



Mastics, Coatings, Adhesives, Sealants

# CHIL-OUT™ CP-33 Vapor Retarder Coating

## INDOOR & OUTDOOR WATER BASED VAPOR RETARDER COATING

### DESCRIPTION

CP-33 is a water-based vapor retarder coating for insulation on interior and exterior, low temperature and some dual temperature applications such as chilled water and refrigerated pipe lines, HVAC ducts and low temperature equipment. It is fast drying and forms a tough, flexible dry film which protects insulated surfaces and helps retard the flow of vapor through an insulation system. It has a smooth, creamy consistency that spreads easily and can be applied in a relatively heavy coating or brushed out into a thin, smooth film.

### USES

CP-33 can be used on most types of thermal insulations in both cold and dual temperature service. It is used to vapor seal the seams, overlaps and punctures from pins and staples in FSK, ASJ, white paper and polyester vapor barrier facings on insulation boards, duct wrap and pipe covering. It may also be used to seal cut ends of insulation to prevent moisture ingress and fiber release. It is compatible with fiber glass, mineral fiber, cellular glass, polyisocyanurate, polyurethane, polystyrene, phenolic, rubber foam and other insulations.

### APPLICATION

CP-33 features easy application by trowel or brush. It may be applied with Chil-Glas #10, glass fiber reinforcing mesh to increase film strength. See reverse side for application information.

### ADVANTAGES

- Water-based for personal and environmental safety.
- Fast drying contributes to maximum production rates.
- Non-flammable - safe for transport, storage and usage.
- Quick and efficient clean-up of tools and metal with warm water before coating completely dries.
- Outdoor rated and U.V. resistant.

### CERTIFIED

- Meets NFPA Standard 90-A and 90-B 25/50 requirements as a closure mastic.
- Meets requirements for LEED IEQ 4.2 Low-Emitting Materials, Paints and Coatings. VOC: 49 g/l, less water and exempt solvents.

### COLOR

White

### AVERAGE WET WEIGHT

11.9 lbs. / U.S. gal. (1.4 kg/liter)

### AVERAGE NON-VOLATILE

55% by volume. 68.5% by weight.

### SERVICE TEMPERATURE RANGE

(Temperature to which dry film is subjected.)  
-20°F to 190°F (-29°C to 88°C)

### APPLICATION & STORAGE 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 -- 3 Hours  
Through -- 24 Hours

### COVERAGE

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

### CLEAN-UP

Warm, soapy water while coating is still wet.

### WATER VAPOR PERMEANCE (TYPICAL AVERAGE)

ASTM F 1249: 0.15 Perms (0.10 metric perms) @ 28-53 mils (1.1 -1.27 mm) Dry film thickness. Tested at 73°F, 50% RH

ASTM E 96, PROCEDURE A: 0.15 perms (0.10 metric perms) @ 50 mils (1.25 mm) dft

### SURFACE BURNING CHARACTERISTICS ASTM E-84

Flame Spread 5

Smoke Developed 0

Tested as applied in a 4 in. strip at a rate of 25 sq. ft./U.S. gallon to inorganic reinforced cement board

CP-33 contains no asbestos, lead, mercury, or mercury compounds.

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# Suggested Specifications

# Childers CP-33

## **FOR VAPOR SEALING INSULATION ON LOW TEMPERATURE EQUIPMENT, CHILLED WATER OR REFRIGERATED PIPING AND FITTINGS, HVAC DUCTBOARD AND DUCT WRAP.**

The insulation on all piping, fittings, and equipment shall be vapor sealed with CP-33 Vapor Retarder Coating. The first coat shall be a tack coat applied at a coverage rate of 2 U.S. gals./100 sq. ft. (0.8 l/sq. m). While still wet a layer of Chil-Glas #10 glass fiber reinforcing mesh shall be embedded, with all seams overlapped a minimum of 2" (5.08cm). A finish coat at a coverage rate of 2 U.S. gals./100 sq. ft. (0.8 l/sq. m.) shall be applied so that the total wet film thickness is a minimum of 0.064". This will provide a minimum dry film thickness of 0.035".

## **NOTES TO SPECIFYING ENGINEER**

1. COP-33 Vapor Retarder Coating, white, should be specified where white All Service Jacketing (ASJ), or other white coatings / finishes are specified on the adjoining pipe or equipment insulation.
2. CHIL-BYL CP-76 or Chil-joint CP-70 joint sealant is recommended for use with CP-33 Vapor Retarder Coating. Confirm compatibility of joint sealant with insulation before choosing.
3. Do not use over copper clad wire.
4. All outdoor horizontal surfaces must be sloped at least 1/2 inch per foot to assure water run-off and prevent the ponding of rain water and melting snow or ice.

## **Application Guide and Suggested Procedures**

### **1. USE OF MATERIAL**

DO NOT THIN. Store the product in a warm and dry area. Protect from freezing until dry.

It is essential in applying vapor retarder sealing materials that the recommended film thickness be achieved. Therefore, do not try to spread the vapor retarder coating too thin.

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

Since CP-33 is a vapor retarder, it should never be applied over insulation containing moisture. Dusty or porous substrates should first be primed with Chil-Seal CP-50A MV1, diluted 50% with water for proper bonding. Allow the primer to thoroughly dry before over-coating with CP-33 vapor retarder coating.

### **3. HINTS FOR SUCCESS**

A vapor retarder system is no better than its weakest link. It is extremely important that where the finish terminates at an uninsulated point, the finish of CP-33 Vapor Retarder Coating and glass fiber reinforcing mesh be flashed over the uninsulated section for a minimum of 4" (10.16 cm).

Where there is a possibility of the temperature of the uninsulated section exceeding 190°F (88°C) due to steam-off or other heated application, the vapor sealing at this joint shall be accomplished by using Chil-Byl CP-76 joint sealant.

The surface of extruded polystyrene and polyisocyanurate board stock may contain water soluble inks that may bleed through water based mastics. Test before applying CP-33 vapor retarder coating.

## **CUSTOMER SERVICE: 800-832-9002**

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