



Mastics, Coatings, Adhesives, Sealants

VI-CRYL®

CP-10 (Trowel Grade)

CP-11 (Spray/Brush)

Weather Barrier Coatings

Product Data Sheet

## DURABLE, WATER-BASED, VINYL-ACRYLIC MASTIC COATING FOR THERMAL INSULATIONS

### DESCRIPTION

VI-CRYL® CP-10/11 weather barrier coating is a tough, durable and fire-resistive, water-based mastic for most types of thermal insulation and finishing and insulating cements. It is very thixotropic – it looks heavy, but spreads easily. It is available in a variety of standard colors. It is outdoor-rated and U.V. resistant.

### USES

VI-CRYL® CP-10/11 weather barrier coating is unsurpassed for the mechanical protection and weatherproofing of thermal insulation both outdoors and indoors in hot, cold and dual-temperature service. However, since it is a 'breather' coating (vapors under pressure will pass through it), it should only be used over insulations in low-temperature or dual-temperature service when the insulations themselves are vapor barriers. VI-CRYL® CP-10/11 has also found use throughout the thermal insulation industry as a coating used over closed cell polyethylene and polyurethane foam insulation. Industry experience has demonstrated that all weather barrier coatings may blister when applied over polystyrene board, but may be limited by use of white colored coatings. VI-CRYL® CP-10/11 weather barrier coating in its metallic gray color is the ideal companion product to aluminum and stainless steel jacketing.

### APPLICATION

VI-CRYL® CP-10/11 is easy to apply by trowel, brush or heavy-duty airless spray. Its thixotropic consistency yields a smooth, attractive finish even over rough substrates; it readily fills gaps and imperfections. CP-10/11 coating should be applied with glass fiber or synthetic reinforcing mesh.

### ADVANTAGES

- In the wet state, VI-CRYL® CP-10/11 weather barrier coating is non-flammable. It contains no solvents that will attack insulations or facings.
- The cured film is tough, flexible and resists most common chemicals and many solvents.
- Fire-resistive: its flame spread index being within the range of acceptance of government and industrial agencies.

### CERTIFIED

- MAS Certified Green®
- California Dept. of Public Health Standard Method v1.2
- VOC Emissions and Content requirements to contribute to **LEED v4** EQ Credit: Low Emitting Materials – Paints and Coatings
- VOC Content: 45 g/l, less water and exempt solvents
- Collaborative for High Performance Schools EQ 7.1
- Meets NFPA Standard 90-A and 90-B 25/50 requirements



### COLORS

	TROWEL	SPRAY/BRUSH
White	10	11
Metallic Gray	10-1	11-1
Black	10-2	11-2

### WET WEIGHT (ASTM D1475)

11.3 lbs./U.S. gal. (1.35 kg/liter)

### AVERAGE NON-VOLATILE (ASTM D2369)

51% by volume (64% by weight)

### SERVICE TEMPERATURE RANGE

Temperature to which dry coating is subjected.  
-40°F to 180°F (-40°C to 83°C)

### APPLICATION TEMPERATURE RANGE

40°F to 100°F (4°C to 38°C)

### DRYING TIME

Temperature, humidity and film thickness will affect drying time.  
To Touch: 2 – 4 Hours  
Through: 24 – 36 Hours

### COVERAGE

Varies with substrate and membrane.  
4 to 6 U.S. gal./100 sq. ft. (1.6 to 2.4 l/m<sup>2</sup>)

### CLEAN UP

Warm, soapy water (wet) or xylol (dry)

### WATER VAPOR PERMEANCE (TYPICAL AVERAGE)

ASTM E96, PROCEDURE B: Greater than 1.0 perms for 1/16" (0.16 cm) dry film thickness

### SURFACE BURNING CHARACTERISTICS (ASTM E84)

CLASSIFIED 	GENERAL PURPOSE COATING SURFACE BURNING CHARACTERISTICS 282U	
	Applied to 1/4" Inorganic Reinforced Cement Board	
Flame Spread:		10
Smoke Developed:		40
Rate per Coat (sq. ft./gal.):		16.7
Number of Coats:		1
Flash Point of Liquid Coating (Closed Cup):	No flash to boiling	
		R3593

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## H.B. Fuller Construction Products Inc.

Customer Service  
800-832-9002

1105 South Frontenac Street  
Aurora, IL 60504

Fax  
800-952-2368

MASTIC FINISH over insulation shall be VI-CRYL® CP-10/11 weather barrier coating. It shall be applied in two coats. For interior applications, a tack coat is to be applied at a rate of 2 gal. per 100 sq. ft. (0.8 l/m<sup>2</sup>). While the tack coat is still wet, a layer of CHIL-GLAS® #10 open weave glass fiber reinforcing mesh shall be embedded with all fabric seams overlapped a minimum of 2" (5.08 cm). A finish coat at a coverage of 2 gal. per 100 sq. ft. (0.8 l/m<sup>2</sup>) shall be applied, fully covering the glass fiber reinforcing mesh, so that the minimum dry film thickness is 1/32" (0.032") (0.8 mm). For exterior applications, increase finish coat to 4 gal. per 100 sq. ft. (1.6 l/m<sup>2</sup>) for a dry film thickness of 0.048" (1.2 mm). There shall be no voids or holidays and the mastic shall be trowelled, sprayed or wet-brushed to a smooth even finish.

All adjoining insulated or uninsulated surfaces must be completely waterproofed and flashed. To effectively seal those locations where the VI-CRYL® CP-10/11 coating meets adjoining insulated or uninsulated surfaces, or dissimilar weather-proofing materials, CHIL-JOINT® CP-76 sealant shall be applied as the sealing/flashing material. CHIL-JOINT® CP-76 shall be trowelled at 1/8" thickness a minimum of 1" in both directions back onto and over the complete joint interface of the VI-CRYL® CP-10/11 coating and the adjoining surface. CHIL-GLAS® #10 glass fiber reinforcing mesh is recommended to provide thickness control and strength at the joint interface.

## NOTES TO SPECIFYING ENGINEER

1. Synthetic fabrics may be substituted for CHIL-GLAS® #10 open weave glass cloth without affecting the application.
2. The above specification is for weather proofing and protection of insulation in HOT SERVICE or for COLD or DUAL TEMPERATURE SERVICE where the insulation and/or the insulation system forms an adequate vapor barrier prior to the application of the VI-CRYL® CP-10/11 coating.

## Application Guide and Suggested Procedures

### 1. USE OF MATERIAL

VI-CRYL® CP-10/11 weather barrier coating looks much heavier than it is. It is thixotropic. DO NOT THIN. Protect from freezing until dry. Keep stored over long periods of time in a heated area. For spray application, VI-CRYL® CP-10/11 coating must be kept at a minimum of 50°F (10°C) just prior to spraying to achieve optimum results.

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

VI-CRYL® CP-10/11 is a "breather coating", which means that it will allow reasonable amounts of water (in the form of vapor – a gas) to pass through it in a reasonable period of time. However, excessively wet insulation on equipment operating at elevated temperatures will cause excessive water vapor pressure, and therefore blistering of the finish. Make certain the insulation is dry prior to the application of any coating. **To obtain proper bonding, dusty surfaces shall first be primed with Chil-Seal® CP-50A MV1 diluted 50% with water.** When applying VI-CRYL® CP-10/11 coating over hygroscopic alkaline cements, first prime the surface of the cement with Chil-Seal® CP-50A MV1 diluted 50% with water and allow to dry completely before applying the finish coat. The presence of moisture in systems operating in cold service can completely destroy the effectiveness of not only the finish, but the entire insulation system. They MUST BE DRY. All exterior horizontal surfaces must be sloped at least 1/2 inch per foot (4 cm/m) to prevent ponding water.

### 3. HAND APPLICATION

Large flat areas are best covered by application with trowel or stiff brush. Smaller, irregular surfaces such as fittings are more readily covered by brushing. Airless spray may also be used.

### 4. SPRAY APPLICATION

VI-CRYL® CP-10/11 may be sprayed with many types of equipment, including airless spray. It may also be sprayed with conventional mastic spray equipment using an external atomizing spray gun. Many manufacturers of spray equipment can make detailed recommendations for any number of types of equipment. The spray equipment and techniques would be similar to those used for applying block fillers. For best results, we suggest at a minimum the following airless spray equipment (see spray equipment dealer for available packages):

PUMP	Graco Checkmate pump, 40:1 on 100cc lower, NXT2200 motor mounted on ram plate, Graco S20C – 5 gallon cart mounted ram
COMPRESSOR	Capable of 75 CFM and maintaining 100 PSIG
FLUID HOSE	High pressure capable of 4,000 PSI 1/2" inch up to 50 feet. 3/4 inch over 50 feet. Use 8' x 1/2" I.D. hose for coupling to the gun. A higher ratio pump set-up will allow for longer hose runs up to 150'
GUN	Graco Mastic or textured coating spray guns with Reverse-A-Clean tips
TIP SIZES	635 to 655

Most manufacturers of mastic spray equipment maintain nearby service facilities to aid in the solution of any technical problems that arise with their equipment.

### 5. DRYING AND RECOATING

A finish coat of VI-CRYL® CP-10/11 should be applied immediately after the tack coat and membrane application for maximum bond.

## CUSTOMER SERVICE: (800) 832-9002

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