

CrownCote™ AcidShield

Product Description Sheet No. 430

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An Acid Resistant Protective Coating for Vertical and Overhead Use on Concrete, Masonry and Steel

Description

CrownCote™ AcidShield, No. 430 is a 100% solids, 100% reactive, moisture-insensitive, non-shrink, two-component, modified novolac epoxy coating or epoxy polymer concrete (EPC). It fully cures with ambient temperature, (no heat requirements) and maybe applied on substrates with a temperature range of 40⁰ to 90⁰F.

Advantages

- Excellent working & cure time
- Excellent chemical resistance & substrate adhesion
- 100% solids, No VOCs
- Nearly no odor during application
- USDA and FDA compliant

Where to Use

For environments where acid spills occur, condensation occurs, and acid resistance is desirable.

For dry steel substrates and dry or damp concrete surfaces.

For closed environments where acid or fluids are stored such as tanks, mixing vessels and pipes.

For closed environments where acid or other chemical condensation occurs in stacks, pipes, inlet and outlet ducts.

Typical Anti-corrosive Protective Coating and Overlay uses:

- Concrete Walls & Ceilings
- Masonry walls
- Steel columns
- Tank lining & Pipe linings
- Trench linings
- Machinery coating
- Secondary containment

Typical Data for CrownCote AcidShield

(Material and Curing Conditions at 73°F unless noted, 50% R.H.)

COLOR Pigmented **VISCOSITY** 3,000 - 4,000 cps.
POTLIFE 20-25 minutes **CONSISTENCY** Liquid

TACK-FREE TIME

Substrate Temperature	40°F	73°F	90°F
	12-14 hrs.	6-8 hrs.	4-6 hrs.

TENSILE PROPERTIES (ASTM D638) 7 Days

Tensile Strength	7,500 psi
Elongation at Break	3.1 %
Modulus of Elasticity, psi	3.8 X 10 ⁵

FLEXURAL PROPERTIES (ASTM D790) 7 Days

Flexural Strength	13,300 psi
Modulus of Elasticity, psi	5.0 X 10 ⁵

SLANT SHEAR STRENGTH (ASTM C882) 7 Days

Test Temperature	Value	Mode of Failure
73°F	5,150 psi	100% Concrete Failure

COMPRESSIVE STRENGTH (ASTM D695) 7 Days

Compressive Strength	10,700 psi
Compressive Modulus, psi	3.04 X 10 ⁵

HARDNESS - SHORE D (ASTM D2240) 7 Days 79

60° SPECULAR GLOSS (ASTM D523) 7 Days 103

WATER ABSORPTION (ASTM D570) 24 Hours 0.21%

ABRASION RESISTANCE, WEIGHT LOSS (ASTM D4060)
1,000 cycles with Wheel No. 10 0.049 g

DEFLECTION TEMPERATURE (ASTM D648) 7 DAYS

Fiber Stress Loading = 264 psi 128°F

MAR RESISTANCE (ASTM D5178) 1.05 kg

SHELF LIFE 2 years in Original Unopened Containers.

PACKAGING 4 - 1 Gallon Units/Case (E), 5 Gallon Units (M)

How to Apply CrownCote AcidShield

Surface Preparation

All substrate surfaces must be clean, (free of dust, grease, waxes, coatings, curing compounds and all contaminants), structurally sound and fully cured. Typical removal methods include dust-free abrasive blasting and water blasting. 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 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%.

Customer Satisfaction

Apply to a test area to ensure that the application meets the customer's expectations.

Mixing

Pre-mix Component "A", then pour Component "B" into "A" and mix for 90 seconds (until one even color 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

Apply with airless Sprayer (30 to 45 to 1 pump ratio) with tip size 21- 30, or with short nap roller covers (1/4 – 3/8 in.) solvent resistant type. Allow coating to become tack-free before applying next coat.

Limitations

- Substrate temperature must be 3°C or 5°F above measured dew point temperature.
- Minimum application temperature is 5°C (40°F).
- DO NOT APPLY on WET SUBSTRATE.
- DO NOT THIN - solvents could prevent proper cure.
- Pre-condition polymer as needed.

FOR INDUSTRIAL USE ONLY

**KEEP OUT OF REACH OF CHILDREN
KEEP CONTAINERS TIGHTLY CLOSED**

Caution

Component "A"- Irritant

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

Component "B" - Corrosive

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

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 Material Safety Data Sheet for More Information

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 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, 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."

For the Location of Your Nearest Crown Polymers Representative

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