

CrownPrime™

Product Description Sheet No. 302

Epoxy Prime Coat and Leveling Slurry for Light or Heavy Duty Commercial and Industrial Uses

Description

CrownPrime™, Product No. 302 is a two-component straw or pigmented epoxy prime coat for concrete and wood surfaces. It is a 100% solids, moisture-insensitive, non-shrink, nearly no odor during application.

Application Methods

The mixed polymer is applied as a neat penetrating coating, or a special slurry aggregate can be added for prefill applications.

Use

Used as a neat polymer when porous surfaces are present or when a strengthening attachment is desirable. When used as a prefill it levels low areas and grout joints in existing floors before placement of the final polymer wear surface.

Benefits

The durable 100% solids epoxy penetrates into the concrete or wood surface to create a waterproof monolithic attachment for the polymer wear surface overlay.

Advantages

- Complies with USDA, FDA, OSHA, ADA and LEED® "Green" requirements
- Great working time
- Nearly no odor during application
- No VOC's – 100% solids formula
- Moisture-insensitive formula
- Cures down to 40°F (5°C)
- Excellent strength properties
- Excellent impact resistant

Typical Neat Coverage

Prime Coat: 10 MILS (160 ft² / Gal.)

Refer to specific overlay specification.

Typical Data for CrownPrime

Material and curing conditions at 73°F (23°C), 50% R.H unless noted.

COLOR 10 Standard Colors **VISCOSITY** 500 – 750 cps.
MIX RATIO BY VOLUME Comp "A" 2 to Comp "B" 1
POTLIFE 25-35 minutes **CONSISTENCY** Nearly Self-Leveling

TACK-FREE TIME

Substrate Temperature	50°F *	73°F	90°F
	10–12 hrs	6–8 hrs	5–7 hrs

TENSILE PROPERTIES (ASTM D638) 7 days

Tensile Strength	8,800 psi
Elongation at Break	5 %

FLEXURAL PROPERTIES (ASTM D790) 7 days

Flexural Strength	16,000 psi
Tangent Modulus of Elasticity	510,000 psi

SLANT SHEAR STRENGTH (ASTM C882) 7 days

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

COMPRESSIVE STRENGTH (ASTM D695) Neat Polymer

	50°F *	73°F	90°F
8 hour	3,700 psi	6,300 psi	10,300 psi
1 day	10,100 psi	10,200 psi	10,300 psi
7 days	14,100 psi	14,200 psi	14,200 psi

COMPRESSIVE STRENGTH (ASTM C579) 7 days

EPC 11,500 psi

HARDNESS (INDENTATION)

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

ADHESION TO CONCRETE (TENSILE PULL)

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

ABRASION RESISTANCE (TABER) EPC, 7 day cure, ASTM D 4060, 1,000 cycles, 1,000 g. load, Wheel No. 17, Loss 0.051 g

WATER ABSORPTION

EPC, 7 day cure, ASTM D 570, max. 0.15%

COEFFICIENT OF THERMAL EXPANSION (ASTM D696)

Temperature Range	-30°C (-22°F) / 30°C (86°F)
7 days	18.0 X 10 ⁻⁶ in / in./°F

FLAMMABILITY (ASTM D635)

EPC, 7 day cure, self-extinguishing

SHELF LIFE 1.5 years in original unopened containers

PACKAGING 3, 5, 15 - Gal/Units

How to Apply CrownPrime™

Surface Preparation

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 and grinding. Clean the substrate to the desired surface profile for the overlay system selected. Follow the Crown Polymer Surface Preparation Guide for best results.

Test Substrate For Cleanliness and Adhesion

Before placement of the polymer overlay, test the cleaned concrete substrate for soundness and cleanliness with a Tensile Pull Test ACI 503 R (min.200 psi) or Crown Polymers Surface Shear Test. 100% concrete must fail to pass either test without bond line failure.

Preconditioning Polymer

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 product flow-ability maintain product temperature before mixing at about 20°C (73°F). When the substrate temperature is 5°C (40°F) or lower, preheat each epoxy component to 32°C (90°F) before mixing. Caution the pot life will be reduced by about 50%. It may be necessary to reduce the mixed volume quantity of the batch.

Customer Satisfaction

Apply the entire overlay system to a test area to ensure that the application meets the customer's expectations or provide a sample for written approval before starting work.

Mixing

Pre-mix Component "A", (when pigmented) then pour Component "B" into "A" and mix for approximately 90 seconds (until one even colors develops) with a low speed paddle attached to a drill (400-600 rpm). The mixed product is ready for immediate placement.

Coverage

Product coverage is depended upon the existing substrate surface profile and thickness of the designed system. Refer to Crown Polymers Application Method Guide and Specifications.

Application Methods

Refer to Crown Polymers Specification for the wear surface polymer. CrownPrime is typically included as part of another polymer overlay specification.

Limitations

- Substrate temperature must be 3°C or 5°F above measured dew point temperature.
- Minimum application substrate temperature is 5°C (40°F).
- **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.
- Applied the next polymer lift within 24 hours if the ambient temperature is below 85°F and 18 hours if above 85°F.
- Withstands vapor pressure up to 3 lbs/1,000 ft². Request data.

Maintenance

There is no maintenance required. CrownPrime is not a wear surface product.

Caution

Component "A" - Irritant

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

Component "B" - Corrosive

Contact with skin may cause severe burns. Avoid eye contact. The product is a strong sensitizer. Contains cycloaliphatic amines.

Important Information

Use safety goggles and chemical-resistant gloves. NIOSH/OSHA approved respirator, and adequate ventilation is recommended when in a confined air space.

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 Material Safety Data Sheet for More Information before use.

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

LIMITED WARRANTY - "Crown Polymers, LLC warrants its products to be free of manufacturing defects, to be of good quality, and that they will meet Crown Polymers current physical published 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, LLC 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, LLC 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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