

# **CP-33 CHIL-OUT**<sup>™</sup> Vapor Retarder Coating

**Product Data Sheet** 

# INDOOR & OUTDOOR WATER-BASED, VAPOR RETARDER COATING

#### **DESCRIPTION**

CP-33 is a water-based, vapor retarder coating for insulation on interior, exterior, low temperature, 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 retarder 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 of product data sheet 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 cleanup of tools and metal with warm water before coating completely dries.
- Outdoor rated and UV resistant.

#### **CERTIFIED**

- MAS Certified Green<sup>®</sup>
- 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: 49 g/l, less water and exempt solvents
- Collaborative for High Performance Schools EQ 7.1
- Meets NFPA Standard 90A and 90B 25/50 requirements as a closure mastic





#### COLOR

White

#### **AVERAGE WET WEIGHT (ASTM D1475)**

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

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

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/m²)

#### CLEAN UP

Warm, soapy water while coating is still wet.

# WATER VAPOR PERMEANCE (TYPICAL AVERAGE) Tested with reinforcing mesh.

ASTM F1249: 0.15 perms (0.10 metric perms) at 28 – 53 mils (1.1 – 1.27 mm) dry film thickness. Tested at 73°F, 50% RH.

ASTM E96, PROCEDURE A: 0.15 perms (0.10 metric perms) at 50 mils (1.25 mm) dry film thickness.

Meets the permeance requirements of ASTM C755-19, Section 7.2.2 for below ambient vapor retarder coatings when used as a closure mastic in conjunction with ASJ and other vapor retarder membranes.

#### **SURFACE BURNING CHARACTERISTICS (ASTM E84)**

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.

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### Suggested Specifications

# Childers® CHIL-OUT™ CP-33

# To seal seams, overlaps, punctures, penetrations and terminations of vapor retarder membrane jacketing:

CP-33 Vapor Retarder Coating shall be applied with a first tack coat applied at a coverage rate of 2 U.S. gals./100 sq. ft. (0.8 l/m²). While still wet, a layer of CHIL-GLAS® #10 Glass Fiber Reinforcing Mesh shall be embedded, with all seams overlapped a minimum of 2" (5.08 cm). A finish coat at a coverage rate of 2 U.S. gals./100 sq. ft. (0.8 l/m²) 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. CP-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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For professional use only. Keep out of reach of children.

Consult Safety Data Sheet and container label for further information.