

**SUBMITTED TO****DISTRIBUTED TO****SITE VISIT #****SITE ATTENDEES****PROJECT LOCATION****ENVIRONMENTAL CONDITIONS****SITE VISIT**

<b>.01</b>		<b>.02</b>	
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**End of Report**

**Proactive Planning. Proven Results.**

## Product Data Sheet



☐ Evolution™ –Paper-Free ASJ

☒ SSL II® –ASJ

☐ SSL® I –ASJ

☐ No-Wrap

### Description

Owens Corning™ Fiberglas™ Pipe Insulations are molded of heavy density resin bonded inorganic glass fibers. The one-piece, 36" (914mm) long, hinged sections are opened, placed over the pipe, closed and secured by means specific to the type as described below.

Fiberglas™ Pipe Insulation with Evolution™ Paper-Free ASJ is jacketed with durable, paper free all-service vapor retarder jacket. The SSL II® double adhesive closure provides positive mechanical and vapor sealing of the longitudinal jacket seam. All Evolution™ Paper-Free ASJ sizes come with the SSL II® closure system.

Fiberglas™ SSL II® Pipe Insulation is jacketed with a smooth, reinforced, wrinkle resistant all-service vapor retarder jacket (ASJ). This product has the same SSL II® closure system as Evolution™ Paper-Free ASJ and is available in the most popular

pipe sizes. For the larger ASJ sizes, Fiberglas™ Pipe Insulation is furnished with a SSL® I single adhesive lap seal.

Both systems include pressure sensitive butt strip seals that complete the positive closure system.

Fiberglas™ Pipe Insulation is also available without a jacket. "No Wrap" pipe insulation intended for field installation with jacketing appropriate to the vapor control, damage or corrosion resistance requirements of the application.

### Key Features

- Evolution™ jacket is more than 3X tougher than standard ASJ. The paper free all service jacket does not support mold growth and is designed to have compatible finished job appearance with standard ASJ.
- The double adhesive lap seal and two-part butt strip seal provide effective long term vapor sealing of the longitudinal and butt joints.
- SSL II® Positive Closure is fast, neat and foolproof. There is no need for staples which promotes job site productivity.
- Short pieces of insulation can be cut without jacket loss and the section will not come apart in handling. There are no "dog-ears" in or out of the carton. Dust and moisture cannot reach the lap seal. Butt strips come in sealed bags inside the carton so they can stay clean until the moment of use.

- Fiberglas™ Pipe Insulation's low thermal conductivity contributes to lower operating costs of heating and cooling equipment.
- The flame spread rating of 25 or less and smoke developed rating of 50 or less usually means that Fiberglas™ Pipe Insulation will be granted immediate building code approval.

### Product Applications

Insulation of hot, cold, concealed and exposed piping operating at temperatures from 0°F (-18°C) to 850°F (454°C) in commercial buildings, industrial facilities and process or power plants.

The hinged sections of Fiberglas™ Pipe Insulation are opened, placed over the pipe, carefully aligned, and sealed or jacketed as required by the form of the insulation and the application.

All jacketed SSL II® Pipe Insulation is shipped with the jacket and longitudinal lap closed, the two adhesives separated by a release strip. The insulation is opened by pulling the release strip from between the two adhesive strips. The insulation is placed on the pipe, carefully aligned, and the two adhesives rubbed firmly together to close and seal. The two part butt strip seal completes the positive closure. Application may be at ambient temperatures from 25°F (-4°C) to 110°F (43°C).

Fiberglas™ "No-Wrap" Pipe Insulation is designed for field-jacketing. The pipe covering is secured by wires or bands, and vapor sealed where required.

## Product Data Sheet

Outdoor applications must be protected from weather. If painting is required, use only water based latex paint.

### Standards, Codes Compliance

- ASTM C547, Mineral Fiber Pipe Insulation, Type I to 850°F (454°C)
- ASTM C1136, Flexible Low Permeance Vapor Retarders for Thermal Insulation: Types I-IV
- ASTM C795, Thermal Insulation for Use in Contact with Austenitic Stainless Steel<sup>4</sup>
- MIL-I-22344D, Insulation, Pipe, Thermal, Fibrous Glass
- Nuclear Regulatory Commission Guide 1.36, Non-Metallic Thermal Insulation<sup>4</sup>
- Doesn't contain the fire retardant decabrominated diphenyl ether (decaBDE)
- MIL-I-24244C (Ships) Insulation Material with Special Corrosion, Chloride, and Fluoride Requirements<sup>4</sup>
- U.S. Coast Guard Approval No. 164.009, Noncombustible Materials (no-wrap)
- CAN/CGSB-51.9 – Type I, Class 2<sup>5</sup>
- New York City MEA No. 344-83, 408-07-M
- NFPA 90A

### Availability

Fiberglas™ Pipe Insulations are available in thicknesses and for pipe sizes as follows<sup>1</sup>:

Insulation Thickness		Nominal Pipe Size	
in.	(mm)	in.	(mm)
½	(13)	½ - 2 ½	(15 - 65)
1	(25)	½ - 33	(15 - 825)
1 ½	(38)	½ - 33	(15 - 825)
2	(51)	½ - 33	(15 - 825)
2 ½	(64)	½ - 32	(15 - 800)
3	(76)	½ - 31	(15 - 775)
3 ½	(89)	½ - 30	(15 - 750)
4	(102)	½ - 29	(15 - 725)
4 ½	(114)	½ - 28	(15 - 700)
5	(127)	½ - 27	(15 - 675)
5 ½	(140)	6 - 26	(150 - 650)
6	(152)	6 - 25	(150 - 625)

1. Please refer to product packaging and data guide for load factors, standard products, minimum order quantity and carton sizes. Contact your customer service representative for product leadtime.

### Physical Property Data

Property	Test Method	Value
Density (size dependent)	ASTM C302	3.5 to 5.5 pcf
Operating Temperature Range <sup>2</sup>	ASTM C411	0°F to 850°F (-18°C to 454°C)
Jacket Temperature Limitation	ASTM C1136	-20°F to 150°F (-29°C to 66°C)
Jacket Permeance	ASTM E96, Proc.A	0.02 perm
Burst Strength, min	ASTM D774/D774M	55 psi
Composite Surface Burning Characteristics <sup>3</sup>	UL 723, ASTM E84 or CAN/ULC-S102	Flame spread 25 Smoke Developed 50

2. Limited to single layer applications above 650°F (343°C), but not greater than 6" (152mm) thickness.

3. The surface burning characteristics of these products have been determined in accordance with UL 723, ASTM E84 or CAN/ULC-S102. These standards should be used to measure and describe the properties of materials, products or assemblies in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of materials, products or assemblies under actual fire conditions. However, results of this test may be used as elements of a fire risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard of a particular end use. Values are reported to the nearest 5 rating.

### Thermal Conductivity

Mean Temperature °F	k Btu•in/hr•ft²•°F	Mean Temperature °C	λ W/m•°C
50	0.22	10	0.032
75	0.23	25	0.034
100	0.24	50	0.037
150	0.27	100	0.043
200	0.29	125	0.047
250	0.32	150	0.051
300	0.35	175	0.056
350	0.39	200	0.062
400	0.43	225	0.068
450	0.48	250	0.075
500	0.54	275	0.082

Apparent thermal conductivity values determined in accordance with ASTM practice C1045 with data obtained by ASTM Test Method C335. Values are nominal, subject to normal testing and manufacturing tolerances.

4. Preproduction qualification testing complete and on file. Chemical analysis of each production lot required for total conformance.

5. Standard Obsolete, replaced by ASTM C547.

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### Personnel Protection Table

Thickness Required for Surface Temperatures ≤ 140 °F, inches (mm)<sup>6,7</sup>

Nominal Pipe Size		System Operating Temperatures °F (°C)											
in.	(mm)	200 °F (93 °C)	300 °F (149 °C)	400 °F (204 °C)	500 °F (260 °C)	600 °F (316 °C)	800 °F (427 °C)						
0.5	(15)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.0 (25)	1.5 (38)						
0.75	(20)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	2.0 (51)						
1	(25)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	2.0 (51)						
1.25	(32)	0.5 (15)	0.5 (15)	1.0 (25)	1.0 (25)	1.5 (38)	2.0 (51)						
1.5	(40)	0.5 (15)	0.5 (15)	1.0 (25)	1.0 (25)	1.5 (38)	2.0 (51)						
2	(50)	0.5 (15)	0.5 (15)	1.0 (25)	1.0 (25)	1.5 (38)	2.0 (51)						
2.5	(65)	0.5 (15)	0.5 (15)	1.0 (25)	1.0 (25)	1.5 (38)	2.0 (51)						
3	(80)	0.5 (15)	0.5 (15)	1.0 (25)	1.0 (25)	1.5 (38)	2.5 (64)						
4	(100)	0.5 (15)	0.5 (15)	1.0 (25)	1.0 (25)	1.5 (38)	2.5 (64)						
5	(125)	0.5 (15)	0.5 (15)	1.0 (25)	1.0 (25)	1.5 (38)	2.5 (64)						
6	(150)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	1.5 (38)	2.5 (64)						
7	(175)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	1.5 (38)	2.5 (64)						
8	(200)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	1.5 (38)	2.5 (64)						
9	(225)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	1.5 (38)	2.5 (64)						
10	(250)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	1.5 (38)	2.5 (64)						
12	(300)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	1.5 (38)	3.0 (76)						
14	(350)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	2.0 (51)	3.0 (76)						
16	(400)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	2.0 (51)	3.0 (76)						
18	(450)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	2.0 (51)	3.0 (76)						
20	(500)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	2.0 (51)	3.0 (76)						
24	(600)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	2.0 (51)	3.0 (76)						
30	(750)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	2.0 (51)	3.0 (76)						

6. Calculations estimated using NAIMA 3E Plus Version 4.0 Software. Fixed Design Conditions: Steel horizontal piping, 80°F (27°C) average ambient temperature, 0 mph wind speed and outer surface jacket emittance of 0.9. For alternate design conditions, contact your Owens Corning representative.

7. Thermal conductivity values used in these calculations are subject to normal manufacturing tolerances.

### Thickness to Prevent Surface Condensation

Owens Corning ASJ Jacket for up to 16" NPS (400mm DN), in. (mm)<sup>8,9</sup>

Ambient Temperature °F (°C)	Relative Humidity	System Operating Temperatures		
		35°F (2°C)	45°F (7°C)	55°F (13°C)
110 (43)	70%	1 (25)	1 (25)	1 (25)
	80%	1½ (38)	1½ (38)	1½ (38)
	90%	3½ (89)	3½ (89)	3 (76)
100 (38)	70%	1 (25)	1 (25)	1 (25)
	80%	1½ (38)	1½ (38)	1 (25)
	90%	3½ (89)	3 (76)	2½ (64)
90 (32)	70%	1 (25)	1 (25)	1 (25)
	80%	1½ (38)	1 (25)	1 (25)
	90%	3½ (89)	3 (76)	2½ (64)
80 (27)	80%	1½ (38)	1 (25)	1 (25)
	90%	3 (76)	2½ (64)	2 (51)
70 (21)	80%	1 (25)	1 (25)	1 (25)
	90%	2½ (64)	2 (51)	1 (25)

8. Calculations estimated using NAIMA 3E Plus version 4.0 software. Fixed design conditions: Steel Horizontal Piping, 16" NPS, 0 mph wind speed, Outer Surface Jacket Emittance of 0.9.

9. Thermal conductivity values used in these calculations are subject to normal manufacturing tolerances.

## Product Data Sheet

### Certifications and Sustainable Features of Fiberglas™ Pipe Insulation

- Certified by Scientific Certification Systems to contain a minimum of 57% recycled glass content
- Certified to meet indoor air quality standards under the stringent GREENGUARD Indoor Air Quality Certification Program<sup>SM</sup>, and the GREENGUARD Children & Schools Certification Program<sup>SM</sup>

### Environmental and Sustainability

Owens Corning is a worldwide leader in building material systems, insulation and composite solutions, delivering a broad range of high-quality products and services.

Owens Corning is committed to driving sustainability by delivering solutions, transforming markets and enhancing lives. More information can be found at [www.sustainability.owenscorning.com](http://www.sustainability.owenscorning.com).

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The GREENGUARD Indoor Air Quality Certified mark is a registered certification mark used under license through the GREENGUARD Environmental Institute.



No-Wrap Pipe Insulation is not yet GREENGUARD® Certified.



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## **Speedline® 25/50 Smoke Safe™ PVC Fitting Covers and Jacketing**

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### **Description**

The Speedline® Smoke Safe™ PVC Insulated Fitting Covering System consists of preformed gloss white outdoor weatherable and gloss colored insulated covers for piping fittings. Their unique shapes fit screwed, Victaulic®, welded and flanged elbows, tees, valves, couplings, laterals, reducers and endcaps.

The Speedline® Smoke Safe™ PVC Jacketing System consists of gloss white outdoor weatherable and colored PVC sheet in either bulk rolls or precurled cut-to-fit pipe sizes. The Jacketing is available in .010", .015", .020", and .030" thicknesses.

The Jacketing and Fitting Covering Systems include solvent weld adhesives, stainless steel tack fasteners, silicone caulking and adhesive tapes. A die-cut multi-temperature fiberglass insulation insert is available and sized for a full insulation over the exposed pipe fitting and under the overlay of the PVC Fitting Cover.



### **Code Compliance**

Speedline® Smoke Safe™ PVC Fitting Covers and Jacketing meet:

- ASTM 1784 ; CAN/ULC S102-M88
- Federal Specification HH-I-558, Form B, Type 1 Class B.
- Requirements of USDA and FDA for use in facilities of the food processing, beverage and pharmaceutical industries

*(The products are also in compliance with the old Military Specs LP-1035A and LP-535E)*

### **Benefits**

- Easy Installation - the unique shapes make an easy seal over an entire mechanical system.
- Clean, neat and attractive appearance of insulation of piping fittings and other mechanical piping equipment due to the high gloss PVC surface
- Low maintenance
- Corrosion resistance
- Outdoor weatherability\* (UV stable)
- The 25/50 fire class of all Speedline® Smoke Safe™ Products provides greater universal building code acceptance.
- Provide a natural barrier to moisture, bacteria and mold

### **Applications**

Speedline® Smoke Safe™ PVC Insulated Fitting Covers and Jacketing are designed for indoors and outdoors\* applications in commercial, institutional and industrial facilities.

- Speedline® Smoke Safe™ PVC Fitting Covers are designed to cover pipe fittings and other mechanical equipment from an outside diameter of 1-5/8" to 24" in accordance with ASTM C-585.
- Speedline® Smoke Safe™ PVC Jacketing is suitable for covering all flat and round surfaces such as ductwork, tanks and other mechanical equipment.

The Speedline® Smoke Safe™ PVC Jacketing System has an application temperature range of -35°F to 500°F (-37°C to 260°C). The PVC surface should remain below 150°F (66°C) through the installation of sufficient insulation on higher temperature applications.

***\* Colored Fitting Covers and Jacketing are NOT recommended for outdoor usage.***

# Speedline® 25/50 Smoke Safe™ PVC Fitting Covers and Jacketing Technical data



## Physical Properties

Property	Test Method	Value
<b>Speedline® Smoke Safe™ PVC</b>		
Flame Spread	ASTM E84	25 or less
Smoke Developed	ASTM E84	50 or less
Specific Gravity	ASTM 792	1.46
Tensile Strength @ yield	ASTM D638	7,000
lb./in. <sup>2</sup>		
Tensile Modulus PSI	ASTM D638	400,000
Izod Impact- ft.lb./in.	ASTM D256	15.0
Perm Rating @.030"	ASTM E96	.03
Electrical Conductance	ASTM D257	None

## Fiberglass Insulation

Flame Spread	ASTM E84	25 or less
Smoke Developed	ASTM E84	50 or less
Thermal Conductivity (75°F/24°C)	ASTM C177	0.26

## Specification Data

### Hot Systems

All piping fittings shall be insulated by filling the total void over all fittings, between straight runs of pipe insulation, with Speedline® die-cut fiberglass insulation, forming a uniform insulation thickness equal to or exceeding the adjacent pipe insulation. Finish all insulated pipe fittings by applying Speedline® Smoke Safe™ PVC Fitting Covers overlapping the adjacent pipe insulation outer covering. Secure the Speedline® Fitting Covers with Speedline® Stainless Steel Tack Fasteners, Speedline® PVC Tape or by Welding PVC overlaps with Speedline® Vinyl Adhesive. Caution should be exercised to be sure that the insulation surface temperature is maintained below 150°F (66°C) through the application of sufficient insulation under all PVC Covering.

### Cold Systems

All piping fittings shall be insulated by filling the total void over all pipe fittings between straight runs of pipe insulation with Speedline® die-cut fiberglass insulation, forming a uniform insulation thickness equal to, or exceeding, the adjacent pipe insulation. Finish all insulated pipe fittings by applying Speedline® Smoke Safe™ PVC Fitting Covers overlapping the adjacent pipe insulation outer covering. The overlap of the throat of the PVC Fitting Cover and the ends of the Fitting Cover overlapping the adjacent pipe insulation vapor barrier jacketing shall be vapor sealed with compatible vapor barrier mastic. The ends of the PVC Fitting Cover overlapping the pipe insulation shall be further sealed by an outer wrapping of Speedline® PVC Tape extending over the adjacent pipe insulation vapor barrier jacketing and overlapping its own juncture by at least two inches in the downward direction on the downward side.

## Chemical Resistance

### Inorganic Acids

Sulfuric, nitric, hydrochloric, hydrofluoric (diluted or concentrated): Excellent

### Organic Acids

Formic, acetic and propionic: Poor

### Alkalies

Sodium and potassium hydroxides: Excellent  
Ammonium hydroxide: Excellent  
Caustic Soda: Excellent  
Soda Ash: Excellent

### Miscellaneous Corrosive Chemicals

Phenol, resorcinol and creosol: Poor  
Iodine, crystals: Fair  
Iodine, tincture: Excellent  
Chlorine and bromine water: Excellent  
Potassium dichromate: Excellent  
Silver nitrate: Excellent  
Tannic acid: Excellent

### Solvent and Dilutents

Alcohol and polyalcohols, including ethyl methanol, butanol and isopropyl alcohol: Excellent

### Ketones

Lower boiling ketones: Dissolves  
Higher boiling ketones: Swells

### Ethers

Ethyl: Softens  
Dichlorethyl ether: Swells  
Diethyl cellosolve: Swells  
Dioxane: Dissolves  
Propylene oxide: Dissolves

### Hydrocarbons

Aromatics as gasoline, kerosene and petroleum oils: Excellent

### Oils, Fats and Waxes

Animal, mineral and vegetable: Excellent

**Speedline Corporation**  
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**www.speedlinepvc.com**




## TECHNICAL DATA SHEET

### HANDI-FOAM® LOW DENSITY LOW PRESSURE SPRAY FOAM

#### LOW PRESSURE SPRAY POLYURETHANE FOAM INFORMATION



<b>Description</b>	Low pressure, low density, two-component spray polyurethane foam
<b>SPF</b>	Spray Polyurethane Foam
<b>Applications</b>	Designed to fill and seal various size voids, deaden sound or reduce vibration.
<b>Preparation for use</b>	Substrate must be clean, dry, firm, free of loose particles, and free of dust, grease and mold release agents. Protect surfaces not to be foamed. Read SDS, Operating Instructions and Product Stewardship Guidelines. For additional information go to <a href="http://www.icpadhesives.com">www.icpadhesives.com</a>
<b>Use</b>	Warm/Cool chemicals to 75-85°F (24-29°C). Follow instructions for set-up found in the operating instructions.
<b>PPE</b>	 Recommend using in a well-ventilated area with certified respiratory protection or a powered air purifying respirator (PAPR). Wear protective glasses with side shields or goggles, nitrile gloves, and clothing that protects against dermal exposure. Read SDS, Operating Instructions, and Product Stewardship Guidelines. For additional information go to <a href="http://www.icpadhesives.com">www.icpadhesives.com</a>
<b>Note</b>	FOR PROFESSIONAL USE ONLY. Always check the local building code before use. Cured low pressure polyurethane foam is non-toxic and inert.
<b>Temperature</b>	See chart on page 2
<b>Disposal</b>	Refer to SDS (Section 13) for instructions. Always dispose of empty cylinders in accordance with all applicable federal, state, provincial and local regulations.
<b>Shelf-life</b>	12 months
<b>Compatibility</b>	Cured low pressure polyurethane foam is chemically inert and non-reactive in approved applications, and will not harm electrical wire insulations, Romex®, rubber, PVC, polyethylene (i.e. PEX) or other plastics. The product is not resistant to UV rays, if left exposed the product should be coated or painted.
<b>Product Storage</b>	See temperature chart located on page 2

#### TECHNICAL DATA

#### STANDARD

#### RESULTS

<b>Density</b> Free Rise	ASTM D1622	.75 lbs/ft <sup>3</sup> (12 kg/m <sup>3</sup> )
<b>Density</b> In-place		1.12 lbs/ft <sup>3</sup> (18 kg/m <sup>3</sup> )
<b>K-factor</b> - Aged 90 days 140°F (60°C)	ASTM C518	0.233 BTU·inch/ft <sup>2</sup> ·h·°F
<b>R-Value</b> - Aged 90 days 140°F (60°C)	ASTM C518	4.3 at 1 inch thickness
<b>Air Barrier Properties</b> -Estimated	ASTM E283	
@1.57 psf (75 Pa)		<0.0025 cfm/ft <sup>2</sup> (<0.0125 L/s/m <sup>2</sup> )
@6.24 psf (300 Pa)		<0.01 cfm/ft <sup>2</sup> (<0.05 L/s/m <sup>2</sup> )
<b>Compressive Strength</b>	ASTM D1621	<5 lbf/in <sup>2</sup> (35 kPa)
<b>Dimensional Stability</b>	ASTM D2126	+/- 5%
<b>Tack-Free/Expansion Time</b>	Tack-Free/Expansion Time	30-45 seconds
<b>Closed-Cell Content</b>	ASTM D2856	5%
<b>Cuttable</b>		3-5 minutes
<b>Fungi Resistance</b>	ASTM G21	No Growth
<b>Fire Rating</b> - Tested at 4" Thickness	ASTM E84	Flame Spread Index 50 Smoke Developed 400

## APPROVALS/STANDARDS/CLASSIFICATIONS

## ASTM E84

Conforms to the requirements of ASTM E84 and is classified as a class 2 (B) material. Tested at 4 inch thickness



## TEMPERATURE

<b>Chemical Storage Temperature</b>	Optimum 75-85°F (24-29°C) but not <60°F (16°C) or >90°F (32°C)
<b>Outside Application Temperature</b>	40-100°F (4-38°C)
<b>Process Core Chemical Temperature</b>	75-85°F (24-29°C)
<b>Surface Temperature (Substrate)</b>	40-100°F (4-38°C)
<b>Cured Foam</b>	-200°F to +240°F (-129°C to +116°C)

YIELD<sup>1</sup> (.75 Density)

	<b>Weight</b> (Including packaging)	<b>Board Feet</b>	<b>Cubic Feet</b>
<b>II-250 P10692</b>	26.4 lbs	250 (23.2 m <sup>2</sup> )	20.8 ft <sup>3</sup> (.58 m <sup>3</sup> )
<b>II-450 P10694</b>	41 lbs	450 (41.8 m <sup>2</sup> )	37.5 ft <sup>3</sup> (1.06 m <sup>3</sup> )
<b>II-1350 P10770</b>	115.7 lbs	1350 (125.5 m <sup>2</sup> )	112.5 ft <sup>3</sup> (3.18 m <sup>3</sup> )

<sup>1</sup> Yield is based on free-rise density. We state our core density/free-rise density when describing the foam. Applying foam into a cavity may result in higher in-place densities due to packing effects. These higher densities may result in lower yields.

**Always read all operating, application and safety instructions before using any products.** Use in conformance with all local, state and federal regulations and safety requirements. Failure to strictly adhere to any recommended procedures and reasonable safety precautions shall release ICP Adhesives & Sealants, Inc. of all liability with respect to the materials or the use thereof. For additional information and location of your nearest distributor, call ICP Adhesives & Sealants Inc. 1 330.753.4585 or 1 800.321.5585.

**NOTE:** Physical properties shown are typical and are to serve only as a guide for engineering design. Results are obtained from specimens under ideal laboratory conditions and may vary upon use, temperature and ambient conditions. Right to change physical properties as a result of technical progress is reserved. This information supersedes all previously published data. The Customer is responsible for deciding whether products and associated TDS information are appropriate for customer's use.

ICP low pressure one-component polyurethane foam sealants and adhesives (OCF), low pressure spray polyurethane foams (SPF), and low pressure pour-in-place polyurethane foams (PIP) are composed of a diisocyanate, hydrofluorocarbon or hydrocarbon blowing agent, and polyol. For polyurethane foam sealants/adhesives: wear protective glasses with side shields or goggles, nitrile gloves, and clothing that protects against dermal exposure. Recommend using in a well-ventilated area. Avoid breathing vapors. Read the SDS and instructions carefully before use ([www.icpadhesives.com](http://www.icpadhesives.com)). For spray polyurethane foams and pour-in-place polyurethane foams: wear protective glasses with side shields or goggles, nitrile gloves, and clothing that protects against dermal exposure. Use only in a well-ventilated area and with certified respiratory protection or a powered air purifying respirator (PAPR). Additional information on ventilation can be found in the Product Stewardship Guide ([www.icpadhesives.com](http://www.icpadhesives.com)). Read the SDS ([www.icpadhesives.com](http://www.icpadhesives.com)) and instructions carefully before use. The urethane foam produced from these ingredients will support combustion and may present a fire hazard if exposed to a fire or excessive heat about 240°F (116°C). Refer to each product's TDS for specifications, testing results, and other attributes. The customer is ultimately responsible for deciding whether products and associated TDS information are appropriate for customer's use. Refer to the products' SDS, ICP Adhesives & Sealants' Product Stewardship Guidelines, and operating instructions for guidance on the safe and proper application of the product ([www.icpadhesives.com](http://www.icpadhesives.com)). For professional use only. Building practices unrelated to materials can lead to potential mold issues. Material suppliers cannot provide assurance that mold will not develop in any specific system.

**WARNINGS:** Follow safety precautions and wear protective equipment as recommended. Prolonged inhalation exposure may cause respiratory irritation/sensitization and/or reduce pulmonary function in susceptible individuals. Onset may be delayed. Pre-existing respiratory conditions may be aggravated. We recommend that the product is used in a well-ventilated area and with certified respiratory protection. NIOSH approved positive pressure supplied air respirator is recommended if exposure guidelines may be exceeded. Contents may be very sticky and irritating to skin and eyes, therefore wear safety glasses with side shields or goggles, nitrile gloves, and clothing that protects against dermal exposure when operating. If liquid chemical comes in contact with skin, first wipe thoroughly with dry cloth, then rinse affected area with water. Wash with soap and water afterwards, and apply hand lotion if desired. If liquid comes in contact with eyes, immediately flush with large volume of clean water for at least 15 minutes and get medical help at once. If liquid is swallowed, get immediate medical attention. Do not induce vomiting. If breathing is difficult, give oxygen. If breathing has stopped give artificial respiration. Products manufactured or produced from these chemicals are organic and, therefore, combustible. Each user of any product should carefully determine whether there is a potential fire hazard associated with such product in a specific usage. **KEEP OUT OF REACH OF CHILDREN.**

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