

# CEILCOTE® 2000 MR FLAKELINE

*Mat reinforced novolac epoxy system*

## DESCRIPTION:

CEILCOTE 2000 MR FLAKELINE system is an intermediate lining/flooring system designed to protect concrete and metal against chemical attack from aggressive chemicals including 98% sulfuric acid and oleum. CEILCOTE 2000 MR FLAKELINE system combines the advantages inherent to heavy-duty linings with the economy of coating systems. Total thickness of the cured system ranges from 80 to 120 mils.

**Primer** - Moisture tolerant, flexible primer penetrates, strengthens and seals concrete.

**Basecoat** - Trowel applied basecoat smooths surface irregularities and lowers the coefficient of expansion.

**Topcoat** - Spray applied topcoat provides corrosion and permeation resistance. The Novolac topcoat is reinforced with overlapping inert flake fillers which create an effective permeation barrier to many corrosives and extend service life.

## TYPICAL USES:

- Secondary containment areas
- Floors and chemical trenches
- Containment pits
- Vaults
- Tanks
- Dikes

## ADVANTAGES:

- Superior resistance to 98% sulfuric acid
- Superior resistance to Oleum
- Seamless surface
- Low odor
- 100% Solids

## COLORS:

Topcoat available in Gray and Tile Red

## PHYSICAL PROPERTIES:

<b>Generic Type</b>	Epoxy Novolac
<b>Volatile Organic Compounds (V.O.C.)</b>	0 lbs./gallon
<b>Compressive Strength (ASTM C 579-82)</b>	9,600 psi
<b>Tensile Strength (ASTM C 307-83)</b>	3,000 psi
<b>Service Temperature Limits (Continuous)</b>	
Immersion/Condensing Fumes	130°F (54°C)
Atmospheric/Noncondensing Fumes	250°F (121°C)
<b>Shelf Life</b>	Shelf life for material is one year minimum, if kept tightly sealed.

## COVERAGE:

<b>CEILCOTE 680 primer (Concrete)</b>	150 - 200 ft <sup>2</sup> /gal (3.7 - 4.9 m <sup>2</sup> /litre)
<b>CEILCOTE 800 COROLINE Base coat/Saturant</b>	30 ft <sup>2</sup> /gal (.7 m <sup>2</sup> /litre)
<b>S-1 Powder</b>	100 ft <sup>2</sup> per 150 lb bag (9.3 m <sup>2</sup> /bag)
<b>Mat Reinforcement</b>	1.1 ft <sup>2</sup> /ft <sup>2</sup> (1.1 m <sup>2</sup> /m <sup>2</sup> )
<b>CEILCOTE 2000 FLAKELINE (Topcoat)</b>	70 ft <sup>2</sup> /gal (1.7 m <sup>2</sup> /litre) @ 20 mils (1 coat)

## MIXING RATIO:

<b>CEILCOTE 680 primer to #9 hardener</b>	
By Volume	3:1
<b>CEILCOTE 800 COROLINE Base coat/saturant to #12 hardener</b>	
By Weight	1.73:1
By Volume	1 49:1
<b>CEILCOTE 2000 FLAKELINE Resin (Part A) to hardener (Part B)</b>	
By Volume	4:1
<b>Thinning</b>	DO NOT THIN

## PACKAGING:

<b>CEILCOTE 680 primer</b> (Including hardener #9)	1 and 4 gallon units
<b>CEILCOTE 800 COROLINE Base coat/saturant</b> (Including hardener #12)	1 and 5 gallon units
<b>S-1 Powder</b>	50 lb bags
<b>1-1/2" oz Mat Reinforcement</b>	As required by sq.ft.

## STORAGE:

All items must be kept in closed containers and stored at temperatures between 70°F - 80°F (21°C - 27°C). Keep materials away from all fire hazards and out of direct sunlight.

## LIMITATIONS:

Do not apply the CEILCOTE 2000 MR FLAKELINE System when the surface temperature is below 50°F (10°C) or over 110°F (43°C).

## APPLICATION:

### Surface Preparation:

**Concrete Surfaces** - Abrasive blasting or scarification to remove laitance and surface contaminants is recommended. Prepared concrete should be similar in texture to 40 to 60 Grit sandpaper. 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, re-test until dry.

**Steel Surfaces** - 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. For atmospheric service, use a "near White: sandblast (SSPC #10-89 or NACE #2).

### Primers:

#### For Steel Surfaces:

CEILCOTE 680 primer

#### For Concrete Surfaces:

CEILCOTE 680C (Conductive) primer

Mix and apply primer per instructions.

Placement:

1. Be certain the cured primer is clean and dust free.
2. **Base coat** - Mechanically premix CEILCOTE 800 COROLINE Base coat/saturant components (i.e. resin Part A and hardener Part B) individually prior to blending together. After initial mixing, add CEILCOTE #12 hardener to CEILCOTE 800 COROLINE Part A (at appropriate volumes) and mechanically mix for three to five minutes more to ensure proper dispersion.
3. In small amounts, add and mix a total of 20 to 24 lbs type S-1 Powder per gallon CEILCOTE 800 COROLINE. More or less may be added as required. Use within 15 minutes after adding hardener.
4. Using a trowel, apply 60 to 80 mils of base coat.
5. Press the reinforcing mat into the base coat while soft, leaving no wrinkles or hollows. Lap each strip about 1" over preceding strips. Press the mat carefully into all corners. When the mat is being placed overhead, allow the base coat to get a little firm, not hard, before saturating mat.

6. **Saturant** - Saturating should be done before the base coat has hardened. Mix the CEILCOTE 800 COROLINE Part A and #12 hardener as instructed above.
7. Apply the saturant with a brush or roller until all cloth is translucent. Let cure.
8. Examine the cured saturating coat before recoating. If it appears damp or has a film on it, wash it with water and allow to dry.
9. **Topcoat** - Mechanically premix CEILCOTE 2000 FLAKELINE components (i.e. resin Part A and hardener Part B) individually at low speed prior to blending together. After initial mixing, add CEILCOTE 2000 FLAKELINE Part A to CEILCOTE 2000 FLAKELINE Part B (at appropriate volumes) and mechanically mix at low speed for three to five more minutes to ensure proper dispersion. In hot weather, it may be necessary to place the pail in a container of ice to extend the working time.
10. FLAKELINE 2000 is NORMALLY APPLIED BY PLURAL COMPONENT SPRAY EQUIPMENT, trowel squeegee or roller. Apply one or two coats of 15 to 25 mils each. To achieve a durable surface textured finish, broadcast sharp inert grit aggregate fillers into the next-to-last coat while it is still tacky.
11. Examine the cured FLAKELINE 2000 before recoating. If it appears damp or has a film on it, wash it with water and allow to dry.

## CLEAN UP:

Use T-410 Solvent, toluene or xylene.

## 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 2000 MR FLAKELINE material 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 2000MR 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 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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