Johns Manville

Fiber Glass Insulation

Pipe & Equipment Insulations Product Selection Guide

	Icon Key
	Thermal
	Acoustical
	Fire Resistance
	Moisture Control
	Formaldehyde-free™ products for improved indoor air quality

For more information, visit us at
specJM.com

800 Series Spin-Glas®

Fiber Glass Duct and Equipment Insulation

Spin-Glas®

Fiber Glass Board Insulation

HTB 26 Spin-Glas®

Fiber Glass Blanket Insulation

DESCRIPTION

This fiber glass insulation board is designed for use on equipment in commercial and industrial HVAC, power, and process applications.

Operating Temperature Limit:
0°F to 450°F (-18°C to +232°C)

1000 Series Spin-Glas®
A semi-rigid board used for insulating furnaces, boilers, heated vessels, ducts, tanks, and other systems operating at medium to high temperatures.

Operating Temperature Limit: 850°F (454°C)

Precipitator Spin-Glas®
A semi-rigid board specifically designed for insulating precipitators, ducts, and breechings in power generation plants.

Operating Temperature Limit: 850°F (454°C)

A lightweight insulating blanket specifically designed for insulating irregular surfaces.

Operating Temperature Limit: 1000°F (538°C)

AVAILABILITY

Type	Density pcf	Density kg/m³	Thickness in.	Thickness mm
812	1.50	24	1½-4	38-102
813	2.25	36	1½-4	38-102
814	3.00	48	1-4	25-102
815	4.25	68	1-2½	25-64
817	6.00	96	1-2	25-51

800 Series Spin-Glas is available plain or faced with an AP or FSK vapor retarder jacketing.

1000 Series Spin-Glas (Boards)

	in.	mm
Thickness	1-4 (½" inc.)	25-102 (13 mm inc.)
Width	24, 48	610, 1219
Length	48, 96	1219, 2438

Precipitator Spin-Glas (Boards)

	in.	mm
Thickness	1-4 (½" inc.)	25-102 (13 mm inc.)
Width	12, 24	305, 610
Length	48, 96	1219, 2438

HTB 26 Spin-Glas (Rolls)

	in.	mm
Thickness	1, 1½ ,2 ,3 ,4	25, 38, 51, 76, 102
Width	24, 36, 48	610, 914, 1219
Length	◆	◆

◆ Length determined by thickness.

PERFORMANCE CHARACTERISITICS

THERMAL CONDUCTIVITY ("k")
(ASTM C 177 AND C 518)

Type	Mean Temperature 75°F	Mean Temperature (24°C)
812	0.24*	0.035**
813	0.23*	0.033**
814	0.23*	0.033**
815	0.22*	0.032**
817	0.22*	0.032**

*Btu•in/(hr•ft²•°F) ** W/m • °C

THERMAL CONDUCTIVITY ("k")
(ASTM C 177 AND C 518)

Type	Mean Temperature 75°F	Mean Temperature (24°C)
1000 SSG	0.23*	0.033**
Precipitator SG	0.23*	0.033**

*Btu•in/(hr•ft²•°F) ** W/m • °C

THERMAL CONDUCTIVITY ("k")
(ASTM C 177 AND C 518)

Type	Mean Temperature 75°F	Mean Temperature (24°C)
HTB	0.26*	0.037**

*Btu•in/(hr•ft²•°F) ** W/m • °C

SPECIFICATION COMPLIANCE

ASTM C 612 Type 1A and 1B
- (813, 814, 815, 817)

ASTM C 553, Type III
- (812 Only)

ASTM C 795
ASTM C 1136
- Type I – AP Facing
- Type II – AP and FSK Facing

ASTM E 84, UL 723, NFPA 255
FHC 25/50, NFPA 90A and 90B
HH-I-558C, Form B, Type I, Class 7
- (812, 813, 814, 815)

MIL-1-24244C
NRC 1.36
Canada: CGSB 51-GP-10M
CAN/ULC S102-M88

ASTM C 612, Type II
ASTM C 795
ASTM E 84, FHC 25/50
ASTM E 136 (Noncombustible)
MIL-I-24244C
MIL-I-22023D, Type I and II, Class 6
USCG 164.009
NRC 1.36
CAN/51-GP-10M

ASTM C 612, Type II
ASTM C 795
ASTM E 84, FHC 25/50
ASTM E 136 (Noncombustible)
HH-I-558C, Form B, Type I, Class 8
- Up to 850°F (454°C)

MIL-I-24244C
USCG 164.009
NRC 1.36
CAN/51-GP-10M

ASTM C 553, Type V
ASTM C 1139, Type I, Grade 2
ASTM C 795
ASTM E 84, FHC 25/50
ASTM E 136 (Noncombustible)
HH-I-558C, Form B, Type I, Class 8
MIL-I-22023D, Type I, Class 3
MIL-I-24244C
USCG 164.009
NRC 1.36
CAN/51-GP-11M

Fabrication Board

Semi-Rigid Fiber Glass Insulation Boards

Fabrication Boards are commonly fabricated into pipe and tank Insulation products used on heated pipes, ducts and equipment. They can also be used in sheet form, plain or faced, for commercial and industrial heating, air conditioning and process equipment.

Operating Temperature Limit: 850°F (454°C)

	Density		Thickness		High Temp. Limit	
Type	pcf	kg/m³	in	mm	°F	°C
3005	3.0	48	1-4	25-102	850	454
3008	3.0	48	1-4	25-102	650	343

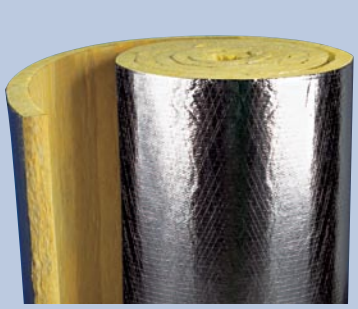
THERMAL CONDUCTIVITY ("k")
(ASTM C 177 AND C 518)

	Mean Temperature			
Type	75°F	(24°C)	300°F	(149°C)
3005	0.23*	0.033**	0.33*	0.048**
3008	0.23*	0.033**	0.36*	0.052**

*Btu•in/(hr•ft²•°F) ** W/m • °C

ASTM C 612
- Class 1 and 2
- Class 3 (3005 Only)

ASTM C 795
HH-I-558B, Form A, Class 1 and 2
ASTM E 84, UL 723, NFPA 255
FHC 25/50, NFPA 90A and 90B
MIL-I-24244B
NRC 1.36



Micro-Flex™

Large Diameter Pipe and Tank Wrap

Unique fiber orientation gives it increased compressive strength, and permits close installation on round surfaces without reducing the thickness of insulation resulting in a loss of insulation efficiency. It is ideally suited for application on rounded shapes such as pipes, tanks, ducts and vessels.

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

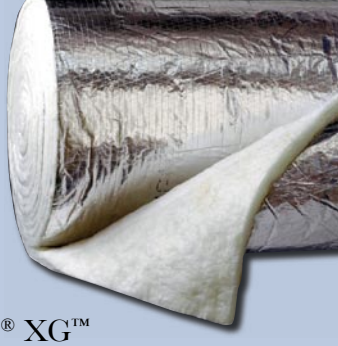
Thickness*		Width	
in	mm	ft.	m
1-4	25-102	3	0.92
1-4	25-102	4	1.22

*Available in ½" (13 mm) increments.

THERMAL CONDUCTIVITY ("k")
(ASTM C 177 AND C 518)

Mean Temperature		"k"	
°F	°C	Btu•in/(hr•ft²•°F)	W/m•°C
75	24	0.24	0.035
150	66	0.28	0.040
200	93	0.32	0.046
300	149	0.39	0.056
400	204	0.46	0.066
500	260	0.58	0.084

ASTM C 1393, Type III A
ASTM E 84
NYC MEA # 360-03-E



Microlite® XG™

Formaldehyde-free™ Fiber Glass Duct Wrap

Microlite XG Formaldehyde-free™ duct wrap insulation is recommended as thermal insulation for the exterior of HVAC systems or other spaces or surfaces where temperature and acoustical control is required.

Operating Temperature Limit:
40°F to 250°F (4°C to 121°C) faced

Thickness	in.	mm
Type 75	1½	38
	2	51
	2.3	59
	3	76
Type 100	1½	38
	2	51
Type 150	1½	38
	2	51

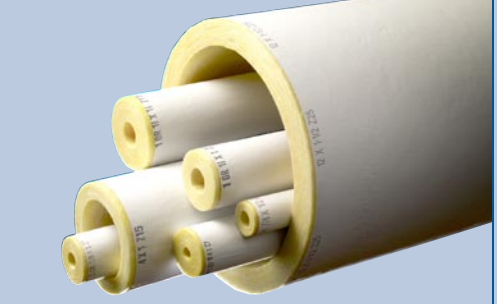
THERMAL PERFORMANCE – INSTALLED
R - VALUE @ 75°F (24°C) MEAN TEMP.

Type	(in)	(mm)	(hr•ft²•°F)/Btu	m²•°C/W
75	1½	38	4.2	0.74
75	2	51	5.6	0.99
75	2.3	59	6.5	1.15
75	3	76	8.3	1.46
100	1½	38	4.5	0.79
100	2	51	6.0	1.06
150	1½	38	4.7	0.83
150	2	51	6.3	1.11

ASTM C 553-92
- Type II – Type 75, 100 and 150
- Type III – Type 150

ASTM C 1290-95
ASTM C 1139-90, Type II
- Grade I – Type 75 Faced
- Grade II – Type 100 Faced
- Grade III – Type 150 Faced

ASMT E 84, FHC 25/50 – FSK Facing
ASTM C 1136, Type II – FSK Facing
NYC MEA # 40-75-M
Canada: CGSB 51-GP-11M
CAN/ULC S102-M88



Micro-Lok® *HP*

High Performance Fiber Glass Pipe Insulation

A rigid, preformed, one-piece, high performance fiber glass insulation. Micro-Lok *HP* is designed for use on commercial, power, or process lines.

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

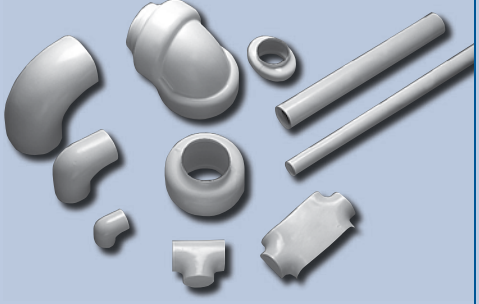
3-Foot (0.92 m) Sections
IPS: ½" - 24" (13 mm - 610 mm)*
CT: ⅝" - 6⅛" (16 mm - 156 mm)

Micro-Lok *HP* is available in thicknesses of:
½" - 5" (13 mm - 127 mm)*
in ½" (13 mm) increments.
*Check for current availability.

THERMAL CONDUCTIVITY ("k")
(ASTM C 335)

Mean Temperature		"k"	
°F	°C	Btu•in/(hr•ft²•°F)	W/m•°C
100	38	0.24	0.035
200	93	0.29	0.042
300	149	0.36	0.052
400	204	0.45	0.065
500	260	0.59	0.085

ASTM C 547, Type I
ASTM C 585
ASTM C 1136
MIL-1-22344D
NRC 1.36
ASTM C 795
FHC 25/50
MIL-I-24244C
USCG 164.109
NYC MEA # 330-85-M



Zeston® 2000 PVC

Insulated Fitting Covers and Jacketing

These PVC fitting covers and jacketing, when combined, form a completely sealed system which meets the requirements of the USDA and FDA approval for food, beverage, and pharmaceutical facilities.

Operating Temperature Limit:
PVC: 0°F to 150°F (-18°C to +66°C)
Insert: 0°F to 450°F (-18°C to +232°C)

Fitting covers, rolls and Cut & Curled™ jacketing are available in white only. Zeston installation accessories complete a systems package which features ease of installation, uniform appearance, and long-term insulation and protection.

Zeston installation accessories include:
Perma-Weld® solvent welding system adhesive and applicator • PVC Z-Tape • White, stainless steel thumb tacks

THERMAL CONDUCTIVITY OF HI-LO® TEMP FIBER GLASS INSULATION INSERT

Mean Temperature		"k"	
°F	°C	Btu•in/(hr•ft²•°F)	W/m•°C
75	24	0.28	0.040
150	66	0.34	0.049
300	149	0.45	0.065

ASTM D 1784, Class 16354-C
L-P-535E, Composition A, Type II, Grade GU
L-P-1035A, Composition A, Type II, Grade GU
ICBO
SBCCI
BOCA
NYC MEA # 7-87
Canada: CGSB 51-GP-53M
CAN/ULC S102-M88
USDA, Agriculture Canada

Zeston® 300 Series PVC

Fitting Covers and Jacketing for Industrial Use

These heavy-duty PVC insulated fitting covers and jacketing are specifically designed for industrial and institutional pipe applications.

Operating Temperature Limit:
PVC: 0°F to 150°F (-18°C to +66°C)

Fitting covers, rolls and Cut & Curled™ jacketing are available both in white and in colors.

Made from the same rugged, pliable PVC material, Zeston PVC jacketing is designed to match the Zeston 300 Series fitting covers. For use over insulated pipe and bare metal, the PVC jacketing is easy to install and maintain, provides an inherent vapor retarder, and will withstand water and most chemical and low-solvency washdowns.

Zeston 300 Series heavy gauge PVC fitting covers are available in many shapes and sizes. Its two piece or two-piece welded construction provides ease of fabrication in the field not available in a traditional one-piece fitting cover. This construction is engineered to accommodate various types of fabricated insulation fittings and an improved "matched" fit in the fitting throat area when solvent welding.

Zeston 300 Series heavy gauge is available in shapes for 90° and 45° (1.6 and 0.8 rad.) short and long radius elbows, tees, and valves plus a wide variety of other fittings, flanges, reducers, end caps, soil pipe hubs, traps, and mechanical line fittings. IPS sizes are available from ½" through 24" (13 mm through 610 mm); CT sizes from ½" through 6⅛" (13 mm through 156 mm).

ASTM D 1784, Class 16354-C
L-P-535E, Composition A, Type II, Grade GU
L-P-1035A, Composition A, Type II, Grade GU
ICBO
SBCCI
BOCA
NYC MEA # 7-87
Canada: CGSB 51-GP-53M
CAN/ULC S102-M88
USDA, Agriculture Canada

717 17th St.
Denver, CO 80202
(800) 654-3103
(800) 978-2318 FAX
specJM.com

CI-177 3-08 (Replaces 2-07)

The physical and chemical properties of the Pipe & Equipment Insulations 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 assure 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.**

Printed on recycled paper.