For Pricing and Availability contact
Allstate Insulation 888-841-4822
www.allstateinsulation.com

Johns Manville

Micro-Lok® *HP*

High-Performance Fiber Glass Pipe Insulation

DESCRIPTION

Micro-Lok *HP* Fiber Glass Pipe Insulation is a high-performance insulation made from rotary glass fibers bonded with a thermosetting resin and produced in 36" (0.92 m) lengths. Micro-Lok *HP* is used to insulate standard iron pipe and copper tubing. The 3' (0.92 m) sections are available plain or with a factory-applied vapor-barrier jacket. The all-service (ASJ) vapor-retarder jacket includes a longitudinal, self-sealing closure lap. The jacket system is adhered to each fiber glass section using a specially formulated adhesive to ensure jacket securement. Latex paint may be applied to the Micro-Lok *HP* jacket after installation.

The factory-installed tape system permits installation at ambient temperatures down to 20°F (-7°C) and will not soften or separate when exposed to high ambient temperatures and humidity.

USES

Micro-Lok *HP* fiber glass pipe insulation is suitable for installation over hot, cold, concealed and exposed piping systems with operating temperatures up to 850°F (454°C). Weather-protective jacketing is required for outdoor applications. Pipes operating below ambient temperatures require all joints to be sealed with the factory-applied, self-seal lap and butt strips

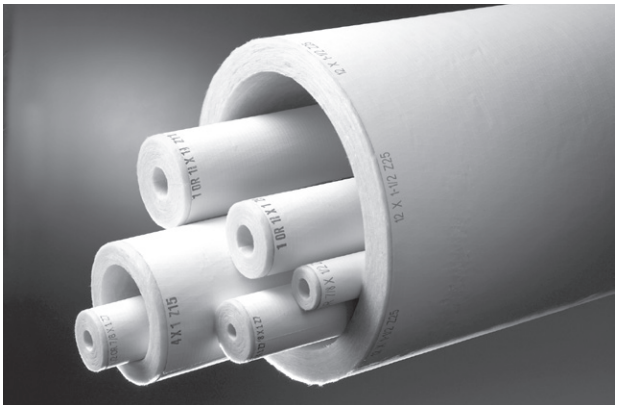
PHYSICAL PROPERTIES

Service Temp. Range (ASTM C411)	0°F to 850°F (-18°C to 454°C)
Moisture Sorption	<5% by weight
Alkalinity	<0.6% expressed as Na_2O
Corrosivity (ASTM C665)	Does not accelerate
Capillarity	Negligible (after 24 hours)
Shrinkage (ASTM C356)	None
Microbial Growth (ASTM C1338)	Does not promote microbial growth
Surface Burning Characteristics	Composite FHC 25/50 per ASTM E84, NFPA 255, CAN/ULC S102-M88
Limited Combustibility	NFPA 90A and 90B
Jacketing	ASTM C1136 (Type I)
Water Vapor Permeance (ASTM E96 – Procedure A)	0.02 perms max.
Burst Strength (ASTM D774)	50 Beach Units (1.5 Joules min.)
Tensile Strength (ASTM D828)	45 lbs./in. (7.9N/mm) width min. (MD) 30 lbs./in. (5.23N/mm) width min. (CD)

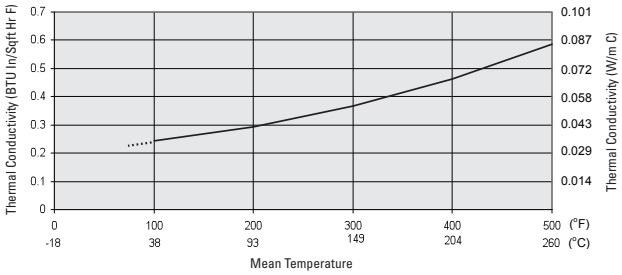
Operating Temperature Limits: 0°F to 850°F (-18°C to 454°C)

SPECIFICATION COMPLIANCE

- ASTM C547 Type I (Replaces HH-I-558B, Form D, Type III, Class 12, Class 13 up to 850°F [454°C])
- ASTM C585 – Dimension Standard
- ASTM C1136 (Jacketing) (Replaces HH-B-100B, Type I & II)
- MIL-I-22344D
- NRC 1.36, ASTM C795, MIL-I-24244C
- Coast Guard/IMO Approved 164.109/56/0 (plain, unjacketed only – excluding ⅞ x ½ [22 mm x 13 mm], ½ x ½ [13 mm x 13 mm])
- New York City MEA # 330-85-M
- California Bureau of Home Furnishings and Thermal Insulation – Registry Number CA-T040 (CO)



THERMAL CONDUCTIVITY ("K")



MEAN TEMPERATURE	K	K(SI)
75°F (24°C)	0.23	0.034
100°F (38°C)	0.24	0.035
200°F (93°C)	0.29	0.042
300°F (149°C)	0.37	0.053
400°F (204°C)	0.46	0.067
500°F (260°C)	0.59	0.085

GREEN BUILDING ATTRIBUTES

Manufacturing Location	Defiance, Ohio (43512)	
Recycled Content	25%	
Volatile Organic Compounds (ASTM D5116)	Total	0.15 g/l
(Analysis ASTM D6196 & ASTM D5197)		
Fiber Glass Pipe Insulation	Formaldehyde	0.009 ppm
	Aldehydes	0.009 ppm
Volatile Organic Compounds (Calculated)	Total	<49 g/l
Self-Sealing Lap & Butt Strips		

GREEN BUILDING CERTIFICATIONS

GREENGUARD®	
• Indoor Air Quality	Certified
• Children and Schools	Certified
LEED® Credits	
LEED-NC	See JM.com/buildgreen JM LEED Credit Guide (HIG-1231)

GREENGUARD® certification is not intended for residential environments. Instead, the certification is intended only for buildings meeting ASHRAE 62.1-2007 commercial building ventilation rates. This certification is proof that the product meets the GREENGUARD Environmental Institute's indoor air quality standards and productemission standards for VOCs.

Micro-Lok® *HP*

High-Performance Fiber Glass Pipe Insulation

SIZE AVAILABILITY

Insulation Thickness		Iron Pipe Size Range		Copper Tubing Size Range	
in.	mm	in.	mm	in.	mm
½	13	½ – 6	13 – 152	⅝ – 4⅛§	16 – 105
1	25	½ – 24	13 – 610	⅝ – 6⅛	16 – 156
1½	38	½ – 24	13 – 610	⅝ – 6⅛	16 – 156
2	51	½ – 24	13 – 610	1⅛ – 6⅛	29 – 156
2½	64	1 – 24	25 – 610	1⅜ – 6⅛	35 – 156
3	76	1 – 24	25 – 610	1⅜ – 6⅛	35 – 156
3½	89	1½ – 24*	38 – 610	–	–
4	102	3 – 24**	76 – 610	–	–
4½	114	3 – 24†	76 – 610	–	–
5	127	3 – 20††	76 – 508	–	–

Notes:

**2½" and 23" IPS not available in this insulation thickness.*

***22" and 23" IPS not available in this insulation thickness.*

†21", 22" and 23" IPS not available in this insulation thickness.

††19" IPS not available in this insulation thickness.

§3⅝" CTS not available in this insulation thickness.

QUALIFICATIONS FOR USE

A sufficient thickness of insulation must be used to keep the maximum surface temperature of Micro-Lok *HP* below 150°F (66°C). In addition, at operating temperatures above 500°F (260°C), Micro-Lok *HP* pipe insulation must be applied in a thickness ranging from 2" (51 mm) minimum to 6" (152 mm) maximum.

During initial heat-up to operating temperatures above 350°F (177°C), an acrid odor and some smoke may be given off as the organic binders used in the fiber glass pipe insulation begin to decompose. When this occurs, caution should be exercised to ventilate the area well. This loss of binder does not directly affect the thermal performance of the pipe insulation, but the compressive strength and resiliency of the product are reduced. For applications with excessive physical abuse or vibration at high temperatures, consult your local Insulation Systems Market Development Manager for alternate material recommendations.

CHILLED WATER SYSTEMS

For chilled water systems, see Chilled Water InsulSpec™ – 3-Part Specification, CI-239.

APPLICATION RECOMMENDATIONS*
MICRO-LOK *HP* PIPE INSULATION AND BUTT STRIPS.

1. Do not apply Micro-Lok *HP* if air temperature is below 20°F (-7°C) or above 130°F (54°C) due to the effect of temperature on tape performance. We recommend stapling when application falls outside this temperature range.

When stapling, we recommend mastic be applied over staples to prevent moisture penetration.

2. If stored below 20°F (-7°C) or above 130°F (54°C), insulation cartons should stand within the recommended temperature range for 24 hours prior to application.

3. Once release paper is removed, both adhesive and lap must be kept free of dirt and water, and the lap sealed immediately.

4. When adhered, the lap and butt strips must be pressurized by rubbing firmly with a plastic squeegee or the back of a knife blade to ensure positive closure.

**For complete application recommendations and installation instructions, see CI-32 brochure.*

Johns Manville

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The physical and chemical properties of Micro-Lok® *HP* High-Performance Fiber Glass Pipe Insulation listed herein represent typical, average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Numerical flame spread and smoke developed ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions. Check with the Regional Sales Office nearest you to ensure current information. **All Johns Manville products are sold subject to Johns Manville's standard Terms and Conditions including Limited Warranty and Limitation of Remedy. For a copy of the Johns Manville standard Terms and Conditions, Limited Warranty and Limitation of Remedy, and information on other Johns Manville thermal insulations and systems, call (800) 654-3103.**

CI-228 06/10 (Replaces 03/09)

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