

### VAPOR RETARDER AND WEATHERPROOFING COATING FOR INTERIOR AND EXTERIOR APPLICATIONS

#### DESCRIPTION

ENCACEL® X CP-40 is an elastomeric, polymer-based coating designed for the protection of thermal insulation. ENCACEL® X CP-40 has good vapor retarder properties as well as excellent low temperature flexibility, resistance to chemicals and excellent weather barrier characteristics.

#### USES

ENCACEL® X CP-40 provides a tough, flexible, fire-resistant finish. It is recommended for hot and cold exterior applications where the chemical environment necessitates additional protection. **It is not to be used in direct contact with polystyrene foam insulation.** It may be used with most other types of insulation.

#### APPLICATION

ENCACEL® X CP-40 is applied by trowel. It has excellent bridging properties and will provide a smooth finish, even over relatively rough substrates. For optimum results, it is suggested that ENCACEL® X CP-40 be stored at a minimum of 50°F (10°C) before use. For spray or brush applications, the use of ENCACEL® V CP-45 is recommended.

Outdoor horizontal surfaces must always drain completely. A pitch of at least 1/2" per foot (4 cm/m) is recommended.

#### ADVANTAGES

- ENCACEL® X CP-40 has excellent tensile and elongation properties, which, coupled with good adhesion and cohesive qualities, make it especially suitable for equipment or systems that cycle.
- ENCACEL® X CP-40 will not check or crack in exterior applications.
- The cured film of ENCACEL® X CP-40 is fire resistive and tough, yet flexible.
- It is resistive to many acids and alkalis.

#### CERTIFIED

- This product has been tested according to ASTM E84 (Surface Burning Characteristics of Building Materials).

#### COLOR

CP-40: White  
CP-40-1: Gray

#### APPLICATION CONSISTENCY

Trowel or glove

#### WET WEIGHT (ASTM D1475)

10.4 lbs./U.S. gal. (1.3 kg/liter)

#### AVERAGE NON-VOLATILE (ASTM D2369)

40% to 44% by volume (60% by weight)

#### SERVICE TEMPERATURE RANGE

Temperature to which dry film is subjected.  
-50°F to 220°F (-46°C to 104°C)

#### APPLICATION AND STORAGE TEMPERATURE RANGE

40°F to 100°F (4°C to 38°C)

#### DRYING TIME

Drying time will vary depending upon film thickness, temperature and humidity.

To Touch: 5 Hours  
Through: 48 Hours

#### COVERAGE

Varies with substrate, service type and service temperature of system.  
5 gal./100 sq. ft. (2.0 l/m<sup>2</sup>) 0.080" (2.0 mm) wet film thickness

#### CLEAN UP

Xylene

#### WATER VAPOR PERMEANCE (TYPICAL AVERAGE)

ASTM F1249: 0.03 perms at 30 mils dry. Tested at 100°F (38°C) and 90% RH

ENCACEL® X CP-40 meets the permeance requirements of ASTM C755-19 for below ambient vapor retarder coatings.

#### SURFACE BURNING CHARACTERISTICS (ASTM E84)



#### GENERAL PURPOSE COATING SURFACE BURNING CHARACTERISTICS

Applied to 1/4" Inorganic Reinforced Cement Board

Flame Spread:	10
Smoke Developed:	15
Rate per Coat (sq. ft./gal.):	25
Number of Coats:	1
Flash Point of Liquid Coating (Closed Cup):	125°F (51.7°C)

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## GENERAL SPECIFICATIONS

Mastic finish over insulation shall be ENCACEL® X CP-40 Vapor Retarder Coating. It shall be applied in two coats, the first coat being a tack coat applied at a coverage rate of 2 U.S. gallons per 100 sq. ft. (0.81 l/m<sup>2</sup>) or 0.031" (0.8 mm) wet film thickness. While still wet, a layer of CHIL-GLAS® #10 Glass Fiber Reinforcing Mesh shall be embedded, with all fabric seams overlapped a minimum of 2" (5 cm). A finish coat, at a coverage rate of 3 U.S. gallons per 100 sq. ft. (1.22 l/m<sup>2</sup>) or 0.048" (1.2 mm), shall then be applied. There shall be no voids or holidays, and the mastic shall be troweled or wet-brushed to a smooth, even finish. When applied in this fashion, the wet film thickness shall equal 0.080" (2.0 mm), and the resulting dry film will equal at least 0.034" (0.9 mm).

All adjoining, uninsulated surfaces must be completely waterproofed and flashed by extending the ENCACEL® X CP-40 Vapor Retarder Coating and reinforcing mesh a minimum of 4" (10.16 cm) onto the adjoining surfaces. If those surfaces will attain temperatures between 180°F and 300°F (82°C to 149°C), use CHIL-BYL® CP-76 Joint Sealant as the flashing compound.

**When using a solvent-based vapor retarder coating such as ENCACEL® X CP-40, the joint sealant to be used shall be CHIL-BYL® CP-76.** CHIL-JOINT® CP-70 Joint Sealant may result in some discoloration of the dry film.

1. For areas subject to severe mechanical or physical abuse, tack coat coverage shall be 4 U.S. gallons per 100 sq. ft. (1.62 l/m<sup>2</sup>). The finish coat shall be applied at a coverage rate of 4 U.S. gallons per 100 sq. ft.
2. Alternate Finish for Cryogenic Design: Tack coat coverage shall be 3 gallons per 100 square feet (1.22 l/m<sup>2</sup>). Glass fiber reinforcing mesh shall be CHIL-GLAS® #10. The finish coat shall be applied at a coverage rate of 4 gallons per 100 sq. ft. (1.63 l/m<sup>2</sup>).

## INSPECTION

Where available, it is suggested to use a National Insulation Association (NIA) certified (or other similarly certified) mechanical insulation inspector throughout the project to inspect and verify the materials and total insulation system have been installed correctly in accordance with the specifications.

## Application Guide and Suggested Procedures

### 1. USE OF MATERIAL

ENCACEL® X CP-40 Vapor Retarder Coating is designed for trowel or palm applications. **DO NOT THIN.** ENCACEL® X CP-40, being solvent-based, is not harmed by freeze-thaw cycling. However, applications at temperatures below 40°F (4°C) will inhibit its normal drying cycle. ENCACEL® X CP-40 Vapor Retarder Coating will not freeze; however, it is recommended that long-period storage be done in a heated area. For large surface areas, ENCACEL® V CP-45 Vapor Retarder Coating is available for spray application.

### 2. THE CONDITION OF THE INSULATION TO BE COATED

The best coating in the world is no better than the surface to which it is applied. **Know the type and condition of the substrate.** ENCACEL® X CP-40 is a vapor retarder coating. It should **never** be applied over damp or wet insulation. ENCACEL® X CP-40 Vapor Retarder Coating can be used over hot insulation, but the following procedures must always be undertaken:

1. Surface to be coated must be thoroughly dry.
2. To assure proper bonding, fibrous and calcium silicate type insulations should be primed with Childers® CHIL-SEAL® CP-50A MV1 diluted 50% with water. The CHIL-SEAL® CP-50A MV1 Adhesive must be completely dry before applying ENCACEL® X CP-40 Vapor Retarder Coating.

### 3. APPLICATION

ENCACEL® X CP-40 Vapor Retarder Coating can be applied with trowel or glove. It is not self-leveling, but a smooth finish may be obtained by smoothing the surface with a clean brush dampened with detergent foam.

In applications where insulation has been fabricated with asphalt as the adhesive or where asphalt has been used as a joint sealant, there likely will be discoloration of the ENCACEL® X CP-40 Vapor Retarder Coating film. This discoloration will not affect the overall physical properties of the dry film; however, if the discoloration would be objectionable, use of an alternate sealant adhesive is suggested. Foster® 81-84NH Adhesive will not discolor the ENCACEL® X dry film.

## CUSTOMER SERVICE: (800) 832-9002

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