ESD STATIC DISSIPATIVE MATERIAL

1. Insulative primer 320 CrownShield Clear, pot-life for one quart is 20 minutes at 77°F. See 320 CrownShield Technical Data Sheet.
 - a. Working time is shortened by higher temperatures.
 - b. The mixing ratio is 2 Parts A to 1 Part B by volume. Mix each component separately prior to proportioning each component out carefully.
 - c. Mix for 2 full minutes using a low-speed drill, scraping the bottom and sides of the mixing vessel using a Jiffy Type Impeller Mixing Paddle.
2. 8601 CrownPro StaticShield Conductive Primer pot-life is 2 to 3 hours at 77°F in a quart mass.
 - a. The pre-measured material is supplied in a 1.1 gal kit. Total is 1.35 gallons, when the addition of 1 quart of Potable Water is added for viscosity reduction.
 - b. Pre-mix both the components separately prior to combining the components in a bucket.
 - c. Combine the pre-measured A Component and B Component in a separate bucket, using a stir stick to get all the materials out of each container into the bucket.
 - d. Mix for 2 full minutes using a low-speed drill, scraping the bottom and sides of the mixing vessel using a Jiffy Type Impeller Mixing Paddle. Do not attempt to hand mix.
 - e. Add 1 quart of water to the mix and mix for 2 full minutes using a low-speed drill, scraping the bottom and sides of the mixing vessel using a Jiffy Type Impeller Mixing Paddle. Do not attempt to hand mix.
3. StaticShield Epoxy 8602 CrownPro has a pot-life of 15 minutes at 77°F in a quart mass.
 - a. The pre-measured material is supplied as a 2.7 gal kit.
 - b. Pre-mix both components separately, as settling can occur on the A Component. Use a low-speed drill with a Jiffy Type Impeller Mixing Paddle

- until all the settled filler has been fully dispersed for cleaning up. Observe all legal, and health and safety precautions when handling or storing and homogenous.
- c. Once the A Component has been fully mixed, add solvents and materials, particularly in confined spaces. Make sure the working areas are well ventilated at all times during placement and curing time.
 - d. Add the B Component to the A Component bucket, mix using low-speed drill with Jiffy Type Impeller Mixing Paddle for 2 minutes, scraping the sides and bottom of bucket. Do not attempt to hand mix.

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.

CLEAN-UP

Clean-up mixing station, tools and equipment as required. Use acetone, a VOC exempt solvent,

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.

TECHNICAL SUPPORT

For questions, contact a Crown Polymers Representative.

DISCLAIMER

All technical bulletins, installation guidelines, guidelines, recommendations, statements, specifications, and technical data contained herein are based on information and tests. The accuracy and completeness of such tests are not guaranteed and are not to be construed as a warranty, expressed or implied. It is the responsibility of the user to document information and tests to determine the intent of the product for ones' own use. The application, job conditions and user assume all risks and liability resulting from use of the product. We do not suggest or guarantee any hazards listed herein are the only ones, which may exist. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss or damage directly or indirectly resulting from use of, or inability to use the product. Recommendations or statements, whether in written or verbal, other than those contained herein shall not be binding upon the manufacturer, unless in writing and signed by a corporate officer of the manufacturer. Technical and application information is provided for the purpose of establishing a general profile of the material and proper application procedures. Test performance results were obtained in a controlled environment and Crown Polymers makes no claim that these tests or any other tests accurately represent all environments. Not responsible for any typographical errors.

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.

FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN. KEEP CONTAINERS TIGHTLY CLOSED.