

CEILCOTE® 25, 64, 74 and 652 Lining Series

Reinforced polyester/vinyl ester linings

DESCRIPTION:

The CEILCOTE® 25, 64, 74 and 652 Lining Series is a heavy duty range of linings that protect steel and concrete in immersion service from strong chemicals. The linings are formulated from polyester or novolac based vinyl ester resins, inert fillers, and fiberglass reinforcement. They withstand solution temperatures to 160°F (71°C) in immersion service.

LINING SERIES TYPES:

- **CEILCOTE 25 LINING:**
A chemical resistant **bisphenol A** polyester resin lining for acid and mild alkali immersion service. This lining resists most dilute inorganic acids and some concentrated acids such as hydrochloric and phosphoric. It also provides protection against alkalis, most salts, and many organic chemicals.
- **CEILCOTE 64 LINING:**
A specially formulated polyester lining with excellent resistance to chromic acid, as well as many other oxidizing acids and hot wet chlorine. In addition, this lining will resist the same dilute inorganic acids, salts, and organic solutions as CEILCOTE 25 Lining.
- **CEILCOTE 74 LINING:**
The same chemical resistance as CEILCOTE 25 Lining but will withstand a broader range of organic chemicals than any of the Linings in this series.
- **CEILCOTE 652 LINING:**
The same broad chemical resistance as CEILCOTE 25 Lining, and is also excellent for hypochlorites.

For specific chemical resistance recommendations on the CEILCOTE Lining Series, refer to the Master Builders Corrosion Resistance Guide, or contact your local Representative.

TYPICAL USES:

- Plating & pickling storage.
- Acid waste disposal tanks.
- Tank lining.

ADVANTAGES:

- Excellent corrosion resistance.
- Longer service life.
- Trowel applied base coat that provides barrier against permeation.
- Lower coefficient of expansion.

PHYSICAL PROPERTIES:

Tensile Strength

ASTM D 638-72 6,500 to 8,000 psi (45 to 55 MPa)

Flexural Strength

ASTM D 790-71 8,000 to 12,000 psi (55 to 83 MPa)

Flexural Modulus

ASTM D 790-71 0.5 to 0.7x10⁶ psi (3.5 to 3.8 GPa)

Thermal

Conductivity 1.0 - 2.0 BTU, in./hr., ft²F (0.14-0.29 W/M²K)

Tensile Bond

to Steel 1,500 psi (10 MPa)

Coefficient of Expansion

13 to 17 x 10⁻⁶ in./in./°F (3.3 to 4.3 x 10⁻⁶ cm/cm/°C)

Permeance

ASTM E 96 0.021 perms

Flash Points

Pensky-Martens Closed Cup

- | | | |
|----------------------------------|-------|--------|
| • CEILCOTE 25 LINING Liquid | 90°F | (32°C) |
| • CEILCOTE 74, 652 LINING Liquid | 83°F | (28°C) |
| • CEILCOTE 64 LINING Liquid | 87°F | (31°C) |
| • #2 Hardener | 175°F | (79°C) |
| • #3 Hardener | 210°F | (99°C) |
| • CEILCOTE 370 PRIMER Liquid | 73°F | (23°C) |
| • CEILCOTE 380 PRIMER Liquid | 83°F | (28°C) |
| • T-410 Solvent | 35°F | (2°C) |

MIXING RATIO & PACKAGING:

- **CEILCOTE 370 PRIMER (use CEILCOTE 370 PRIMER Resin)**
(2 oz #3C hardener/gal resin) 1 gal. (8.6 lbs.), 5 gal. (43 lbs.)
- **CEILCOTE 380 PRIMER (use CEILCOTE 380/652/695BC Resin)**
(2-1/2 oz. #2C hardener/gal resin) 1 gal. (8.75 lbs.), 5 gal. (44 lbs.)
- **CEILCOTE 25 LINING (use CEILCOTE 2500/25 Resin)**
(2 oz. #3C hardener/gal resin) 1 gal. (8.5 lbs.), 5 gal. (42.5 lbs.)
- **CEILCOTE 64 LINING (use CEILCOTE 6400/64 Resin)**
(2 oz. #3C hardener/gal resin) 1 gal. (9 lbs.), 5 gal. (45 lbs.)
- **CEILCOTE 652 LINING (use CEILCOTE 380/652/695BC Resin)**
(2-1/2 oz. #2C hardener/gal resin) 1 gal. (9 lbs.), 5 gal. (45 lbs.)
- **CEILCOTE 6650/74 RESIN**
(2-1/2 oz. #2C hardener/3/4 gal. resin)
3/4 gal. (6.75 lbs.), 4 gal. (36 lbs.)

COVERAGES:

Primers:

- CEILCOTE 370 PRIMER
1 gal. unit covers 250 to 300 ft² (6.1 to 7.3 m²/litre)
- CEILCOTE 380 PRIMER
1 gal. unit covers 160 to 200 ft² (3.9 to 4.9 m²/litre)

Liquids/Catalyst:

- CEILCOTE 25 LINING
1 gal. unit covers 7 to 8.5 ft² (.17 to .21 m²/litre)
- CEILCOTE 64 LINING
1 gal. unit covers 7 to 8.5 ft² (.17 to .21 m²/litre)
- CEILCOTE 74 LINING
3/4 gal. unit covers 7 to 8.5 ft² (.17 to .21 m²/litre)
- CEILCOTE 652 LINING:
1 gal. unit covers 7 to 8.5 ft² (.17 to .21 m²/litre)

Powder:

S-1-50# (22.67 kg) bag covers 100-120ft²/bag (9.3-11.1m²/bag)

Glass Reinforcement:

- 1-1/2 oz., order 2.2 ft²/ft² (2.2m²/m²)
- C Veil, order 1.1 ft²/ft² (1.1 m²/m²)

Thin Film Curing Aid:

Order 0.001 lbs/ft² (0.005 kg/m²)

T-410 (Cleaning Solvent):

1 gal covers 200 ft² (4.9 m²/litre)

LIMITATIONS:

Components should be stored in a cool place. Primer and lining liquids are stable for 4-6 months (2 months for CEILCOTE 74 Lining) at ambient temperature, 70°F (21°C). Keep the powder and fiberglass dry.

APPLICATION: (abbreviated)

Surface Preparation:

Steel:

Must be abrasive blasted to "White Metal" for optimum performance. (Refer to SSPC SP 5-63 or NACE Specification No. 1). A minimum abrasive blast profile of 3 mils is required. CEILCOTE 370 Primer is used to protect abrasive blasted steel from dirt, grease, or rusting before the lining is applied. Use 2 fl. oz. of Hardener No. 3 per gal. of CEILCOTE 370 Primer.

Concrete:

Abrasive blasting or scarification to remove laitance and surface contaminants is recommended. Concrete must be thoroughly cured, free of oils, curing solutions, mold release agents or 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. For concrete quality and preparation, please refer to Construction Specification CPT-1, CP-14, CP-17 & CS-10. Concrete substrates should be properly prepared and primed with CEILCOTE 380 Primer prior to application of the CEILCOTE Lining system to ensure proper surface strength and adhesion. Use CEILCOTE 380C (Conductive) Primer if lining is to be spark tested.

1. Refer to Installation Procedure #1.4I for more details.
2. Prime surface.
3. Trowel on base coat from 40 to 80 mils.
4. Press glass mat onto base coat, roll on the saturant coat and roll out air bubbles using a ribbed roller. Repeat for second layer of mat.
5. Press in the "C" surface veil and roll it out until saturated.
6. After lining has hardened spark test with 15,000 to 20,000 volts and repair any holidays.
7. Apply topcoat which consists of two coats of catalyzed liquid, the final coat containing thin film curing aid.

CLEAN UP:

- Use T-410 Solvent, methyl ethyl ketone or lacquer thinner. **DO NOT USE ACETONE SOLVENT.**
- Clean up tools before the materials have hardened.

SAFETY:

- CEILCOTE 25,64,74 & 652 Linings contain polyester or vinyl ester resin and styrene monomer. The Hardener is an organic peroxide. CEILCOTE Linings have been formulated to optimize physical lining 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 ensure product safety.
- During application of CEILCOTE 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 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 safety storage practices by separating resins from hardeners, by keeping solvents and hardeners in a cool area free of sources of ignition, 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 Procedure 1.4I are available and should be consulted when handling products. These products are for industrial and professional use only; application directions must be followed.
- **FOR INDUSTRIAL AND PROFESSIONAL USE ONLY**

For additional 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

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