

CEILCOTE® 68

Crack-bridging epoxy lining

DESCRIPTION:

CEILCOTE® 68 lining is a fiberglass reinforced, toughened epoxy lining system developed for protection of concrete and steel surfaces that are subjected to immersion and corrosive chemical environments. It is particularly well suited for thickeners, clarifiers and areas that require chemical containment over cracked concrete.

SYSTEM COMPONENTS:

PRIMER:

CEILCOTE 680 primer is used as the primer. CEILCOTE 680 penetrates, strengthens and seals the concrete and will also tolerate some moisture in the concrete during application.

BASE COAT:

The trowel applied, silica filled base coat fills and smooths the concrete surface. The toughened epoxy resin system and formulated filler adds strength and permeation resistance to the lining.

FIBERGLASS REINFORCEMENT:

Fiberglass mat in combination with the permanently flexible resin system gives CEILCOTE 68 lining crack bridging capability and the tensile strength required for concrete protection.

TOPCOAT:

Flake filled epoxy topcoat may be applied by brush, roller or spray.

TYPICAL USES:

- Primary containment over cracked concrete.
- Secondary containment areas.
- Floors & chemical trenches.
- Truck loading & unloading areas.
- Clarifiers & thickener bottoms.

ADVANTAGES:

- Seamless corrosion barrier over cracked concrete.
- Chemical resistance to caustics and a wide range of acids and solvents.
- Moisture tolerant curing.
- Low temperature curing.
- Low odor.

COLORS:

Will vary depending on topcoat used.

PHYSICAL PROPERTIES:

Thickness	3/32" nominal (2.4 mm)	
Tensile Strength		
Reinforcement Layer	9,500 psi (65 MPa)	
Bond Strength	Exceeds the strength of concrete	
Service Temperature Limits, Continuous		
• Immersion/Condensing Fumes	140°F (60°C)	
• Atmospheric/Non-Condensing Fumes	200°F (93°C)	
Movement to Crack The Lining¹	25 mils	
With 3" Bond Breaking Tape	50 mils	
Flash-Point (Pensky-Martens Closed Cup)		
• CEILCOTE 680 primer	204°F	(95°C)
• #9 Hardener	228°F	(108°C)
• CEILCOTE 68 lining Base coat Component A (use CEILCOTE 680/68BC Component.A)	204°F	(95°C)
• CEILCOTE 68 Lining Base coat Component B (use CEILCOTE 680/68BC Component B)	228°F	(108°C)
• CEILCOTE 68 lining Topcoat Component A (use CEILCOTE 600 FLAKELINE® Coating Component A)	35°F	(2°C)
• CEILCOTE 68 Lining Topcoat Component B (use CEILCOTE 600 FLAKELINE Coating Component B)	210°F	(99°C)

Shelf Life

Expiration dates printed on labels; 6 months @ 70°F (21°C)

¹The lining system is applied by standard procedure to a special concrete test specimen. After the lining has cured, the specimen is placed in a tensile test machine and pulled at a slow fixed rate. The concrete test specimen is designed with a stress riser so the concrete immediately cracks at a predetermined location under the lining. An extensometer is affixed to the specimen in such a way that actual crack width is accurately measured and recorded. A bond breaker placed under the lining can spread out the required movement over a three inch wide section of lining.

The above laboratory test does not take in account the effect of actual service conditions in a real installation. It is recommended that the design movement for actual installations be limited to 10 mils.

COVERAGE:

- **CEILCOTE 680 primer:**
1 gal unit, 150 to 200 ft²/gal (3.7 to 4.9 m²/litre)
(use CEILCOTE 680/68BC Resin)
- **CEILCOTE 68 lining Liquid:**
1 gal unit, 15 to 17 ft²/gal (.37 to .41 m²/litre)
(use CEILCOTE 680/68BC Resin)
- **CEILCOTE 68 lining Topcoat:**
1 gal unit., 100 to 130 ft²/gal (2.4 to 3.2 m²/litre)
(use CEILCOTE 600 FLAKELINE)
1.5 oz. Mat: 50 in width, 1.1/ft²
S-1 Powder: 50# bag, 100 to 120 ft²/bag
T-410: 1 gallon, 200 ft²/gal (4.9 m²/litre)
(Cleaning Solvent)

PACKAGING:

- **1 & 4 gal units:** CEILCOTE 680 primer and CEILCOTE 68 lining Base coat
(use **CEILCOTE 680/68BC resin**)
- **1 & 5 gal units:** CEILCOTE 68 lining Topcoat
(use **CEILCOTE 600 FLAKELINE**)
Sq. ft.: 1-1/2 oz. Mat
50# Bag: S-1 Powder

LIMITATIONS:

Components should be stored in a cool place. Primer and lining liquids are stable for 6 months at ambient temperatures 70°F (21°C). Keep the powder and fiberglass dry.

APPLICATION: (abbreviated)

Surface Preparation:

- **Steel:** Abrasive blast with sharp abrasive. A "White Metal" surface (**SSPC #5-89 or NACE #1**) is required with a minimum anchor pattern profile of 3 mils.
- **Concrete:** Abrasive blasting or scarification to remove laitance and surface contaminants is required. Concrete must be thoroughly cured, free of oils, curing solutions and mold release agents, dust and must be dry at time of application. Refer to ASTM D 4263G.
- **Placement:** (Refer to Installation Procedure #1.6I for complete procedures.)
 1. For all application steps, the surface temperature, air temperature, and material temperature should be between 50°F (10°C) and 100°F (43°C).
Do not apply if the relative humidity is more than 90% or the surface temperature is less than 5% above the dew point of the air in the working area.

2. Prime surfaces with CEILCOTE 680 PRIMER. Allow to cure tack free before proceeding.
3. Spread base coat 1/16" thick.
4. Immediately press the fiberglass cloth into the base coat.
5. Saturate by brushing or rolling on the saturating liquid until whiteness of glass disappears. Allow to cure.
6. Apply topcoat by spray, brush or roller to a thickness of 10 to 15 mils.

CLEAN UP:

Use toluene, xylene, MEK, T-410 or lacquer thinner .

SAFETY:

- Store in cool, dry area 50°F to 90°F (10°C to 32°C) away from direct sunlight, flame or other hazards.
- CEILCOTE 68 lining contains epoxy resins and a polyamine catalyst. The product's components have been formulated to optimize physical characteristics such as filling capacity, abrasion, moisture and chemical resistance while minimizing hazardous physical and health factors encountered during application. A concerted effort is made to be aware of the latest chemical toxicological information and to apply this knowledge in a responsible manner to insure product safety.
- During application of CEILCOTE 68 lining materials, always wear gloves and appropriate work clothing to minimize contact. Ventilation is required with special consideration for enclosed or confined areas. Air movement must be designed to insure turnover at all locations in work area and adjacent areas to avoid buildup of heavy vapors. Use caution when handling flammable liquids, eliminate sources of ignition from work area, and containers with residues.
- Observe safe storage practices by separating resins from hardeners, by keeping solvents in a cool area free of sources of ignitions.
- Product Material Safety Data Sheets (MSDS) are available and should be consulted when handling products. These products are for industrial and professional use only; application directions must be followed.

MAINTENANCE:

Periodically inspect the applied material and repair localized areas needed. Consult your Master Builders representative for additional information.

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