



OPTIONAL COMPONENTS

- **Moisture Mitigation Primer :**
8303 CrownShield™ Clear 100 ft²/gal @ 16 mils
- **Waterproofing & Crack Suppression Membrane :**
8502 CrownFlex Clear 40 ft²/gal @ 40 mils
- **Cove Binder :**
811 CrownCrete-U Cove 35 lf/gal @ 6"

*For complete details refer to each optional components Technical Data Sheet (TDS).

MECHANICAL PROPERTIES

For complete details refer to each components Technical Data Sheet (TDS)

CHEMICAL RESISTANCE

Refer to CrownTech Chemical Resistance Guideline Technical Bulletin No. 9

SYSTEM DESCRIPTION

CrownCrete-U Urethane Cement System is a heavy-duty gloss finish flooring system with an overall nominal thickness of 250 mils (1/4"). It is designed to withstand thermal shock, impact, heavy traffic and chemical exposure. It is comprised of 814 CrownCrete-U Urethane Cement, single broadcast of natural quartz, 8320 pigmented epoxy build coat, 8340 pigmented topcoat. It is VOC Compliant in all states and provinces in North America.

TYPICAL USES

- Animal Care and Housing
- Commercial Bakeries and Kitchens
- Hospital and Health Care Facility Floors
- Manufacturing Facility Floors
- Pharmaceutical & Vivarium Floors
- Automotive Maintenance & Repair
- Food & Beverage Processing
- Laboratories and Research Floors
- School & University Floors

BENEFITS

- Complies with USDA, FDA, FSMA. See Crown Polymers Technical Bulletin: 3 Food and Beverage Compliance.
- Slip Resistance (ADA) See Crown Polymers Technical Bulletin: 4 Coefficient of Friction.
- LEED requirements. See Crown Polymers Technical Bulletin: 5 LEED information
- Cures to an inert finish. See Crown Polymers Technical Bulletin: 2 VOC Compliance

COLORS



APPLICATION EQUIPMENT

Personal Protective Equipment
Jiffy Mixing Paddle
Slow Speed Drill
18"x3/8" Nap Roller Cover
1/4" Cam Rake
1/8" Notched Squeegee
4" Chip Brush
Spike Shoes

SURFACE DIAGNOSTICS

Concrete must be structurally sound and free of all contaminants and bond breakers. Test concrete compressive strength using a Schmidt or Rebound Hammer to ensure substrate has compressive strength of 3500 psi or higher.

Perform a PH test using concrete PH test strips or meter to ensure substrate PH is between 9-12.

Perform Moisture Test using either Calcium Chloride per ASTM F1869 or In-Situ Relative Humidity Probe per ASTM F2170 to ensure substrate has Moisture Vapor Emission Rate of 3 lbs or less and Relative Humidity of 80% or less. See CrownTech Bulletin 6: Moisture Mitigation Negative Side Moisture Barrier

If Moisture Vapor Emission Rate is above 20 lbs. but below 25 lbs. and relative humidity is above 80% but below 99% then apply 8303 Moisture Barrier Primer first at 16 mils with a coverage rate of 100 Ft²/ Gal.

SURFACE PREPARATION

Use Mohs scratch test to determine concrete hardness for proper diamond bond selection.

Concrete should be mechanically profiled and prepared to produce a Concrete Surface Profile (CSP) level between #2 & #4 per ICRI Guideline no. 310.2R. See CrownTech Bulletin 1: Concrete Surface Preparation.

All perimeter areas of coating termination shall be masked for protection. Saw cut and key-in all termination points.

SURFACE REPAIR

All depressions, divots and cracks should be profiled and free of dust and contaminants. Repair surface imperfections to reduce the ability to see the defect through the coating.

Honor all dynamic (moving) joints, static joints may be filled, use dynamic joints as initiation and termination points during application process where needed.

TEMPERATURE EVALUATION

Ambient and substrate temps should be above 50°F and a minimum of 5°F above Dew Point.

Product temps should be between 70-80°F.

Relative Humidity should not exceed 80%. See CrownTech Bulletin 7: Temperature & Relative Humidity

REFER TO SAFETY DATA SHEETS (SDS) FOR SAFETY PRECAUTIONS.

SAFETY PRECAUTIONS MUST BE FOLLOWED DURING STORAGE, HANDLING AND USE.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

SHALL BE WORN AT ALL TIMES INCLUDING BUT NOT LIMITED TO LONG SLEEVE SHIRTS OR DISPOSABLE ARM SLEEVES, SAFETY GLASSES, DISPOSABLE NITRILE GLOVES, AND PROPERLY FITTED NIOSH RESPIRATORS

ALL SOURCES OF IGNITION SHOULD BE TURNED OFF AND ENVIRONMENT SHOULD HAVE PROPER AND ADEQUATE VENTILATION DURING APPLICATION AND CURING PROCESS

MIXING AREA SHOULD BE PLACED ON OR IN CLOSE PROXIMITY TO PROJECT. AREA SHOULD BE SECURELY COVERED WITH PLASTIC, CARDBOARD OR TARP. STAGE MATERIALS, TOOLS AND CLEANING SUPPLIES IN MIXING AREA PRIOR TO APPLICATION PROCESS.

Do not mix more material than can be applied in 10 minutes

814 MIXING

1 Pre-Mix B-Component in its respective container using Jiffy mixer and drill at slow speeds for 1 minute until pigment is uniform.

If using multiple batches, it is best to box all B-Components together then separate back into individual containers to ensure even pigmentation.

2 Pre-Mix A-Component in its respective container using clean Jiffy mixer and drill at slow speeds for 30 seconds or until thoroughly homogeneous.

3

Transfer A-component and B-component into a clean metal 5-gal bucket and mix for 1 minute then slowly add C-Component gradually while continuously mixing for 2-3 minutes being sure to scrape sides of the bucket with a stir stick ensuring both components are thoroughly blended

814 COVERAGE RATE

30 Ft² / Kit @ 1/4"

814 WORKING TIME

15 Minutes @ 75°F

Warmer ambient, product and surface temperatures as well as direct airflow will shorten potlife and working time.

814 APPLICATION PROCEDURE

1

Pour a band of mixed material across the surface roughly 4-6" wide. Use 1/4" cam rake to gauge material across surface.

- Maintain wet edge
- Do not allow more than 10 mins ahead of next mixed batch.
- Always pour next mixed batch onto wet edge.
- Honor all joints and use as termination points as needed

2

Back roll the surface with 18" spiked roller by walking into the wet material wearing spike shoes and roll the surface wall to wall with overlap perpendicular to your first pass to release air entrapment

✓

Broadcast natural quartz to rejection into wet coating at a rate of 0.7 Lbs/Ft²

- Quartz will sink into wet coating; check for wet/shiny areas and broadcast more quartz as needed
- Allow coating to dry 6-8 hrs @ 75°F

1

Reclaim loose quartz with a push broom and dust pan. Vacuum all residual quartz and floor thoroughly

8320 MIXING

1

Pre-Mix A-Component in its respective container using Jiffy mixer and drill at slow speeds for 1 minute until pigment is uniform.

If using multiple batches, it is best to box all A-Components together then separate back into individual containers to ensure even pigmentation.

2

Pre-Mix B-Component in its respective container using clean Jiffy mixer and drill at slow speeds for 30 seconds or until thoroughly homogeneous.

3

Transfer A-component and B-component into a clean 5-gal bucket at 2A:1B mix ratio and mix for 2-3 minutes being sure to scrape sides of the bucket with a stir stick ensuring both components are thoroughly blended

8320 COVERAGE RATE

100 Ft² / Gal

8320 WORKING TIME

15-30 Minutes @ 75°F

Warmer ambient, product and surface temperatures will shorten potlife and working time.

8320 APPLICATION STEPS

1

Pour a band of mixed material across the surface roughly 4-6" wide. Use 15-20 mil notched squeegee to gauge material across surface

2

Back roll the surface with 18" x 3/8" roller by walking into the wet material wearing spike shoes and roll the surface wall to wall with overlap perpendicular to your first pass to release air entrapment

✓

Allow coating to dry 4-6 hrs.

8340 MIXING

1

Pre-Mix A-Component in its respective container using Jiffy mixer and drill at slow speeds for 1 minute until pigment is uniform.

2

Transfer A-component and B-component into a clean 5-gal bucket at 2A:1B mix ratio and mix for 2-3 minutes being sure to scrape sides of the bucket with a stir stick ensuring both components are thoroughly blended

8340 COVERAGE RATE

160 Ft² / Gal @ 10 mils wet film

8340 WORKING TIME

30-40 Minutes @ 75°F & 50% RH

8340 APPLICATION PROCEDURE

1

Pour a band of mixed material across the surface roughly 4-6" wide. Use 8-12 mil notched squeegee to gauge material across surface

- Maintain wet edge
- Do not allow more than 10 mins ahead of next mixed batch.
- Always pour next mixed batch on wet edge

2

Back roll the surface with 18" x 3/8" nap roller by walking into the wet material wearing spike shoes and roll the surface wall to wall with overlap perpendicular to your first pass

- Do not overwork material

✓

Allow coating to dry 6-8 hrs.

Light Traffic: 24 hours

Heavy Traffic: 72 hours

Equipment Traffic: 72 Hours

SLIP RESISTANCE

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

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: 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

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