

# CEILCOTE® 2100 FLAKELINE®

Epoxy novolac coating



## DESCRIPTION:

The CEILCOTE® 2100 FLAKELINE® coating is a revolutionary high-performance coating system that is designed to provide maximum resistance to 98% Sulfuric Acid and other aggressive chemicals. Based on novolac epoxy technology, CEILCOTE 2100 FLAKELINE coating is a unique combination of high functionality epoxy and polyamine adduct hardener. This results in a high crosslink density and provides excellent resistance to a wide range of chemicals. The coating is reinforced with overlapping inert flake fillers which create an effective permeation barrier to many corrosives and extend its service life.

## TYPICAL USES:

The CEILCOTE 2100 FLAKELINE coating is ideally suited for coating areas subjected to immersion, fumes, splash and spillage of acids, caustics and solvents. Through its unique properties, the coating is designed for both steel and concrete applications, including:

- Chemical storage & process vessels
- Floor & chemical trenches in process areas
- Secondary containment areas
- Truck loading & unloading areas
- Pedestals of chemical pumps
- Surfaces exposed to chemical spillage/fumes
- Chemical process equipment

## ADVANTAGES:

- Superior resistance to 98% Sulfuric Acid
- Superior resistance to Oleum
- Improved thermal compatibility with steel & concrete substrates
- Ease of application
- Low permeation rate
- Contains no volatile solvents
- Low temperature cure capability

## COLORS:

Available in Gray and Tile Red.

## PHYSICAL PROPERTIES:

Generic Type	Epoxy novolac
Volatile Organic Compounds (VOC) (EPA Method 24)	0.12 lb/gal (14 g/L)
Viscosity (77 °F or 25 °C)	3,000 cps
Mass/Gallon (Mixed)	11.6 +/- 0.2 lb/gal (1.39 kg/L)
Compressive Strength (ASTM D-695)	10,000 psi (70 MPa)

Tensile Strength  
(ASTM D-638)

4,800 psi (33 MPa)

Tensile Elongation

1.2

Abrasion Resistance (CS - 17 Wheels, 1,000 Cycles)  
(ASTM D-4060)

104 mg

## Flash Point

(Pensky-Martens Closed Cup)

CEILCOTE 2100 FLAKELINE

- Liquid >200 °F (93 °C)
- Hardener >200 °F (93 °C)

CEILCOTE 680 Primer

- Liquid 204 °F (96 °C)
- Hardener #9 228 °F (109 °C)
- T-471 Solvent 43 °F (6 °C)

## Service Temperature Limits (Continuous)

- Immersion/Condensing Fumes 120 °F (49 °C)
- Note: For H<sub>2</sub>SO<sub>4</sub> immersion 100 °F (38 °C)
- Atmospheric/Noncondensing Fumes 250 °F (121 °C)

## Shelf Life

Shelf life is one year minimum, if kept tightly sealed

## MIX RATIO:

2:1 by Volume Resin (Part A) to Hardener (Part B).

## COVERAGE:

Theoretical: 38 ft<sup>2</sup>/gal (0.9 m<sup>2</sup>/L)  
@ 40 mils (1.0 micrometer) thickness  
(two coats)

CEILCOTE 680 Primer:

- 150 to 200 ft<sup>2</sup>/gal (3.7 to 4.9 m<sup>2</sup>/L), on concrete depending on the concrete texture
- 275 to 325 ft<sup>2</sup>/gal (6.7 to 8.0 m<sup>2</sup>/L) on steel

## HANDLING PROPERTIES:

Approximate Time (Pot Life (1 pint or 500 mL)):

160 minutes	@	50 °F (10 °C)
70 minutes	@	60 °F (16 °C)
25 minutes	@	75 °F (24 °C)
20 minutes	@	90 °F (32 °C)
15 minutes	@	100 °F (38 °C)

## Thin Film Set Time:

10 h	@	40 °F (4 °C)
2.5 h	@	75 °F (24 °C)

## PACKAGING:

Available in 1 or 3 gal (3.8 or 11.4 L) units.

## LIMITATIONS:

- Do not apply CEILCOTE 2100 FLAKELINE when the surface temperature is below 40 °F (4 °C).
- CEILCOTE 2100 FLAKELINE should be recoated within 4 to 48 hours to assure proper adhesion of topcoat to base coat.

For longer exposure, confirm recoatability by wiping the coating with toluene. If the surface becomes "tacky", adhesion is acceptable. If not softened by toluene, surface must be gritblasted or mechanically abraded to provide a nonglossy, rough surface.

#### **APPLICATION:** (abbreviated)

This product should be installed only in accordance with Master Builders installation procedure 2.111.

#### **Surface Preparation:**

##### **Steel:**

For immersion or high temperature service a "White Metal" sandblast (SSPC #5-89 or NACE #1) is required with a minimum anchor pattern profile of 3 mils (76 micrometers). For atmospheric service use a "Near White" sandblast (SSPC #10-89 or NACE #2).

##### **Concrete:**

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, dust and must be dry at time of application. Use plastic sheet test method to ensure concrete is moisture free. If moisture is detected, retest until dry. Refer to ASTM D-4263 Moisture Test.

#### **Primers:**

##### **For Steel Surfaces:**

CEILCOTE 680 Primer

##### **For Concrete Surfaces:**

- CEILCOTE 680 Primer
- CEILCOTE 680C (Conductive) Primer

#### **Mixing:**

Each component should be premixed because of settling that may occur during shipping and storage. If using plural component spray equipment, do not mix components A and B together. Stir well at a low speed until a uniform color is achieved. In hot weather, it may be necessary to place the pail of mixed material in a container of ice in order to extend the working time.

#### **Placement:**

- CEILCOTE 680 Primer can be easily applied by spray or roller.
- CEILCOTE 2100 FLAKELINE is normally applied by plural component spray equipment, squeegee or roller.
- CEILCOTE 2100 FLAKELINE is applied in two coats of 15 to 30 mils (380 to 760 micrometers) each to achieve a 30 to 50 mil (760 to 1270 micrometers) dry film thickness. The coating may be sparktested as 4,000 volts to ensure absence of pinholes.

- **CAUTION:** Amine blush is possible. Precautions should be taken to ensure there is no amine blush present before application of second coat. If present, wash with water and let dry.
- To achieve a durable finish with surface texture, broadcast sharp inert grit aggregate fillers into next-to-last coat while it is still tacky. Various types of grit are used to achieve different texture, thickness and toughness.

#### **CLEAN UP:**

Use toluene, xylene or T-410.

#### **SAFETY:**

- Store in cool, dry area [50 °F to 90 °F (10 °C to 32 °C)] away from direct sunlight, flame or other hazards.
- The CEILCOTE 2100 FLAKELINE system 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 ensure product safety.
- During application of CEILCOTE 2100 FLAKELINE 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 ensure 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.

#### **MAINTENANCE:**

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

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