

CrownCote™ TempShield

Product Description Sheet No. 442

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A Protective Coating for Substrates Requiring Solvent Protection or Cold Substrate Application

Description

CrownCote™TempShield, (Product No. 442) is a 100% solids, 100% reactive, moisture-insensitive, non-shrink, two-component, modified Aliphatic Novolac epoxy coating designed as vertical and overhead protective coating that adheres and cures on dry concrete surfaces.

Advantages

- Excellent Working Time
- Applied as Rolled or Sprayed System
- Excellent Chemical Resistance and Fast Cure
- Applicable and Curable to 5°C (40°F)
- Excellent Physical Strength Properties
- 100% Solids, No VOC's
- Nearly No Odor During Application
- USDA and FDA Compliant

Where to Use

Use an Anti-Corrosive Protective Heat Resistant Coating System for:

- Concrete Walls and Ceilings
- Interior or Exterior
- Areas Exposed to Hot Water Spills or Splash:
- Continuous Immersion or Dry to 232°C (450°F)
- Wet Thermal-Cycling Exposures to 149°C (300°F)
- Secondary Containment Areas
- Welded Steel Tanks

Typical Data for CrownCote TempShield

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

COLOR Pigmented **VISCOSITY** 3,000 – 4,000 MPa.s (cps)
POTLIFE 18-25 minutes **CONSISTENCY** Liquid

TACK-FREE TIME

Substrate Temperature	5°C (40°F)	23°C (73°F)	32°C (90°F)
	12-14 hrs.	6-8 hrs.	4-6 hrs.

TENSILE PROPERTIES (ASTM D638) 7 Days

Tensile Strength, MPa (psi)	58.5 (8,500)
Elongation at Break, %	> 4.0
Modulus of Elasticity, MPa (psi)	26.9 X 10 ⁵ (3.9 X 10 ⁵)

FLEXURAL PROPERTIES (ASTM D790) 7 Days

Flexural Strength, MPa (psi)	92.2 (14,100)
Modulus of Elasticity, MPa (psi)	38.6 X 10 ⁵ (5.6 X 10 ⁵)

SLANT SHEAR STRENGTH (ASTM C882) 7Days

Test Temperature	Value, MPa (psi)	Mode of Failure
23°C (73°F)	37.75 (4,750)	100% Concrete Failure

COMPRESSIVE STRENGTH (ASTM D695) 7 Days

Compressive Strength, MPa (psi)	84.8 (12,300)
Compressive Modulus, MPa (psi)	26.9 X 10 ⁵ (3.9 X 10 ⁵)

HARDNESS - Shore D (ASTM D2240) 7 Days 80

WATER ABSORPTION (ASTM D570) 24 Hours 0.18%

ABRASION RESISTANCE, WEIGHT LOSS (ASTM D4060)

1,000 cycles with Wheel No.10, grams	0.051
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SHELF LIFE 2 years in Original Unopened Containers

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

COLORS 10 Standard Colors

How to Apply CrownCote TempShield

Surface Preparation

Concrete substrate must be clean, sound, and dry. Remove dust, grease, waxes, and coatings, curing compounds and all contaminants by mechanical means such as bush hammering and/or abrasive blasting. Abrasive blast all metal surfaces to white metal for best adhesion. Apply before flash rusting develops or the cleaned concrete becomes contaminated.

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 (30-45 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 when substrate is wet
- DO NOT THIN - solvents could prevent proper cure.
- Pre-condition polymer as needed.
- Usable to 232°C (450°F) Dry Heat Exposure
- Usable to 149°C (300°F) Wet / Dry Heat Exposure

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

**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 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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