LARGE DIAMETER FIBERGLAS™ PIPE INSULATION

FIBERGLASS INSULATION SSL® WITH ASJ MAX

Owens Corning® Large Diameter Fiberglas™ pipe insulation is molded of heavy-density resin-bonded inorganic glass fibers that come in one-piece, 36-inch-long (914 mm), hinged sections. The maximum inner diameter (I.D.) is 36 inches. Sections range from 18-inch outside diameter (O.D) to 42-inch O.D. and can be ordered as factory-applied SSL® with ASJ Max or as unjacketed No-Wrap.

Features

- ASJ Max is an all-service jacket with a polymer film exterior surface that is smooth, durable, cleanable, wrinkle-resistant, resists water staining, and doesn't support mold or mildew growth.[1]
- ASJ Max can resist short durations of water exposure that may occur during construction.
- Ridge Core Pipe Product has a maximum operating temperature of 1,000°F (538°C) (with heat-up schedule).
- SSL® Positive Closure System that fastens with no need for staples or mastic.
- The product does not contain polybromodiphenyl ethers (PBDE), (penta-, octa-, or deca-brominated diphenyl).

1 ASJ Max jacket does not support mold growth as tested in accordance with ASTM C1338.

Standards, Codes Compliance

- ASTM C547, Mineral Fiber Pipe Insulation: Type I, Grade A; and Type IV, Grade B
- 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, X
- UL Labeled for Flame Spread Index of 25 or less and Smoke Developed Index of 50, and is fully building code compliant
- UL Listed and Labeled for use over PVC and other polymer pipes; UL Category BSMP
- ASTM C795, Thermal Insulation for Use in Contact with Austenitic Stainless Steel[2]
- Nuclear Regulatory Commission Guide 1.36, Non-Metallic Thermal Insulation[2]
- MIL-PRF-22344E, Insulation, Pipe, Thermal, Fibrous Glass
- MIL-DTL-32585, Type I, Form 4, Facing A
- MIL-DTL-24244D (Ships) Insulation Material with Special Corrosion, Chloride, and Fluoride Requirements[2]
- NFPA 90A and 90B

2 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.

Physical Properties

PROPERTY	TEST METHOD	VALUE
Density (size dependent)	ASTM C302	3.5 to 5.5 pcf
Operating Temperature Range[3]	ASTM C411	0°F to 1,000°F (-18°C to 538°C)
Water Vapor Sorption	ASTM C1104	Less than 5% by weight
Corrosion	ASTM C665	Pass — steel, copper, and aluminum
Corrosion	ASTM C1617	Pass — steel
Jacket Temperature Limitation	ASTM C1136	-20°F to 150°F (-29°C to 66°C)
Jacket Permeance	ASTM E96, Proc. A	0.01 perm
Burst Strength, min	ASTM D774/D774M	100 psi
Composite Surface Burning Characteristics[4] Jacketed	UL 723, ASTM E84, or CAN/ULC-S102	Flame Spread 25 Smoke Developed 50

3 With heat-up schedule when operating temperatures between 850ºF and 1,000ºF.
4 The surface burning characteristics of these products have been determined in accordance with UL 723, ASTM E84, or CAN/ULC-S102. Values are reported to the nearest 5 rating.

Applications

- Used to insulate iron, copper, PVC, and other polymer pipes with operating temperatures between 0°F (-18°C) and 1,000°F (538°C) in commercial and institutional buildings and industrial facilities.
- When temperatures are above 650°F (454°C), maximum installed insulation thickness shall be no greater than 6 inches as a single layer or nested.
- Rated per ASTM C547, Type I, Grade A — Pipe insulation can be installed on in-service/hot pipes with an operating temperature up to 850°F (454°C).
- Rated per ASTM C547, Type IV, Grade B — When operating temperatures will be between 850°F (454°C) and 1,000°F (538°C), a heat-up schedule needs to be followed per the Installation Instructions, Pub. No. 10021355.
- When installed outdoors, an additional weather-protective jacket is required.

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.

Thickness to Prevent Surface Condensation

Owens Corning® ASJ Max Jacket for up to 16 inches NPS (400 mm DN)[5, 6]

AMBIENT TEMPERATURE		RELATIVE HUMIDITY	SYSTEM OPERATING TEMPERATURES					
°F	°C		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)

5 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.

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

Acoustic — Insertion Loss in dB per ASTM E1222

Fiberglas™ Pipe Insulation with ASJ Max and SSL II®

	AT 1" THICKNESS	AT 2" THICKNESS
FREQUENCY (HZ)	INSERTION LOSS (dB)	INSERTION LOSS (dB)
315	-3	-2
400	2	0
500	1	0
630	3	1
800	0	-3
1000	6	8
1250	6	7
1600	10	13
2000	11	13
2500	16	20
3150	18	23
4000	19	23
5000	18	22

Availability

Our Fiberglas™ pipe insulation portfolio is available in thicknesses up to 5 inches with inside diameters of up to 42 inches. Contact your local Owens Corning area sales manager for product availability.

Refer to "Fiberglas™ Pipe Insulation Sizing Manual" for more information (Pub. No. 10018078).

Installation

Ambient application temperatures are from 25°F (-4°C) to 110°F (43°C).

For complete installation instructions and recommendations, see "Fiberglas™ Pipe Insulation Installation Instructions" (Pub. No. 10021355).

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.owenscorning.com.

Certifications and Sustainable Features

- Certified by SCS Global Services to contain an average of 53% recycled glass content, 31% pre-consumer, and 22% post-consumer.
- For faced products: 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.
- Environmental Product Declaration (EPD) has been certified by UL Environment.

Notes
For additional information, refer to the Safe Use Instruction Sheet (SUIS) found in the SDS Database via http://sds.owenscorning.com.

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