



**Guide to**  
***Mastics,***  
***Coatings,***  
***Adhesives***  
***& Sealants***  
**for the**  
**Thermal**  
**Insulation**  
**Industry**

**Childers**<sup>®</sup>

# Selection Guide to Childers® Products

## Mastics, Coatings, Adhesives and Sealants

### Weather Barrier Coatings

“Breather” type for above ambient temperatures and Vapor Barrier type for below ambient temperatures.

GLASS FIBER/MINERAL WOOL/CELLULAR GLASS/POLYURETHANE/POLYISOCYANURATE/PHENOLIC FOAM INSULATIONS			
Pipings, Fittings, Vessels and Equipment Operating at:		Air-Conditioning and Dual-Temperature Ducts*	Warm Air Ducts
Below Ambient	Above Ambient		
<b>OUTDOOR AND HEAVY-DUTY INDOOR</b>			
Encacel® X/V CP-40/45	Ak-Cryl™ CP-9	Encacel® X/V CP-40/45	Ak-Cryl™ CP-9
Chil-Pruf™ CP-22/24	Vi-Cryl® CP-10/11	Chil-Perm® WB CP-35	Vi-Cryl® CP-10/11
		Chil-Pruf™ CP-22/24	
<b>INDOOR</b>			
Chil-Perm® CP-30 Low Odor	Ak-Cryl™ CP-9	Chil-Perm® WB CP-35	Ak-Cryl™ CP-9
Chil-Perm® WB CP-35	Vi-Cryl® CP-10/11	Vapor Retarder Coating CP-34	Vi-Cryl® CP-10/11
Vapor Retarder Coating CP-34	Chil-Seal® CP-50AMV1/ CP-50AHV2	Chil-Seal® CP-50AMV1/ CP-50AHV2**	Chil-Seal® CP-50AMV1/ CP-50AHV2

\*Ak-Cryl™ CP-9 and Vi-Cryl® CP-10/11 may also be used in most sloped dual temperature duct applications where insulation facing provides a vapor barrier.

\*\*Chil-Seal® CP-50AMV1 and CP-50AHV2 may be used on dual temperature duct applications where insulation facing provides a vapor barrier.

EXTRUDED AND EXPANDED POLYSTYRENE INSULATIONS			
Pipings, Fittings, Vessels and Equipment Operating at:		Air-Conditioning and Dual-Temperature Ducts*	Warm Air Ducts
Below Ambient	Above Ambient		
<b>OUTDOOR AND HEAVY-DUTY INDOOR</b>			
Chil-Perm® WB CP-35	Ak-Cryl™ CP-9	Chil-Perm® WB CP-35	Ak-Cryl™ CP-9
Vapor Retarder Coating CP-34	Vi-Cryl® CP-10/11		Vi-Cryl® CP-10/11
<b>INDOOR</b>			
Chil-Perm® WB CP-35	Ak-Cryl™ CP-9	Chil-Perm® WB CP-35	Ak-Cryl™ CP-9
Vapor Retarder Coating CP-34	Vi-Cryl® CP-10/11	Vapor Retarder Coating CP-34	Vi-Cryl® CP-10/11
	Chil-Seal® CP-50AMV1/ CP-50AHV2		Chil-Seal® CP-50AMV1/ CP-50AHV2

\*Ak-Cryl™ CP-9 and Vi-Cryl® CP-10/11 may also be used in most sloped dual temperature duct applications where insulation facing provides a vapor barrier.

CALCIUM SILICATE AND PERLITE INSULATIONS	
Pipings, Fittings, Vessels and Equipment Operating Above Ambient	
Normal Service	Heavy-Duty Service
<b>OUTDOOR</b>	
Ak-Cryl™ CP-9	Ak-Cryl™ CP-9
Vi-Cryl® CP-10/11	Vi-Cryl® CP-10/11
Chil-Brate™ CP-25	Chil-Brate™ CP-25
<b>INDOOR</b>	
Chil-Seal® CP-50AMV1/ CP-50AHV2	Ak-Cryl™ CP-9
	Vi-Cryl® CP-10/11

**NOTE:** If insulating cements are used, the cement must be completely dry. Prime the dry cement or dusty surfaces, such as calcium silicate, with Childers® Chil-Seal® CP-50AMV1 diluted 50% with water and allow to completely dry prior to the application of either Ak-Cryl™ CP-9 or Vi-Cryl® CP-10/11 weather barrier coatings.

# Adhesives and Sealants

GLASS FIBER AND MINERAL WOOL INSULATIONS				
Adhering insulation to tanks, vessels, equipment, ducts	Adhering insulation to itself for piping, fittings	Sealing joints of piping, tanks, vessels, equipment	Lagging/Adhering Canvas / Glass Cloth	Sealing Laps of ASJ, FSK Vapor Barrier Facings
Chil-Stix® FRN CP-82 (Brush) Chil-Stix® Clear CP-85 (Brush) Chil-Spray® NF CP-89 (Spray) Chil-Grip™ CP-124	Chil-Stix® FRN CP-82 (Brush) Chil-Stix® Clear CP-85 (Brush)	Not Applicable	Chil-Seal® CP-50AMV1/ CP-50AHV2	Chil-Stix® FRN CP-82 Chil-Stix® Clear CP-85

PHENOLIC FOAM, POLYURETHANE, AND POLYISOCYANURATE INSULATIONS				
Adhering insulation to tanks, vessels, equipment, ducts	Adhering insulation to itself for piping, fittings	Sealing joints of piping, tanks, vessels, equipment	Lagging/Adhering Canvas / Glass Cloth	Sealing Laps of ASJ, FSK Vapor Barrier Facings
Chil-Stix® FRN CP-82 (Brush) Chil-Stix® Clear CP-85 (Brush) Chil-Spray® NF CP-89 (Spray) Chil-Rene™ CP-96 (Trowel) Chil-Grip™ CP-124	Chil-Rene™ CP-96 (Trowel)	Chil-Joint® CP-70** Chil-Byl® CP-76	Chil-Seal® CP-50AMV1/ CP-50AHV2	Chil-Stix® FRN CP-82 Chil-Stix® Clear CP-85

EXTRUDED AND EXPANDED POLYSTYRENE INSULATIONS				
Adhering insulation to tanks, vessels, equipment, ducts	Adhering insulation to itself for piping, fittings	Sealing joints of piping, tanks, vessels, equipment	Lagging/Adhering Canvas / Glass Cloth	Sealing Laps of ASJ, FSK Vapor Barrier Facings
Chil-Rene™ CP-96 (Trowel)*	Chil-Rene™ CP-96 (Trowel)*	Chil-Joint® CP-70	Chil-Seal® CP-50AMV1/ CP-50AHV2	Inquire

\*After applying Chil-Rene™ CP-96 solvent must be allowed to flash off before bonding.

CELLULAR GLASS INSULATIONS				
Adhering insulation to tanks, vessels, equipment, ducts	Adhering insulation to itself for piping, fittings	Sealing joints of piping, tanks, vessels, equipment	Lagging/Adhering Canvas / Glass Cloth	Sealing Laps of ASJ, FSK Vapor Barrier Facings
Inquire	Inquire	Chil-Joint® CP-70** Chil-Byl® CP-76	Not Applicable	Chil-Stix® FRN CP-82 Chil-Stix® Clear CP-85

CALCIUM SILICATE AND EXPANDED PERLITE INSULATIONS				
Adhering insulation to tanks, vessels, equipment, ducts	Adhering insulation to itself for piping, fittings	Sealing joints of piping, tanks, vessels, equipment	Lagging/Adhering Canvas / Glass Cloth	Sealing Laps of ASJ, FSK Vapor Barrier Facings
Fibrous Adhesive CP-97	Fibrous Adhesive CP-97	Not Applicable	Chil-Seal® CP-50AMV1/ CP-50AHV2	Not Applicable

\*\* Not to be used underneath solvent-based vapor barrier coatings if minor surface discoloration would be objectionable.

## General Information

1. Recommendations made in this selection and specification guide to Childers® Mastics, Coatings, Adhesives and Sealants are general in nature and scope. Please refer to the individual Product Data Sheet for complete product information and recommendations to assure proper product selection.
2. Adhesive use should be predicated upon the user testing the suitability of the adhesive for the particular insulation and application desired.
3. Weather barrier coatings, when applied outdoors, should always be applied over sloped horizontal surfaces to prevent ponding water. Industry experience has demonstrated that all weather barrier coatings may blister when applied over skinned extruded polystyrene board. Also, a white color should always be used.

Name	General Description	Insulation Application	Volatile Component	Product Application	
<b>Childers® CP-9 Ak-Cryl™</b>	Weatherproofing coating/mastic that is tough, durable, fire-resistive. Used as mechanical protection and weatherproofing of thermal insulations, indoors and outdoors, for piping, tanks, fittings, vessels, equipment, and other irregularly shaped objects.	Hot service and dual temperature	Water	Trowel Brush Spray	
<b>Childers® CP-10/11 Vi-Cryl®</b>	High performance weather barrier mastic/coating that is tough, durable and fire-resistive. Used as weatherproofing and mechanical protection of thermal insulations, indoors and outdoors, for piping, tanks, fittings, vessels, equipment, and other irregularly shaped objects.	Hot service and dual temperature	Water	Trowel Brush Spray	
<b>Childers® CP-22/24 Chil-Pruf™</b>	Asphalt-based combustible fibrated cutback vapor barrier and weather barrier insulation coating. The cured film forms a highly vapor retardant, tough, durable, and well bonded finish. Used over insulations (except polystyrene) to protect piping, tanks, fittings, and vessels. Also protects insulation on underground piping.	Cold service and dual temperature	Solvent	Trowel Brush Spray	
<b>Childers® CP-25 Chil-Brate™</b>	Water-based fibrated asphalt emulsion breathing weather barrier insulation coating. Fire retardant, tough, and durable. Protects against corrosives, chemical dusts, fumes, fogs, and moisture. Used over all types of insulations to protect piping, fittings, tanks, and vessels. Not recommended for ponded water areas.	Hot service	Water	Trowel Spray	
<b>Childers® CP-30 Low Odor Chil-Perm®</b>	Extremely effective vapor barrier coating for low temperature interior application. Combustible. Provides a tough, flexible, fire resistant, dry film resistant to most acids and alkalis. Used over low temperature insulations (except polystyrene) for pipings, fittings, tanks.	Cold service	Solvent	Trowel Brush	
<b>Childers® CP-34 Vapor Retarder Coating</b>	Water-based vapor retardant coating for use over ASJ, FRK, FSK and other jacketing and board facings to give a vapor retarding seal at joints, laps and weld pin punctures. For use with insulation on pipes, vessels, ducts, and equipment operating between 32°F (0°C) and ambient temperatures.	Cold service	Water	Brush Spray	
<b>Childers® CP-35 Chil-Perm® WB</b>	A high performance water-based vapor retarder coating for low temperature interior and exterior applications. Provides a tough, flexible, dry film. Used over all low temperature insulations for piping, fittings, tanks. Not recommended for ponded water areas.	Cold service	Water	Trowel Brush Spray	
<b>Childers® CP-40 Encacel® X</b>	Trowelable elastomeric combustible vapor barrier coating. Fire resistant dry film with excellent adhesion and flexibility. The ultimate vapor barrier coating for interior and exterior applications. Used over low temperature insulations (except polystyrene) for spheres, tanks, piping, and fittings.	Cold service and dual temperature	Solvent	Trowel	
<b>Childers® CP-45 Encacel® V</b>	Sprayable elastomeric combustible vapor barrier coating. Fire resistant dry film with excellent adhesion and flexibility. The ultimate vapor barrier coating for interior and exterior applications. Used over low temperature insulations (except polystyrene) for spheres, tanks, piping, and fittings. Also used for exterior sprayed polyurethane applications.	Cold service and dual temperature	Solvent	Brush Spray	
<b>Childers® CP-50A MV1 Chil-Seal®</b>	Combination coating and lagging adhesive. Water-based and fire-resistive when dry. Used to adhere fabrics (canvas and brattice cloth) to round and rectangular insulated ductwork and to adhere laps of fabrics to themselves and underlying pipe insulations.	Hot service and dual temperature	Water	Brush Spray	
<b>Childers® CP-50A HV2 Chil-Seal®</b>	A high viscosity combination coating and lagging adhesive. Water-based and fire-resistive when dry. Can be applied to overhead and vertical surfaces. Used to adhere fabrics (canvas and brattice cloth) to round and rectangular insulated ductwork and to adhere laps of fabrics to themselves and underlying pipe insulations.	Hot service and dual temperature	Water	Trowel Brush Spray	

Color	Coverage	Service Temperature	Perm Rating	Reinforcing Mesh	Clean-up	Specification Met
White, <i>Special Colors Available</i>	6 U.S. Gal./ 100 sq. ft. (.063" DFT) (2.4 l/sq. m) (.16 cm DFT)	-40°F to 180°F (-40°C to 82°C)	Greater than 1.0 Perm for 1/16" dry film (Breather)	Chil-Glas® #10	Water	U.L. Classified and tested according to ASTM E-84. Meets NFPA Standard 90-A and 90-B 25/50 requirements.
White, Gray, Black, <i>Special Colors Available</i>	6 U.S. Gal./ 100 sq. ft. (.063" DFT) (2.4 l/sq. m) (.16 cm DFT)	-40°F to 180°F (-40°C to 82°C)	Greater than 1.0 Perm for 1/16" dry film (Breather)	Chil-Glas® #10	Water	U.L. Classified and tested according to ASTM E-84. Meets NFPA Standard 90-A and 90-B 25/50 requirements.
Black	10-13 U.S. Gal./ 100 sq. ft. (4-5.2 l/sq. m)  Varies with substrate and membrane	-60°F to 325°F (-51°C to 163°C)	.02 to .03 Perms (Procedure E) at .094" film thickness	Chil-Glas® #5 Chil-Glas® #10	Mineral Spirits or Chlorinated Solvents	Tested in accordance with ASTM E-84.
Black	15 U.S. Gal./ 100 sq. ft. (6.15 l/sq. m)  Varies with substrate and membrane	-20°F to 200°F (-29°C to 93°C)		Chil-Glas® #5 Chil-Glas® #10	Water	
White	4 U.S. Gal./ 100 sq. ft. (.020" DFT) (1.6 l/sq. m) (.096 cm DFT)	-40°F to 190°F (-40°C to 88°C)	Less than .02 Perms at .02" film thickness	Chil-Glas® #10	Xylene or Chlorinated Solvents	U.L. Classified and tested according to ASTM E-84. Meets NFPA Standard 90-A and 90-B 25/50 requirements. Qualification under U.S. Coast Guard specification 164.012.
White	4 U.S. Gal./ 100 sq. ft. (.038" DFT) (1.6 l/sq. m) (.096 cm DFT)	-20°F to 180°F (-29°C to 82°C)	.08 Perms at .045" film thickness	Chil-Glas® #10	Water	Tested in accordance with ASTM E-84. Meets NFPA Standard 90-A and 90-B 25/50 requirements when used to seal laps in vapor barrier facings.
White	4 U.S. Gal./ 100 sq. ft. (.038" DFT) (1.6 l/sq. m) (.096 cm DFT)	-20°F to 190°F (-29°C to 88°C)	Less than .08 Perms at .055" film thickness	Chil-Glas® #10	Water	Tested in accordance with ASTM E-84. Meets NFPA Standard 90-A and 90-B 25/50 requirements.
White, Gray, <i>Special Colors Available</i>	5 U.S. Gal./ 100 sq. ft. (.038" DFT) (2.4 l/sq. m) (.096 cm DFT)	-40°F to 190°F (-40°C to 88°C)	Less than .06 Perms at .035" film thickness	Chil-Glas® #10	Xylene or Chlorinated Solvents	U.L. Classified and tested according to ASTM E-84. Meets NFPA Standard 90-A and 90-B 25/50 requirements. Qualification under U.S. Coast Guard specification 164.012.
White, Gray, <i>Special Colors Available</i>	6 U.S. Gal./ 100 sq. ft. (.030" DFT) (2.4 l/sq. m) (.08 cm DFT)	-40°F to 190°F (-40°C to 88°C)	Less than .07 Perms at .027" film thickness	Chil-Glas® #10	Xylene or Chlorinated Solvents	U.L. Classified and tested according to ASTM E-84. Meets NFPA Standard 90-A and 90-B 25/50 requirements. Qualification under U.S. Coast Guard specification 164.012.
White	1-1.25 U.S. Gal./ 100 sq. ft. per coat (.41-.51 l/sq. m) on Fabrics	-20°F to 180°F (-29°C to 82°C)	1.0 Perms	Canvas, Brattice Cloth, Glass Fiber	Water	Tested in accordance with ASTM E-84. Meets NFPA Standard 90-A and 90-B 25/50 requirements.
White	1-1.25 U.S. Gal./ 100 sq. ft. per coat (.41-.51 l/sq. m) on Fabrics	-20°F to 180°F (-29°C to 82°C)	1.0 Perms	Canvas, Brattice Cloth, Glass Fiber	Water	U.L. Classified and tested according to ASTM E-84. Meets NFPA Standard 90-A and 90-B 25/50 requirements. MIL SPEC MIL-A-3316C, Class 1, Grade A. Qualification under U.S. Coast Guard specification 164.012.

Name	General Description	Insulation Application	Volatile Component	Product Application	
<b>Childers® CP-70 Chil-Joint®</b>	Flexible sealant, flashing compound and vapor seal. Non-shrinking, skins over, permanently flexible. Used to vapor seal and act as an expansion joint in joints of cellular glass and cellular plastic insulations.	Cold service, dual temperature, some hot service	Solvent	Trowel Extrusion	
<b>Childers® CP-76 Chil-Byl®</b>	Flexible sealant and elastomeric vapor barrier. Resists ultra violet, water soak, vibrational stress. Permanently flexible. Used to vapor seal and act as an expansion joint in joints of cellular glass and cellular plastic insulations. Also used as sealant for joints in metal jacketing and metal curtainwall panels and sheets.	Cold service, dual temperature, some hot service	Solvent	Trowel Extrusion	
<b>Childers® CP-79 Chil-Lastic™</b>	High temperature asphalt sealant and coating operating up to 350°F (177°C). Forms a tough, durable, and heavy film. Used as flashing to seal boiler settings to prevent air infiltration. Also used in refractory applications.	Hot service	Solvent	Trowel Spray	
<b>Childers® CP-82 Chil-Stix® FRN</b>	A high strength neoprene contact adhesive. Non-flammable wet, fire-resistive dry. Used to bond impermeable surfaces together. Also used to adhere insulations (except polystyrene) to sheet metal and ductwork. Adheres laps of vapor barrier facings and jackets.	Cold service and hot service	Solvent	Brush	
<b>Childers® CP-85 Chil-Stix® Clear</b>	Adhesive for flexible blanket insulations, fibrous glass, some plastic foams. Flammable. Quick setting, fire-resistive, permanently flexible, quick initial grab. Used to bond impermeable surfaces together. Also used to adhere insulations (except polystyrene) to sheet metal and ductwork.	Cold service and hot service	Solvent	Brush	
<b>Childers® CP-89 Chil-Spray® NF</b>	Spray adhesive. Non-flammable wet and fire-resistive dry. Sprays without misting and has a high coverage rate. Used to bond impermeable surfaces together. Also used to adhere insulations (except polystyrene) to sheet metal and ductwork.	Cold service and some hot service	Solvent	Spray	
<b>Childers® CP-96 Chil-Rene™</b>	High strength fast grab synthetic rubber and resin adhesive. Flammable. Bonds polystyrene and urethane insulations to themselves and other structural surfaces such as aluminum, stainless steel, galvanized steel, concrete block, ceramic tile, masonry, drywall, wood, and gypsum board. Ideal for cold storage applications.	Cold service and some hot service	Solvent	Trowel	
<b>Childers® CP-97 Fibrous Adhesive</b>	A sodium silicate-based adhesive of exceptional strength. Non-flammable wet and totally incombustible dry. Bonds calcium silicate and expanded perlite to themselves and to other non-porous surfaces.	Hot service	Water	Trowel	
<b>Childers® CP-124 Chil-Grip™</b>	Spray adhesive. Fast tacking, fire-resistive, sprays without misting, high coverage rate. Flammable. Used to bond impermeable surfaces together. Also used to adhere insulations (except polystyrene) to sheet metal and ductwork.	Cold service and hot service	Solvent	Spray	

Color	Coverage	Service Temperature	Perm Rating	Reinforcing Mesh	Clean-up	Specification Met
Gray	<i>For 1" x 1/8" Joint:</i> 154 Lin. ft./U.S. Gal. (12 m/l for 2.5 cm x .31 cm) <i>For 1/8" Beads:</i> 1232 Lin. ft./U.S. Gal. (99 m/l for .31 cm Bead)	-100°F to 300°F (-73°C to 149°C)	Too small to measure through a 1" joint x 1/8" wide		Mineral Spirits or Chlorinated Solvents	
White, Gray	<i>For 1" x 1/8" Joint:</i> 154 Lin. ft./U.S. Gal. (12 m/l for 2.5 cm x .31 cm) <i>For 1/8" Beads:</i> 1232 Lin. ft./U.S. Gal. (99 m/l for .31 cm Bead)	-100°F to 300°F (-73°C to 149°C)	Too small to measure through a 1" joint x 1/8" wide		Mineral Spirits or Chlorinated Solvents	Tested according to ASTM E-84. Meets NFPA Standard 90-A and 90-B 25/50 requirements.
Black	8-10 U.S. Gal./ 100 sq. ft. (3.2-4.1 l/sq. m)	-75°F to 350°F (-59°C to 177°C)	.01 Perms	Chil-Glas® #5 Chil-Glas® #10	Mineral Spirits or Chlorinated Solvents	
Light Tan	<i>For Insulation:</i> 150-250 sq. ft./ U.S. Gal. (3.6-6.1 sq. m/l) <i>For Laps:</i> 600-750 Lin. ft./ U.S. Gal. (48-60 m/l)	-30°F to 200°F (-34°C to 93°C)			Chlorinated Solvents	U.L. Classified and tested according to ASTM E-84. Meets NFPA Standard 90-A and 90-B 25/50 requirements. Meets ASTM C-916, Type 1.
Clear, Amber	<i>For Insulation:</i> 200-250 sq. ft./ U.S. Gal. (4.9-6.1 sq. m/l) <i>For Laps:</i> 500-600 Lin. ft./ U.S. Gal. (40-48 m/l)	-20°F to 200°F (-29°C to 93°C)			Xylene or Chlorinated Solvents	U.L. Classified and tested according to ASTM E-84. Meets NFPA Standard 90-A and 90-B 25/50 requirements. Meets ASTM C-916, Type 4.
Blue	(Applied to metal) 450-600 sq. ft./ U.S. Gal. (11-14.7 sq. m/l)	-30°F to 200°F (-29°C to 93°C)			Chlorinated Solvents	U.L. Classified and tested according to ASTM E-84. Meets NFPA Standard 90-A and 90-B 25/50 requirements. Meets ASTM C-916, Type 2.
Light Tan	60 sq. ft./U.S. Gal. (1.5 sq. m/l)	-20°F to 180°F (-29°C to 82°C)			Mineral Spirits or Chlorinated Solvents	
Gray	2.5-3 U.S. Gal./ 100 sq. ft. (1.02-1.22 l/sq. m)	40°F to 850°F (4°C to 454°C)			Water	
Red	(Applied to metal) 450-600 sq. ft./ U.S. Gal. (11-14.7 sq. m/l)	-20°F to 200°F (-29°C to 93°C)			Mineral Spirits or Chlorinated Solvents	U.L. Classified and tested according to ASTM E-84. Meets NFPA Standard 90-A and 90-B 25/50 requirements. Meets ASTM C-916, Type 4.

# Childers®

## Protective Systems

Mastics & Coatings  
Adhesives & Sealants

## HVAC

Adhesives & Sealants

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**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 products meets all of your requirements. The warranted shelf life of our products is six months from date of shipment to the original purchaser.

