

# CEILCOTE® 222HT FLAKELINE®

*Vinyl ester coating*

## DESCRIPTION:

CEILCOTE® 222HT FLAKELINE® coating is a flake glass filled, catalyzed novolac vinyl ester system which exhibits excellent resistance to both aliphatic and aromatic organic solvents and concentrated organic and inorganic acids. The coating system consists of a primer, spray applied base coat and topcoat, with a nominal dry film thickness of 30 to 40 mils. It can be applied on concrete and metal surfaces with proper surface preparation. A third coat may be applied for higher temperature resistance.

## TYPICAL USES:

- Tanks, nozzles, pipes & structural steel.
- Trenches & pits.
- Vaults & dikes.
- Secondary containment.
- Floors.

## ADVANTAGES:

- Outstanding chemical resistance.
- High temperature resistance.
- Can be used on concrete or steel.
- Low permeation rate for longer, trouble free service.
- Quick turn around for service.

## COLORS:

Gray.

## PHYSICAL PROPERTIES:

### Generic Type

vinyl ester

### Tensile Bond Strength

1,500 to 1,700 psi (10 to 12 MPa)

### Flexural Strength

ASTM D 790

7,500 psi (52 MPa)

### Flexural Modulus

ASTM D 790

8.9 x 10<sup>5</sup> psi (61 MPa)

### Tabor Abrasion

CS 17 wheel, 1,000 gm, 1,000 revolutions

91 mg

### Moisture Permeability

ASTM E 96 Proc. E

0.0011 perm in. (0.0018 perm cm.)

### Tensile Strength

ASTM D 638

5,700 psi (39 MPa)

### Tensile Elongation

0.44%

### Density (wt./gal.)

10.3 ± 0.2 lbs/gal (1.24 ± 0.02 kg/litre)

## Viscosity

4,000 to 4,500 cps @ 77°F

## Flash Point

*Pensky-Martens Closed Cup*

89°F (32°C)

## Service Temperature Limits (Continuous)

- Immersion/Condensing Fumes

- 130°F (54°C), 2 coats
- 150°F (66°C), 3 coats

- Continuous Dry
- 350°F (177°C) 2 coats

## Shelf Life (Expiration dates printed on labels)

- 2 months at 70°F to 80°F (21° C to 27°C);
- 30 days or less at 80°F to 90°F (27°C to 32°C).

## MIXING RATIO:

Stir thoroughly, then add 2-1/2 oz. of #2C/2R Hardener per gal of CEILCOTE 222HT/282BC resin.

## COVERAGE:

Actual coverage is 25 to 35 ft<sup>2</sup>/gal (.6 to .86 m<sup>2</sup>/litre) @ 35 mils which depends on loss due to waste and overspray.

## HANDLING PROPERTIES:

Temperature	Working Time	To Recoat/ Handle	To Cure
@ 50°F (10°C)	1-1/2 hrs	12 to 24 hrs	48 hrs
@ 73°F (23°C)	1 hr	4 to 8 hrs	24 hrs
@ 90°F (32°C)	45 min	3 to 4 hrs	16 hrs

## PACKAGING:

3/4 & 4 gal. units

## LIMITATIONS:

Do not apply CEILCOTE 222HT FLAKELINE coating when the surface temperature is below 50°F (10°C) or over 110°F (43°C). **CEILCOTE 222HT FLAKELINE coating must be recoated within 7 days when shaded from sunlight. If the coating is applied outdoors (even on cloudy days), it must be recoated within 4 hours to obtain proper intercoat adhesion.**

## STORAGE:

Store in a cool, dry place away from fire hazards.

## APPLICATION: (ABBREVIATED)

(For complete details, refer to Installation Procedure #2.21 for CEILCOTE 200 FLAKELINE Series)

## Surface Preparation:

### Steel:

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.

**Application (abbreviated), continued**

**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-4263.

**Primers:**

**For Steel Surfaces:**

CEILCOTE 370 PRIMER

**For Concrete Surfaces:**

- CEILCOTE 380 PRIMER

- CEILCOTE 380C (Conductive) PRIMER.

[Use when sparktesting (High voltage holiday testing) will be conducted on concrete.]

- Mechanically premix CEILCOTE 222HT/282BC resin (i.e. Part A) 2 minutes individually prior to adding hardener. After initial mixing, add 2-1/2 oz. of #2C/2R Hardener per gallon of CEILCOTE 222HT/282BC resin and mix three additional minutes.
- Apply CEILCOTE 222HT/282BC resin and hardener at 20 to 32 mils WFT to yield 15 to 25 mils DFT, target of 18 mils DFT. Allow to harden. Repeat for second and third coat (if needed for high temperature immersion service) application.

NOTE: All coats are the same material (except primer).

**Thinning:**

None required. DO NOT THIN.

**Application Equipment:**

• **Conventional Spray:**

For equipment recommendation, please reference Installation Procedure 2.2I.

• **Air Assisted Airless:**

For equipment recommendation refer to Installation Procedure #2.2I (Special Catalyst Spray Equipment section).

• **Airless Spray:**

Not recommended.

• **Brush or Roller:**

Must be spray applied. Brush or roller recommended for minor touch-up only.

**CLEAN UP:**

Use T-410 solvent, methyl ethyl ketone or lacquer thinner.  
DO NOT USE ACETONE SOLVENT.

**SAFETY:**

- CEILCOTE 222HT FLAKELINE coating contains vinyl ester resins, styrene monomer and inert flake glass filler. The hardener is an organic peroxide. Components have been formulated to optimize physical coating characteristics 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 222HT FLAKELINE materials, always wear gloves and appropriate work clothing to minimize contact. Ventilation is required with special consideration for an enclosed or confined area. 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 and eliminate sources of ignition from work area and containers with residues.
- Observe safe storage practices by separating resins from hardeners, by keeping solvents and hardeners in a cool area free of sources of ignitions and by observing a special warning on **RED** and **YELLOW** labeled products. The **RED** label represents amine type chemicals and the **YELLOW** label represents organic peroxide type chemicals which should not be stored adjacent or mixed together because of the possible violent reaction between them.
- Product Material Safety Data Sheets (MSDS) and Installation Procedures are available and should be consulted when handling products. These products are for industrial and professional use only. Application directions must be followed.

For more information, contact your local Master Builders Representative.

**Master Builders, Inc.  
United States**

23700 Chagrin Boulevard  
Cleveland, Ohio 44122-5554  
(800) MBT-9990  
Fax (216) 831-6910

**Canada**

3637 Weston Road  
Toronto, Ontario M9L 1W1  
(800) 387-5862  
Fax (416) 741-7925

**Mexico**

Blvd. M. Avila Camacho 80, 3er Piso  
53390 Naucalpan, México  
011-525-557-5544  
Fax 011-525-395-7903