



Mastics, Coatings, Adhesives, Sealants

ENCACEL® V  
CP-45  
Vapor Barrier Coating

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

### DESCRIPTION

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

### USES

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

**It is not to be used in direct contact with polystyrene foam insulation.**

### APPLICATION

ENCACEL V Vapor Barrier Coating can be applied by spray or brush. (For applying by glove or trowel, ENCACEL X, CP-40, Vapor Barrier Coating is recommended.) With its excellent bridging properties, ENCACEL V Vapor Barrier Coating 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 Vapor Barrier Coating 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 Barrier Coating will not check or crack in exterior applications.
- The cured film of ENCACEL V Vapor Barrier Coating is fire-resistant and tough, yet flexible.
- It is resistive to many acids and alkalis.
- The excellent spray characteristics of the product minimizes the possibility of "pinholing", resulting in a uniform monolithic film.

### CERTIFIED

- Meets NFPA Standard 90-A and 90-B 25/50 requirements.
- This product has been tested according to ASTM E-84 (Surface Burning Characteristics of Building Materials).

CP-45 contains no asbestos, lead, mercury, or mercury compounds.

Visit us on the web at [www.fosterproducts.com](http://www.fosterproducts.com)

® and ™ Trademark of H.B. Fuller Construction Products Inc.

### COLOR

CP-45 White, Spray/Brush  
CP-45-1 Gray, Spray/Brush

### WET WEIGHT

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

### AVERAGE NON-VOLATILE

31% to 35% 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

Touch—3-4 hours  
Through—24 hours  
(Drying time will vary depending upon film thickness, temperature and humidity.)

### COVERAGE

6 gal./100 sq. ft. (2.4 l/sq. m)  
Varies with substrate and membrane

### CLEAN-UP

Xylene or Chlorinated solvent  
(Dried Encacel is extremely difficult to remove.)

### WATER VAPOR PERMEANCE

ASTM E 96, Method E, 0.025 perms  
(0.016 metric perms) at 51 mils dry (1.3mm)  
ASTM E-96 Procedure A, 0.018 perms (0.012 metric perms) at 26 mils (0.66mm) dry  
ASTM F 1249, 0.05 perms (0.033 metric perms) at 30 mils dry (0.8mm).  
Tested at 100°F (38°C) and 90% RH.



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/gallon):	25
Number of Coats	1
Flash point of liquid coating (closed cup):	125 F (51.7 C)
	282U

## H.B. Fuller Construction Products Inc.

Customer Service  
800-832-9002

1105 South Frontenac St.  
Aurora, IL 60504

Fax  
800-952-2368

## GENERAL SPECIFICATIONS

The insulation will be installed in accordance with manufacturer's recommendations and allowed to cure where necessary. The insulation shall be free of moisture, excessive rough texture, deteriorated surface, dirt, and debris. The coating shall be applied on the same day that the insulation is applied whenever possible.  
DO NOT THIN ENCACEL<sup>®</sup> V, CP-45.

1. *Specification for Vapor Barrier Finish for Low Temperature Tanks and Equipment (-40° to 50°F; -40°C to 10°C):* Mastic finish over the insulation shall be ENCACEL V CP-45 Vapor Barrier 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. (.81 l/sq. m.). While still wet, a layer of CHIL-GLAS<sup>®</sup> #10 Glass Fiber Reinforcing Mesh shall be applied with all fabric seams overlapped a minimum of 2" (5.08 cm). A finish coat, at a coverage rate of 4 U.S. gallons per 100 sq. ft. (1.62 l/sq. m) shall then be applied. This total coverage rate will result in a uniform, pinhole-free coat at a minimum dry film thickness of 32 mils (.032", .08 cm) on a smooth surface. There shall be no voids or holidays. This represents 6 U.S. gallons per 100 sq. ft. (2.43 l/sq. m). Rough surfaces such as cellular glass will require 3 to 6 additional gallons of material to achieve recommended dry film thickness.
2. *Specification for Cryogenic Design: (-40° to -300°F; -40° to -184°C):* After the first two coats have set, 24 hours minimum or until dry, apply an additional coat of Encacel V Coating at a thickness of 3/64 inch (1.2 mm). This is equivalent to 3 gal./100 sq. ft. (1.2 l/m<sup>2</sup>). This additional application shall provide a minimum dry film thickness of 48 mils (1.2mm).
3. *Specification for Vapor Barrier Finish for Low Temperature Tanks Piping and Equipment (-50°F to 50°F; -46°C to 10°C) for Sprayed Polyurethane Foam:* Over monolithic sprayed-on insulation, glass fiber reinforcing mesh shall not be used. Mastic finish over insulation shall be ENCACEL V CP-45 Vapor Barrier Coating as manufactured by H.B. Fuller construction Products Inc. Apply a uniform pinhole-free coat to a minimum dry film thickness of 32 mils (.032", .08 cm). It shall be applied in two coats (two contrasting colors preferred) using the cross hatch method at a coverage rate of 16 dry mils (.016", .04 cm) per coat. This represents 6 U.S. gallons per 100 sq. ft. (2.43 l/sq. m) coverage on a smooth surface. Rough surfaces will require 1 1/2 to 3 additional gallons of material to achieve recommended dry film millage. Sprayed Polyurethane Foam may be primed with Foster<sup>®</sup> 40-26<sup>™</sup> Waterbase Primer prior to the application of Vapor Barrier Coating to improve adhesion. Many sprayed polyurethane systems are different; end user should always perform an adhesion test to ensure that the adhesion of Vapor Barrier Coating and primer system with the foam insulation is sufficient.

4. *Specification for Weather Barrier Finish for Sprayed Polyurethane Insulations on tanks, piping, & equipment:* Over monolithic sprayed-on insulation, glass fiber reinforcing mesh should not be used. Mastic finish over insulation shall be ENCACEL V CP-45 Vapor Barrier Coating. It shall be applied in a uniform pinhole-free coat to a minimum dry film thickness of 32 mils (.032", .08 cm). This represents 6 U.S. gallons per 100 sq. ft. (2.43 l/sq. m) coverage on a smooth surface. Rough surfaces will require 1 1/2 to 3 additional gallons of material to achieve recommended dry film millage. Use contrasting colors for each coat. Sprayed Polyurethane Foam may be primed with Foster<sup>®</sup> 40-26<sup>™</sup> Waterbase Primer prior to the application of MONOLAR Coating to improve adhesion. Many sprayed polyurethane systems are different; end user should always perform an adhesion test to ensure that the adhesion of MONOLAR Coating and primer system with the foam insulation is sufficient.

Certain "hot" polyisocyanurate foams require a minimum four to six hours to complete their cure cycles. These foams should be coated within 24 hours after the cure cycle is completed. Consult your foam manufacturer for name and system number of "hot" foams.

## NOTES TO SPECIFYING ENGINEER

### Flashing:

1. Prior to the application of the vapor barrier 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. Apply by trowel a 1/16" (.15 cm) wet coat of CHIL-BYL<sup>®</sup> CP-76 Joint Sealant a minimum of 3" (7.62 cm) over insulation and metal protrusion.
  - B. Embed CHIL-GLAS #10 Glass Fiber Reinforcing Mesh into wet CHIL-BYL CP-76 Joint Sealant a minimum of 3" (7.62 cm) over insulation and metal protrusion.
  - C. Apply by trowel a 1/8" (.30 cm) coat of CHIL-BYL CP-76 Joint Sealant 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 Barrier Coating a minimum of 3" (7.62 cm) out over the insulation.
2. When using a solvent vapor barrier such as Encacel V CP-45, the joint sealant to be used shall be CHIL-BYL CP-76. CHIL-JOINT<sup>®</sup> CP-70 Joint Sealant should not be used for this application.
3. In applications where insulation has been fabricated with asphalt as the adhesive, or where asphalt has been used as a joint sealant, there may be discoloration of the ENCACEL V CP-45 Vapor Barrier Coating film. 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.

## CUSTOMER SERVICE—800-832-9002

IMPORTANT:H.B. Fuller Construction Products Inc. warrants that each of its products will be manufactured in accordance with the specifications in effect on the date of manufacture. WE MAKE NO OTHER WARRANTIES AND EXPRESSLY DISCLAIM ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. If a product fails to meet this limited warranty, purchaser's sole and exclusive remedy is replacement of the product or, at our option, refund of the purchase price. OUR ACCEPTANCE OF ANY ORDERS FOR THE PRODUCT IS EXPRESSLY CONDITIONAL UPON PURCHASER'S ASSENT TO THE TERMS ON THE APPLICABLE INVOICE.

ADEQUATE TESTS: The information contained herein we believe is correct to the best of our knowledge and tests. The recommendations and suggestions herein are made without guarantee or representation as to results. We recommend that adequate tests be performed by you to determine if this product meets all of your requirements. The warranted shelf life of our products is six months from date of shipment to the original purchaser.

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