Childers®

Mastics, Coatings, Adhesives, Sealants

CP-45 ENCACEL® V Vapor Retarder Coating

Product Data Sheet

VAPOR RETARDER AND WEATHERPROOFING COATING FOR INTERIOR AND EXTERIOR APPLICATIONS

DESCRIPTION

ENCACEL® V CP-45 is an elastomeric, polymer-based, vapor retarder and weatherproofing coating designed for the protection of sprayed, board and block-type insulation. ENCACEL® V has outstanding adhesive properties and excellent flexibility, in addition to its superior vapor retarder characteristics.

USES

Finish for all cold insulation systems. It is also recommended for hot, exterior, sprayed polyurethane applications. In both cases, ENCACEL® V is used as the finish coat after flashing and sealing all metal protrusions throughout the surface of the insulation.

ENCACEL® V can be used as a decorative finish over closed-cell, flexible, cellular plastics. Care must be taken that the adhesive-bonded joint is not adversely affected by the solvent in the vapor retarder. **It is not to be used in direct contact with polystyrene foam insulation.**

APPLICATION

ENCACEL® V can be applied by spray or brush (for applying by glove or trowel, ENCACEL® X CP-40 vapor retarder coating is recommended). With its excellent bridging properties, ENCACEL® V will provide a smooth finish, even over relatively rough substrates. On large exterior surfaces, such as sprayed polyurethane foam, airless spray provides the most economical and efficient method of application. Over sprayed polyurethane foam, a two-coat, two-color system is suggested to eliminate voids and holidays. It is suggested that ENCACEL® V be stored at a minimum of 50°F (10°C) just prior to application to achieve optimum results. Outdoor horizontal surfaces must always drain completely. A pitch of at least 1/2" per foot (4 cm/m) is recommended.

ADVANTAGES

- ENCACEL® V vapor retarder coating will not check or crack in exterior applications.
- The cured film of ENCACEL® V is fire-resistive and tough, yet flexible.
- It is resistive to many acids and alkalis.
- The excellent spray characteristics of the product minimizes the possibility of "pin-holing", resulting in a uniform, monolithic film.

CERTIFIED

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

SURFACE BURNING CHARACTERISTICS (ASTM E84)

CLASSIFIED UL

GENERAL PURPOSE COATING
SURFACE BURNING CHARACTERISTICS

Applied to ¼" 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)

282U

COLOR

CP-45: White
CP-45-1: Gray

APPLICATION CONSISTENCY

Spray or brush

WET WEIGHT (ASTM D1475)

9.7 lbs./U.S. gal. (1.16 kg/liter)

AVERAGE NON-VOLATILE (ASTM D2369)

29% by volume (46% by weight)

SERVICE TEMPERATURE RANGE

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

APPLICATION 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: 3 – 4 Hours
Through: 24 hours

COVERAGE

Subject to the nature of material coated. Wet coverages shown below are for smooth, non-porous surfaces. Porous or rough surfaces will require higher gallonage to attain required dry thickness.

6 gal./100 sq. ft. (2.4 l/m^2) 0.096 inch (2.4 mm) wet film thickness. Equivalent dry thickness of 0.028 inch (0.7 mm).

Increase application rates for severe and cryogenic service.

CLEAN UP

Xylene or chlorinated solvent
(Dried ENCACEL® V is extremely difficult to remove)

WATER VAPOR PERMEANCE (TYPICAL AVERAGE)

ASTM E96, PROCEDURE A: 0.03 perms (0.02 metric perms) at 45 mils (1.1mm DFT)

ASTM F1249: 0.05 perms (0.033 metric perms) at 45 mils dry (1.1 mm). Tested at 100°F (38°C) and 90% RH.

ENCACEL® V CP-45 meets the permeance requirements of ASTM C755-19 for below ambient vapor retarder coatings.

WET FLAMMABILITY (ASTM D3278):

Flash Point: 103°F (39°C)

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Suggested Specifications ENCACEL® V CP-45

NOTES TO SPECIFYING ENGINEER

1. *Flashing*
   Prior to the application of the vapor retarder coating system, a complete flashing shall be provided at all metal-to-insulation joints and/or protrusions through the insulation. Uniformity of surface shall be made by cutting or shaving the insulation on these protrusions as necessary.
   A. By trowel, apply a 1/16" (0.15 cm) wet coat of CHIL-BYL® CP-76 Joint Sealant a minimum of 3" (7.62 cm) over insulation and metal protrusions.
   B. Embed CHIL-GLAS® #10 Glass Fiber Reinforcing Mesh into wet CHIL-BYL® CP-76 a minimum of 3" (7.62 cm) over insulation and metal protrusions.
   C. By trowel, apply a 1/8" (0.30 cm) coat of CHIL-BYL® CP-76 over the entire glass fiber reinforcing mesh.
   D. Allow a minimum of 24 hours drying time for the applied flashing system.
   E. Apply ENCACEL® V CP-45 Vapor Retarder Coating a minimum of 3" (7.62 cm) out over the insulation.
2. When using a solvent vapor retarder such as ENCACEL® V CP-45, the joint sealant to be used shall be CHIL-BYL® CP-76. CHIL-JOINT® CP-70 Joint Sealant should not be used for this application.
3. In applications where insulation has been fabricated with asphalt adhesive or where asphalt has been used as a joint sealant, there may be discoloration of the ENCACEL® V CP-45. This discoloration will not affect the overall physical properties of the dry film.
4. *Recommended Spraying Equipment*
   Normal surface irregularities of sprayed polyurethane foam require correct atomization of sprayed coatings in order to achieve uniformity of dry film thickness. ENCACEL® V CP-45 Coating can be sprayed with a variety of airless pump models. For spray equipment information, please consult Airless Spray Recommendations or contact your airless spray equipment supplier.

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

NORMAL SERVICE:
Apply a tack coat of Encacel V Coating at a thickness of 1/32 inch (0.8 mm). This is equivalent to 2 gal./100 sq. ft. (0.8 l/m^2). Embed Foster MAST-A-FAB® or CHIL-GLAS® #10 White Membrane into wet tack coat. Smooth membrane to avoid wrinkles and overlap all seams at least 2 inches (5 cm). Apply a finish coat of Encacel Coating at a minimum thickness of 1/16 inch (1.6 mm). This is equivalent to 4 gal./100 sq. ft. (1.6 l/m^2). This finish coat shall be applied no later than 2 hours after the tack coat and shall completely cover membrane. This application shall provide a minimum dry film thickness of 29 mils (0.7 mm).

SEVERE AND CRYOGENIC SERVICE:
After the first two coats have set, 24 hours minimum or until dry, apply an additional coat of Encacel Coating at a thickness of 3/64 inch (1.2 mm). This is equivalent to 3 gal./100 sq. ft. (1.2 l/m^2). This additional application shall provide a minimum dry film thickness of 42 mils (1.05 mm).

On rough or porous insulation surfaces additional product will be required to achieve the full surface dry film thickness. The application rate may need to be increased by up to 20% or more to achieve minimum film thicknesses. User shall determine required material based on specific substrates and application methods.

ON SPRAYED POLYURETHANE FOAM:
Many sprayed polyurethane foam systems are different; end user should always perform an adhesion test to ensure that the adhesion of Encacel V Coating to the foam insulation to be used is sufficient. If adhesion is not sufficient the sprayed polyurethane foam may need to be primed prior to the application of coating to improve adhesion. See FC-1T Guide Specification.

BRUSH:
Use a good brush, making strokes as long as possible over the surface. Multiple coats may be needed to achieve the minimum dry film thickness. Do not overwork.

CLEAN UP
Use xylol (flammable) or chlorinated solvent (non-flammable) for cleaning equipment. Dried Encacel Coating is extremely difficult to remove.

CUSTOMER SERVICE: 833-849-3700

For professional use only. Keep out of reach of children.
Consult Safety Data Sheet and container label for further information.