



Product Data Sheet



- ASJ Max
- ASJ Max for Aquatherm®
- No Wrap
- No Wrap Vacuum Pack

Description

Owens Corning® FIBERGLAS™ Pipe Insulation is 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.

ASJ Max FIBERGLAS™ Pipe Insulation has an encapsulated-paper, vapor-retarder jacket that is smooth, durable, cleanable, wrinkle-resistant, resists water staining and doesn't support mold or mildew growth.² It is also available in select metric sizes for use with Aquatherm® pipe systems. (See dimensional data sheet for metric sizing availability. Pub. No. 10018078.)

The ASJ Max jacket features the SSL® Max closure system which provides a positive-mechanical closure and vapor seal of the longitudinal jacket seam. It was designed with advanced adhesives to work specifically with the new

jacket to provide a tight, reliable seal that doesn't need glue or staples. Pressure sensitive butt strip seals complete the positive closure system.

No Wrap FIBERGLAS™ Pipe Insulation doesn't have a jacket and is intended for field installation with jacketing appropriate to the vapor control, damage, or corrosion resistance requirements of the application. No Wrap Vacuum Pack is compression packaged inside a poly bag utilizing a vacuum. This results in a product that can be shipped and stored more efficiently.*

ASJ MAX FIBERGLAS™ Pipe Insulation for Aquatherm®

- High-quality, FIBERGLAS™ Pipe Insulation with ASJ Max custom-fit for Aquatherm® metric-sized polypropylene-random (PP-R) piping systems
- 13 sizes covering pipe up to 12" (315 mm) diameter
- 22 skus

Key Features

- The ASJ Max jacket is tougher¹ than standard ASJ. It has a polymer coating that helps resist water staining and does not support mold or mildew growth².

* The No Wrap Vacuum Pack packaging process may cause some breakdown of the mechanical properties, such as the hinge, or cause additional dust in the package. It also may impact the outside diameter of the insulation pertaining to ASTM C585. The user assumes all responsibility for meeting project insulation requirements.

1. Based on burst strength testing.

2. ASJ Max jacket does not support mold growth when tested in accordance with ASTM C1338.

- ASJ Max is designed to have a compatible finished job appearance with standard ASJ.
- SSL® Max closure system is fast, neat and combines with the butt strips to provide effective long term vapor sealing of the longitudinal and butt joints.
- Short pieces of insulation can be cut without jacket loss and the section will not come apart in handling. 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.
- ASJ Max can resist short durations of liquid water exposure that can occur during construction.
- This product does not contain decaBDE.
- UL Labeled for flame spread rating of 25 or less and smoke developed rating of 50 and is full building code compliant.

Product Applications

Insulation of hot, cold, concealed and exposed piping operating at temperatures from 0°F (-18°C) to 1,000°F (538°C) (with heat-up schedule) in commercial buildings, industrial facilities, and process or power plants.



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Installation Instructions

ASJ Max

1. Ambient application temperatures are from 25°F (-4°C) to 110°F (43°C).
2. Open the hinged sections and place the insulation over the pipe, taking care not to get dirt, dust or moisture on the overlap area.
3. Pull the release strip from the lap. While preparing to close the insulation, take care not to allow the adhesive to contact anything until the insulation is properly lined up and closed over the pipe.
4. Seal the insulation. Start by pulling the lap down at the middle until the adhesive touches the facing. Press together. Rub firmly with nylon sealing tool or squeegee from the middle of the section towards the end until the lap is securely adhered to the jacket.
5. Apply the matching butt strip centered over the adjoining pipe sections, and rub with firm pressure to complete the positive closure.

NOTE: After initial SSL® Max adhesive tack, and when the butt strip is applied, it is critical that the closures are not re-opened and repositioned on the facing. Doing so will delaminate the jacket and adhesive, diminishing the bond strength.

Availability

FIBERGLAS™ Pipe Insulations are available in thicknesses and for pipe sizes as follows¹:

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)

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 ²	ASTM C411	0°F to 1,000°F ³ (-18°C to 538°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	100 psi
Composite Surface Burning Characteristics ⁴	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. With heat up schedule.
4. 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·ft ² ·°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.



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Personnel Protection Table

Thickness Required for Surface Temperatures ≤ 140 °F, inches (mm)^{5,6}

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)	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)	0.5 (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)	1.0 (25)	1.5 (38)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.0 (25)	1.5 (38)
1	(25)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.0 (25)	1.5 (38)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.0 (25)	1.5 (38)
1.25	(32)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.0 (25)	1.5 (38)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.0 (25)	1.5 (38)
1.5	(40)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.0 (25)	1.5 (38)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.0 (25)	1.5 (38)
2	(50)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.0 (25)	1.5 (38)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.0 (25)	1.5 (38)
2.5	(65)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.0 (25)	1.5 (38)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.0 (25)	1.5 (38)
3	(80)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.0 (25)	1.5 (38)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.0 (25)	1.5 (38)
4	(100)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.0 (25)	1.5 (38)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.0 (25)	1.5 (38)
5	(125)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.0 (25)	1.5 (38)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.0 (25)	1.5 (38)
6	(150)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	1.5 (38)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	1.5 (38)
7	(175)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	1.5 (38)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	1.5 (38)
8	(200)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	1.5 (38)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	1.5 (38)
9	(225)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	1.5 (38)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	1.5 (38)
10	(250)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	1.5 (38)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	1.5 (38)
12	(300)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	1.5 (38)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	3.0 (76)
14	(350)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	2.0 (51)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	3.0 (76)
16	(400)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	2.0 (51)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	3.0 (76)
18	(450)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	2.0 (51)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	3.0 (76)
20	(500)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	2.0 (51)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	3.0 (76)
24	(600)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	2.0 (51)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	3.0 (76)
30	(750)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	2.0 (51)	0.5 (15)	0.5 (15)	0.5 (15)	1.0 (25)	1.5 (38)	3.0 (76)

5. 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.

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

Thickness to Prevent Surface Condensation

Owens Corning™ ASJ Max Jacket for up to 16" NPS (400mm DN), in. (mm)^{7,8}

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)

7. 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.

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

- If the operating temperature of the system is above 100°F (37°C), it is recommend that if the pipe insulation terminates with an exposed end, apply mastic over the exposed end, per the mastic manufacturer's instructions.
- If the operating temperature of the system is below 100°F (37°C), the pipe insulation terminated exposed end shall be sealed with a vapor barrier mastic applied over the exposed end per the mastic manufacturer's instructions.
- Apply systems identification labels by pressure-sensitive labels, or by stencil with spray paint.



Product Data Sheet

No Wrap

1. Open the hinged sections and place over the pipe, carefully aligned and secured by wires or bands.
2. Jacket and vapor seal as required by the application.

Additional Installation Instructions

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

Standards, Codes Compliance

- ASTM C547, Mineral Fiber Pipe Insulation, Type IV to 1,000°F (538°C) (with heat-up schedule)
- ASTM C585, Inner and Outer Diameters of Thermal Insulation for Nominal Sizes of Pipe and Tubing
- ASTM C1136, Flexible Low Permeance Vapor Retarders for Thermal Insulation: Types I, II, III, IV
- ASTM C795, Thermal Insulation for Use in Contact with Austenitic Stainless Steel¹

- MIL-PRF-22344E, Insulation, Pipe, Thermal, Fibrous Glass
- Nuclear Regulatory Commission Guide 1.36, Non-Metallic Thermal Insulation¹
- MIL-I-24244D (Ships) Insulation Material with Special Corrosion, Chloride, and Fluoride Requirements¹
- US Coast Guard 164.109/70/0 Non-Combustible
- NFPA 90A and 90B

Certifications and Sustainable Features of FIBERGLAS™ Pipe Insulation

- Certified by SCS Global Services to contain a minimum of 53% recycled glass content, 31% pre-consumer and 22% post-consumer.
- Jacketed pipe insulation is certified to meet indoor air quality standards under the GREENGUARD Certification Program, and is GREENGUARD Gold certified.

- These products' Environmental Product Declaration (EPD) has been certified by UL Environment.
- FIBERGLAS™ Pipe Insulation has received the Cradle to Cradle Products Innovation Institute's Bronze Level Material Health Certificate.

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 <http://sustainability.owenscorning.com>.

¹ Preproduction qualification testing complete and on file. Chemical analysis of each production lot required for total conformance. Certification needs to be specified at time of order.

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SCS Global Services provides independent verification of recycled content in building materials and verifies recycled content claims made by manufacturers. For more information, visit www.SCSglobalservices.com

GREENGUARD Certified products are certified to GREENGUARD standards for low chemical emissions into indoor air during product usage. For more information, visit ul.com/gg.



* Applies to jacketed pipe insulation only.

AVERAGE 53% RECYCLED CONTENT
31% PRE-CONSUMER
22% POST-CONSUMER



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