

CrownStone Cove

System Description Sheet No. 312

Epoxy Polymer Wall Cove System

Description

CrownStone Cove, System No. 312 is an epoxy system designed as an integral part of the flooring system. 100% solid, non shrink, 3 component polymer mortar. Formulated to be hand-trowel applied at 4" - 6" or more. CrownStone offers a decorative or industrial cove demanding a seamless floor to wall built system.

Use

- Chemical containment applications
- Pharmaceutical, food and beverage facilities
- Showers and bathrooms
- Commerical kitchen coolers and walk-in boxes
- Decorative and protective applications

Advantages

- Complies with USDA, FDA, OSHA, ADA and LEED[®] requirements
- No VOCs – 100% solids formula
- Nearly no odor during application
- Non-Shrink
- Moisture insensitive formula
- Cures down to 50°F; lower curing temperature products are available
- Fast cure available
- Crown Trowel blend aggregate for easy troweling
- Prevents moisture, bacteria and insects from penetrating into walls or floors.
- Allows for easy cleaning and disinfecting of edges

Typical Coverage

Use CrownStone Primer 310 to wet out surface, priming substrate. CS-32 kit: 32-37 linear ft. 4" x 1/8" x 1" radius and 30-35 linear ft. 6"x1/8"x1" radius.

Mix Ratio

Per single kit: Mix One 32 pound bag to 1/2 gallon of mixed resin kit
Sand Mix Ratio: 1:7 resin to CS Blend Sand
Coverage: 4x1/8x1 Radius, 32-37 Linear Feet

Typical Data for CrownStone Cove

(Mix ratio 1:7 Prod. No. 311 to aggregate)

Compressive Strengths

ASTM C579, 7 day full cure, 11,500 psi

Hardness

ASTM D2240, Neat Epoxy, 7 day full cure, Shore D 80

Indentation (Load)

MIL-D-3134, Para. 4.7.4.2.1, 7 day cure

Method: 1 in. diameter steel ram steadily applies a load of 2,000 lbs. for 30 min. on the test specimen that is placed on concrete.

Value 0.004 in. indentation

Indentation (Impact)

MIL-D-3134, Para. 4.7.3, 7 day cure,

Method: 2 lb. steel ball is dropped twice from an 8 ft. height.

Value 0.012 in. indentation

Adhesion To Concrete (Tensile Pull)

ACI 503 R, 7 day cure 410 psi, 100% concrete failure

Abrasion Resistance (Taber)

ASTM D 4060, 7 day cure, 1,000 cycles, 1,000 g load, Wheel No. 17 Loss 0.051 g

Water Absorption

ASTM D 570, 7 day cure, < 0.15%

Tensile Properties

ASTM D 638 Strength - Neat Epoxy, 7 day cure 8,800 psi

ASTM D 638, Elongation - Neat Epoxy, 7 day cure 5%

Flexural Properties

ASTM D 790, Neat Epoxy, 7 day cure

Strength 9,200 psi

Tangent Modulus of Elasticity

5.1 x 10⁵ psi

Slant Shear Strength

ASTM C 882, 7 day cure

Test Temperature	Value	Mode of Failure
90 ⁰ F	4,000 psi	100% Concrete Failure
50 ⁰ F	4,200 psi	100% Concrete Failure

Coefficient of Thermal Expansion

Temperature Range: -30C/30C (-22⁰F / 86⁰F)

ASTM D 696, 7 day cure,

18.0 x 10⁻⁶ in / in °F

Flammability

ASTM D635, 7 day cure,

Self-extinguishing

Slip Resistance

Complies with Americans with Disabilities Act (ADA), Title 111, July 1992 and OHSA Standards 29 CFR-1910. Accepted Industry Standard, ASTM C 1028 Coefficient of Friction Levels range from 0.5 to 1.0. Rating is depended on surface profile selected.

Shelf Life

2 years in original unopened containers

CrownStone Cove, an Epoxy Polymer Wall Cove System

Surface Preparation

All substrate surfaces must have all loose and deterioration removed to a sound surface. Concrete and other substrates must be clean, sound, and free of dust, grease, waxes, coatings, curing compounds and all contaminants. Typical removal methods include dust-free abrasive shot-blasting. Clean the substrate to the desired surface profile, until all the surface shows open pores. Follow Crown Polymer Surface Preparation Guide for best results.

Test Substrate for Cleanliness and Adhesion

Before placement of the Epoxy Polymer Concrete, check the concrete and steel substrates for soundness and cleanliness with a Tensile Pull Test (ACI 503 R) or Shear Test. 100% concrete must fail to pass either test.

Preconditioning Epoxy

When temperatures drop, polymers typically thicken and it becomes harder to flow or to spread the product. When the temperatures are warmer, they typically become thinner. To improve the flow-ability maintains product temperature before mixing at about 20°C (73°F). When the substrate temperature is 15°C (60°F) or lower, preheat each epoxy component to 90°F before mixing. Caution the pot life will be reduced by about 50%.

Mixing

Pre-mix Component "A", (when pigmented) then pour Component "B" into "A" and mix for 90 seconds with a low speed paddle attached to a drill (400-600 rpm). Pour the mixed epoxy into a clean 5 gal pail and slowly add the aggregate and mix until uniformly blended, about 4 minutes. For larger batches pour the mixed epoxy into a concrete mixer, add the aggregate into the mixer, and blend for about the same amount of time.

Note: When a mixer is used, on the first batch reduce 5-10 lbs. of aggregate to allow the mixer drum surface to wet out. Be sure the mixing vessel is clean and dry.

Priming

Crown TD formula is designed to prime the surface as part of the placement process and it can normally require priming. Priming may be preferred when using a screed box for application. Problematic concrete surfaces may require priming prior to EPC placement.

Placement

Place the mixed EPC onto the surface, spread evenly with a box screed or a vibrating screed. Finish smooth with hand or power troweling methods at a compacted thickness of $\frac{3}{16} - \frac{1}{4}$ in.

Limitations

- Substrate temperature must be 3°C or 5°F above measured dew point temperature.
- Minimum application temperature is 10°C (50°F). Lower curing temperature option available.
- DO NOT APPLY on WET SUBSTRATE.
- DO NOT THIN - solvents could prevent proper cure.
- Aggregate must be dry when used.
- Pre-condition polymer as needed.

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

Caution

Before Using Read Material Safety Data Sheets.

Component "A" - Irritant

Contains epoxy resins. Prolonged contact with skin may cause irritation. Avoid contact with eyes.

Component "B" - Corrosive

Contains aliphatic/cycloaliphatic amines. Contact with skin may cause severe burns. Avoid eye contact. Product is a strong sensitizer

Component "C" - Contains silica. Avoid breathing product.

Important Information

Use of safety goggles, chemical-resistant gloves, adequate ventilation and NIOSH/OSHA approved respirator is recommended.

Clean Up

In case of spills wear suitable protective equipment, contain spill, and collect with absorbent material, place in suitable container. Ventilate area. Avoid contact. Dispose according to applicable local, state, and federal regulations.

First Aid

In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes. For respiratory problems, remove person to fresh air. Contact Physician Immediately. Wash clothing before re-use.

Consult Safety Data Sheet for More Information

LIMITED WARRANTY - "Crown Polymers Corp. warrants its products to be free of manufacturing defects, to be of good quality, and that they will meet Crown Polymers current published physical properties when applied in accordance with Crown Polymers written directions and tested in accordance with ACI, ASTM and Crown Polymers Standards. Product proved to be defective will be replaced. **There are no other warranties by Crown Polymers Corp. 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 Corp. 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, from any other cause whatsoever. Crown Polymers will not be responsible for use of this product in a manner to infringe on any patent held by others."

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