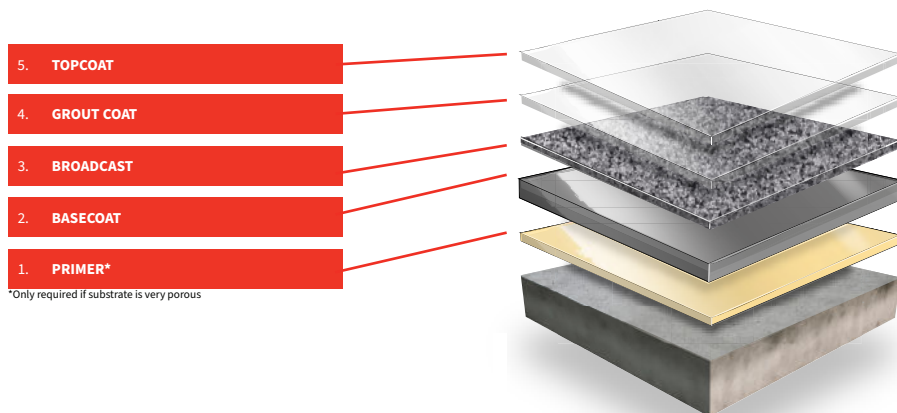


SYSTEM DESCRIPTION

CrownCrete 814 CQ is a multi-layer moisture control and decorative colored quartz floor system. The first layer creates a moisture vapor tolerant barrier between the concrete substrate and finished with Crown Polymers system that consists of a self-leveling, three component, cementitious urethane slurry, which is broadcast to rejection with Crown Polymers decorative colored quartz and sealed with a clear epoxy or UV stable topcoat. The system is customizable with an extensive blend palette. Finish options include an integral cove base and variable surface texture to produce a range of slip-resistant finish. The system is typically installed @ nominal 3/16 -1/4" (4.7 -6 mm).



SYSTEM COMPOSITION

1. 810 CrownCrete Skim Coat (if necessary)
2. 814 CrownCrete U 1/4"
3. Colored Quartz Broadcast
4. 8320 or 8318 CrownShield[®] Clear Epoxy
5. 8320 CrownShield[®] Clear Epoxy

OPTIONAL TOPCOATS:

- 8020 CrownPro Clear Polyaspartic
- 8340 CrownPro Clear High-Solids Polyaspartic
- 8100 CrownCote Clear HP Polyurethane

TYPICAL USES

- Animal Holding and Housing Floors
- Automotive Maintenance Floors
- Commercial Bakeries and Kitchens Floors
- Food and Beverage Processing Floors
- Hospital and Health Care Facility Floors
- Laboratories and Research Floors
- Light and Medium Manufacturing Floors
- Meat, Poultry and Fish Processing Floors
- Pharmaceutical and Vivarium Floors
- School and University Floors

BENEFITS

- Can be applied over 7-10 day partially cured concrete substrates
- Can be applied to concrete substrates where <99 % relative humidity is measured as per ASTM F2170
- Substrate has tensile bond strength in excess of 218 psi
- Resists a very wide range of organic and inorganic acids, alkalis, amines, salts and solvents.
- Similar coefficient of thermal expansion to concrete allowing movement with the substrate through normal thermal cycling.
- It will perform and retain its physical characteristics through a wide temperature range from -40 °F (-40 °C) up to 248 °F (120 °C).
- High abrasion qualities result from its aggregate structure.
- Minimal maintenance costs, superior life cycle cost advantage versus tile.
- Meets the requirements of USDA for use in food Plants

PHYSICAL PROPERTIES

COMPRESSIVE STRENGTH	ASTM C579	8,800 p.s.i
TENSILE STRENGTH	ASTM C307	1,450 p.s.i
FLEXURAL STRENGTH	ASTM C580	5,000 p.s.i
SHORE D HARDNESS	ASTM D2240	78-80
ABRASION RESISTANCE CS17 Wheel, 1000g Load, 1000 Cycles	ASTM D4060	0.026 gr
IMPACT RESISTANCE	ASTM D2794	>160 in./lbs
ADHESION TO CONCRETE	ASTM D7234	>400 p.s.i Concrete Failure

*The above physical properties were measured in accordance with the referenced standards. Results may vary based upon statistical variations on mixing methods, equipment, application methods, environment, actual site conditions, and curing conditions. All sample preparation and testing are conducted in a laboratory environment and actual performance on job site may vary from these values based on actual site conditions. Results marked with * are derived from 8320 CrownShield.

CONCRETE

Concrete must be structurally sound. Concrete should be properly cured and have a minimum compressive strength of 3,000 psi and a minimum surface tensile strength of 250 psi prior to coating application. Concrete substrate should have a minimum Floor Flatness Tolerance level of FF30 per ASTM E1155 unless otherwise specified. Concrete finish shall be steel troweled.

Surface shall be clean and free of all contaminants and bond breakers. 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

SUBSTRATE DIAGNOSTICS

Test concrete compressive strength using a Schmidt or Rebound Hammer to ensure substrate has compressive strength of 3,000 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. Refer to appropriate Technical Data Sheet limits and Crown Polymers Technical Bulletin: 6 Moisture Mitigation Negative Side Moisture Barrier.

SURFACE PREPARATION

Use Mohs scratch test to determine concrete hardness for proper concrete preparation method.

Concrete should be mechanically profiled and prepared to produce appropriate Concrete Surface Profile (CSP) per ICRI Guideline no. 310.2R. See CrownTech Bulletin 1: Concrete Surface Preparation and refer to individual product Technical Data Sheet (TDS) for desired CSP level.

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.

CLIMATE EVALUATION

Ambient and substrate temperatures should be above 50°F and a minimum of 5°F above Dew Point for ideal dry times. Refer to product Technical Data Sheet (TDS) for application temperature ranges.

Product temps should be between 70-80°F.

Atmospheric Relative Humidity should not exceed 80% during application. 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.

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” component to ensure all raw material and pigments are dispersed uniformly. See Crown Polymers Technical Bulletin: 10 Mixing Guidelines and refer to Individual products Technical Data Sheet (TDS) for mixing procedures.

APPLICATION

Please refer to each individual product’s Technical Data Sheet (TDS) for Application Instructions.

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.

CHEMICAL RESISTANCE

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

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.

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

DISCLAIMER

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