

CEILCOTE® 870 COROCRETE® Flooring

Epoxy novolac, slurry broadcast flooring

DESCRIPTION:

The CEILCOTE® 870 COROCRETE® Flooring is a heavy duty, epoxy novolac system that is designed to resist attack by aggressive chemicals such as concentrated sulfuric acid, and will also withstand mechanical abuse.

CEILCOTE 870 COROCRETE Flooring is a 1/8" to 1/4" (3.18 to 6.35 mm) thick floor topping which is designed with a permanent slip-resistant texture. The finished surface is textured, yet non-porous.

Unique novolac technology permits the extended working time of CEILCOTE 870 COROCRETE Flooring, making this product user friendly, resulting in easier application and less waste.

TYPICAL USES:

- The protection of concrete against the attack of corrosive chemicals.
- In areas subjected to severe spillage, including:
 - Tank farms.
 - Processing areas.
 - Pump pads & flooring.
 - In areas where moist or damp surfaces exist.

ADVANTAGES:

- Superior resistance to 98% Sulfuric Acid.
- Extended working time.
- Tough, durable system.
- Moisture tolerant cure.
- Seamless surface.
- Low odor.
- 100% solids.

COLORS:

Available in Gray and Tile Red

PHYSICAL PROPERTIES:

Generic Type

Epoxy Novolac

Volatile Organic Compounds (VOC)

0 lbs/gallon (0 grams/litre)

Compressive Strength

ASTM C 579-82 7,500 to 8,000 psi (52 to 55 MPa)

Flexural Strength

ASTM C 580-85 2,500 to 3,500 psi (17 to 24 MPa)

Flexural Modulus

ASTM C 580-85 1.4 x 10⁶ psi (18 GPa)

Linear Shrinkage

ASTM C 531-85 0.0065 in/in (cm/cm)

Taber Abrasion

ASTM D 4060-84 55 mg

Coefficient of Thermal Expansion

14 x 10⁻⁶ in/in/°F (25 x 10⁻⁶ cm/cm/°C)

Thin Film Blush

None

Flash Point

(Pensky Martin Closed Cup)

- | | | |
|------------|--------|--------|
| • Liquid | >200°F | (93°C) |
| • Hardener | >208°F | (97°C) |

Service Temperature Limits

- | | | |
|-----------------------------|-------|--------|
| • Frequent or Severe Spills | 150°F | (66°C) |
| • Occasional Splash/Spills | 200°F | (93°C) |

Shelf Life

Shelf life for material is one year minimum, if kept tightly sealed.

COVERAGE:

Estimated:

- 60 to 80 ft²/unit (5.6 to 7.4 m²/unit) @ 1/8" thick (3.18 mm)

MIXING RATIO:

1.6:1, Part A to Part B (by volume)

(Use CEILCOTE 810 COROCRETE resin and CEILCOTE #12 Hardener.)

PACKAGING:

Available in US measured units.

CEILCOTE 870 COROCRETE 2.6 gal. unit consists of:

- CEILCOTE 810 COROCRETE Resin
16.2 lbs. in a 3.5 gal pail
- CEILCOTE #12 Hardener
8.7 lbs. in a 1 gal pail

Aggregate:

- Use 20 to 50 (range) mesh rounded, clean and dry aggregate (purchase locally).
- Use 150 lbs for each 2.6 gal (9.84 litre) unit

HANDLING PROPERTIES:

(Approximate Time)	50°F (10°C)	73°F (23°C)	90°F (32°C)
Working Time	100 min	45 min	25 min
Recoat Time	24 hrs	12 hr	8 hrs
Time to Traffic*	48 hrs	24 hrs	16 hrs

* For concentrated sulfuric acid exposure information, consult Master Builders.

LIMITATIONS:

Do not apply CEILCOTE 870 COROCRETE Floor System when the surface temperature is below 50°F (10°C).

APPLICATION:

The following information is abbreviated application information. Install only in accordance with complete instructions found in the current, published Master Builders Installation Procedure #3.1471

Surface Preparation:

Abrasive blasting or scarification to remove laitance and surface contaminants is recommended. Concrete must be thoroughly cured, free of oils, curing solutions or mold release agents and dust and must be dry at time of application. Use plastic sheet test method to ensure concrete is moisture free (ASTM D 4263). If moisture is detected, re-test until dry.

Primer: (not normally required)

On old, dry, porous concrete, a separate coat of CEILCOTE 680 Primer shall be used. If the system is to be spark tested use CELCOTE 680 C (Conductive) Primer.

When dry priming mix CEILCOTE 680 Primer resin with CEILCOTE #9 Hardener at 3:1 ratio (3.5:1 ratio if using Conductive Primer). Stir well. Apply to prepared concrete surfaces, at approximately 2 to 5 wet mils (WFT), using a nylon or natural bristle brush or paint roller. **DO NOT PUDDLE THE PRIMER.** Broadcast 20 to 50 mesh (range) sand sparingly into wet primer to enhance grip of flooring. Allow to cure.

Mix and apply PRIMER per instructions.

Placement:

Mix resin and hardener for at least two minutes. Slowly add aggregate. Blend, making sure there are no dry spots. Use trowel or screed rake to spread mixture over required area. In general, apply mixture to the desired thickness:

Trowelled or Screed Thickness	Finished Thickness
80 mils	1/8"
1/8"	3/16"
3/16"	1/4"

Within 15 minutes, broadcast the remaining aggregate into the mixture until saturated. After cure, vacuum excess sand and topcoat if desired.

For vertical surfaces (cove bases) mix resin and hardener as above. Slowly add aggregate. Mix well. Trowel cove to primed surface.

CLEAN UP:

Use Toluene, Xylene, 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 870 COROCRETE material contains epoxy resins and 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 870 COROCRETE 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 Inc. representative for additional information.

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