

Childers™

Guide to

Mastics, Coatings, Adhesives and Sealants

for the Thermal Insulation Industry

Mastics and Coatings

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Foster® Vapor Barrier Membrane and Jacketing

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Typical Use Commercial (C) or Industrial (I)	Product Name	Vapor Sealing Insulation Facing and Jacketing (FSK, ASJ, FRK)	Lagging Adhesive/ Coating	Fiberglass and Mineral Wool	Rigid Insulation (Cellular Glass, PIR, Phenolic)	Polystyrene Coating ¹	Calcium Silicate
C	Ak-Cryl™ Coating CP-9 (White, Gray)	○		●	●	●	●
C/I	Vi-Cryl® Coating CP-10 (Trowel), CP-11 (Brush) (White, Gray, Black)	○		●	●	●	●
I	Chil-Pruf™ Coating CP-22 (Trowel), CP-24 (Spray) (Black)			○	○		
I	Chil-Brate™ Coating CP-25 (Black)			○	○		○
C	Chil-Perm® Coating CP-30 LO (White)	●		●	○		
C	Vapor Retardant Coating CP-34 (White)	●		●	○		
C/I	Chil-Perm® WB Coating CP-35 (White)	●		●	●	●	
C/I	Chil-Low™ Coating CP 38 (White)	●		●	●	●	
I	Encacel X® Coating CP-40 (Trowel), (White, Gray)			●	●		
I	Encacel V® Coating CP-45 (Brush, Spray) (White, Gray)			●	●		
C	Chil-Seal® Coating CP-50A MV1 (White)		●			○	○
C	Chil-Seal® Coating CP-50A HV2 (White)		●			○	○
I	Chil-Lastic™ Coating CP-79T (Trowel), CP-79S (Spray) (Black)			○	○		

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This guide is provided as a quick reference. Please see product data sheet for specific test methods, installation methods and additional information.

¹ Always choose white colored coating for exterior use on polystyrene insulation. Do not use solvent based products with polystyrene.

General Description	Volatile Component	LEED IEQ Credit	Perm Rating ²	Flash Point
Used as mechanical protection and weatherproofing of thermal insulations for indoor and outdoor use. Used for piping, tanks, fittings, vessels, equipment and other irregularly shaped objects.	Water	X	Greater than 1.0 Perm for 1/16" Dry Film (Breather)	None
High performance weather barrier mastic/coating. Water-based breather for indoor and outdoor use. Used over most types of insulation systems operating above ambient and cold, or dual temperature systems where the insulation facing provides a vapor barrier.	Water	X	Greater than 1.0 Perm for 1/16" Dry Film (Breather)	None
Asphalt cutback based fibrated vapor barrier and weather barrier insulation coating. The cured film forms a highly impermeable, tough, durable and well-bonded finish. Used over insulations (except polystyrene) to protect piping, tanks, fittings and vessels. Also protects underground insulation.	Solvent		0.02 to 0.03 Perms	Over 100°F (37°C)
Water-based asphalt emulsion, weather barrier insulation coating. Protects against corrosives, chemical dusts, fumes, fogs and moisture. Used over all types of insulations to protect piping, fittings, tanks and vessels.	Water	X	NA	None
Extremely effective, solvent based, vapor barrier coating for low temperature indoor applications. Provides a tough, flexible, fire resistant, dry film. Used over low temperature insulations (except polystyrene) for pipings, fittings, tanks.	Solvent		0.02 Perms at 0.02" Film Thickness	Over 100°F (37°C)
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.	Water	X	0.08 Perms at .045" Film Thickness	None
A high performance, water-based vapor retarder coating for low temperature indoor and outdoor applications. Provides a tough, flexible, dry film. Used over all low temperature insulations for piping, fittings, tanks operating between 32°F (0°C) and ambient temperatures.	Water	X	0.08 Perms at .055" Film Thickness	None
Low permeance water-based vapor retarder for indoor or outdoor use. Low odor, non-toxic and low VOC. Use on cold operating systems over all types of insulation and insulation facings. Meets MIL-C-19565, Type II requirements and is QPD listed.	Water	X	0.08 Perms	None
Trowelable, elastomeric, combustible vapor barrier coating. Fire resistant dry film with excellent adhesion and flexibility. The ultimate vapor barrier coating for outdoor applications. Used over low temperature insulations (except polystyrene) for spheres, tanks, piping and fittings.	Solvent		0.06 Perms at .035" Film Thickness	110°F (43°C)
Sprayable, elastomeric, combustible vapor barrier coating. Fire resistant, dry film with excellent adhesion and flexibility. Used over low temperature insulations (except polystyrene) for spheres, tanks, piping and fittings. Also used for outdoor sprayed polyurethane applications.	Solvent		0.07 Perms at .027" Film Thickness	110°F (43°C)
Combination coating and lagging adhesive. Non-flammable wet, fire-resistive 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.	Water	X	1.0 Perms	None
A high viscosity combination coating and lagging adhesive. Non-flammable wet, fire-resistive 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. Meets MIL-A-3316C Class 1, Grade A requirements and is QPD listed.	Water		1.0 Perms	None
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.	Solvent		0.02 to 0.03 Perms	Over 100°F (37°C)

² See PDS for methods and test conditions.

Product Name	General Description	Type of Volatile	Flash Point
Chil-Seal® Coating / Adhesive CP-50A MV1 and CP-50A HV2	Combination coating and lagging adhesive. 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. CP-50A MV1 is lower viscosity than CP-50A HV2.	Water	None
Chil-Stix® FRN Adhesive CP-82	High strength polychloroprene 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. ASTM C 916, Type I.	Solvent	None
Chil-Stix® Clear Adhesive CP-85	Fast-setting rubber adhesive for adhering low density fibrous, insulation to sheet metal and to most other construction materials. ASTM C916 Type IV.	Solvent	-7°F (-22°C)
Chil-Rene™ Adhesive CP-96	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.	Solvent	0°F (-18°C)
Fibrous Adhesive CP-97	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.	Water	None
Chil Grip™ Adhesive CP-124	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. ASTM C916, Type IV.	Solvent	-20°F (-29°C)

Sealants

Product Name	General Description	Service Temperature Limits at Coated Surface	Type of Volatile	LEED IEQ Credit	Flash Point
Chil-Joint® Sealant CP-70	Flexible joint sealant, flashing compound and vapor seal. Non-shrinking and skins over. Used as a joint and bedding sealant for rigid insulations including cellular glass, PIR, PUR and polystyrene.	-100°F to 300°F (-73°C to 149°C)	Solvent	X	-100°F to 300°F (-73°C to 149°C)
Chil-Byl® Sealant CP-76	Flexible sealant and elastomeric vapor barrier. Resists ultra-violet, water soak, vibrational stress. Permanently flexible. Used to vapor seal joints of cellular glass and PIR / PUR insulations. Also used as sealant for joints in metal jacketing. Not for use with polystyrene insulation.	See data sheet. -100°F to 300°F (-73°C to 149°C)	Solvent		-100°F to 300°F (-73°C to 149°C)

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Suggested Use ¹					Insulation Type					
Attachment	Lap Sealing	Lagging	Joint and Fitting Fabrication	Duct Liner	Fiberglass and Mineral Wool	PIR/ Polyurethane/ Phenolic	Cellular Glass	Polystyrene ¹	Calcium Silicate	Rubber Foam
		●				○	○	○	○	○
●	●			○	●					●
●	●			●	●					
●			●		●	●	○	●		
●			●						●	
●				●	●					

¹Do not use solvent based products with polystyrene.

Typical Use Commercial (C) or Industrial (I)	Product Name	Vapor Sealing Insulation Facing and Jacketing (FSK, ASJ, FRK)	Lagging Adhesive/ Coating	Fiberglass and Mineral Wool	Rigid Insulation (Cellular Glass, PIR, Phenolic)	Polystyrene Coating ¹	Calcium Silicate
C	FOSTER® VAPOR-FAS™ 62-05 Jacketing (Aluminum or White) (Embossed or Smooth Finish)			●	○	●	
I	FOSTER® C.I. WRAP™ 50 (Black)			●	●	○	
I	FOSTER® C.I. WRAP™ 30 (Black)			●	●	○	

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Reinforcing Membranes

Product Name	General Description
Mast-a-Fab® 42-24	A white leno weave, synthetic fiber reinforcing membrane with 9" x 8" mesh size. Easy to handle yet superior to glass mesh because of its elastic properties.
Chil-Glas # 10	A 10' x 10' glass mesh. Used to reinforce mastic, coatings and sealants.



General Description	Volatile Component	LEED IEQ Credit	Perm Rating ²	Flash Point
A weather resistant, 5-ply aluminum and polymer laminated vapor barrier jacketing, with a peel and stick PSA adhesive. For outdoor or indoor use over cold and dual temperature insulation systems, including roof-top ductwork and chilled water piping.	n/a	n/a	0.00	n/a
A 50 mil flexible, modified asphalt, vapor retarder sheet membrane. It is used to provide a moisture and vapor retarder film over cold and cryogenic piping, and equipment insulation. It is also suitable for underground piping.	n/a	n/a	<0.015	n/a
A 30 mil flexible, modified asphalt, vapor retarder sheet membrane. It is used to provide a moisture and vapor retarder film over cold and cryogenic piping, and equipment insulation.	n/a	n/a	<0.02	n/a

² See PDS for methods and test conditions.



General Notes

1. The recommendations in this selection guide are of general nature only. Refer to the product data sheets to be certain the selected Childers® product meets all the requirements of the application.
2. Do not apply exterior weather barrier coating on horizontal surfaces that might be subject to prolonged ponding of water.
3. If insulation cement is used, it must be completely dry before applying Childers® mastics or coatings. Prime as required.
4. Because of the variation in surface characteristics of facing materials, we recommend that the user conduct their own adhesion test when choosing a coating or mastic for foil, kraft and plastic-faced insulations.
5. The Childers® products listed in this guide are for professional use only.



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