

Fabrication Board

Semi-Rigid Fiber Glass Insulation Boards

Description

Fabrication Boards are manufactured from inorganic glass fibers bonded by a thermosetting resin. Light, strong and resilient, they are easy to fabricate and install.

Available Forms

Made in sheet form, they are available in four different densities and rigidities to meet a wide range of product application temperature and thermal performance requirements. Please refer to the table of "Densities, Thicknesses and Sizes".

Uses

Fabrication Boards have a recommended temperature limit up to 850°F (454°C) and 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. These products are not designed for direct exposure to the airstream.

Advantages

High Thermal Performance. The glass fibers create an enormous number of minute air spaces, making the insulation highly resistant to the passage of heat.

Fire Safety. Fabrication Boards meet the requirements of NFPA 90A and 90B Standards and FHA in plain form. Tested in accordance with ASTM E 84, NFPA 255 and UL 723 with surface burning characteristics FHC of 25/50.

Noise Control. Inherent acoustical properties reduce the level of unwanted noise.

Faster Installation. Fabrication Boards are readily cut with an ordinary knife and can be secured with fasteners, adhesives or tape.

Superior Performance. Bonded glass fibers are strong and durable with resistance to the effects of moisture, oil, grease and most acids. The resilient glass fibers resist settling, breakdown or sagging from vibration and high temperatures. Fabrication Boards provide neat, square corners for an improved, finished appearance in equipment systems.

Densities, Thicknesses and Sizes Standard Size Batts

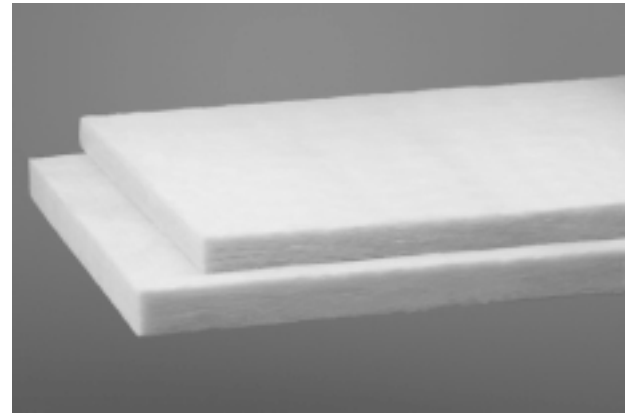
Type	Density		Thickness*		High Temp. Limit	
	pcf	kg/m ³	in	mm	°F	°C
2405	2.4	38.4	1-4	25-102	850	454
3005	3.0	48.1	1-4	25-102	850	454
3008	3.0	48.1	1-4	25-102	650	343
3012	3.0	48.1	1-4	25-102	450	232

Width: 24" or 48" (610 mm or 1219 mm).

Length: 36" (914 mm) min. (+³/₈-¹/₈") [+9.5 mm-3.2 mm].

Other lengths available in 1/2" (13 mm) increments.

*Note: Available in 1"-4" (25 mm-102 mm) thicknesses in 1/2" (13 mm) increments.



Operating Temperature Limits: Temperature limits by product listed below.

Qualifications for Use

The temperature limits listed are based on the material in plain sheet form. The application of the fabricated Pipe and Tank product will depend on the facing material and adhesive used.

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 insulation begin to decompose. When this occurs, caution should be exercised to ventilate the area well.

Physical Properties

Moisture sorption	Less than 5.0% by weight
Alkalinity (ASTM C 871)	Less than 0.6% expressed as Na ₂ O
Corrosivity	Non-corrosive; does not accelerate
Odor	None
Shrinkage	None
Resistance to fungi and bacteria (ASTM C 665)	Does not breed or promote

Thermal Conductivity (k) - ASTM C 518

Type	Mean Temperature °F (°C)			
	75°F (24°C)	300°F (149°C)		
2405	.23*	.033**	.34*	.049**
3005	.23	.033	.33	.048
3008	.23	.033	.36	.052
3012	.23	.033	.39	.056

*Btu •in./(hr•ft²•°F) ** W/m • °C

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Specification Compliance

Type	2405	3005	3008	3012
HH-I-558B:				
Form A, Class 1	X	X	X	X
Form A, Class 2	X	X	X	X
Exceptions - Unless requested, only standard inspection. - Does not meet length and width tolerances.				

ASTM C 612:

Class 1	X	X	X	X
Class 2	X	X	X	X
Class 3	X	X	—	—

Exceptions - Does not meet standard length and width requirements.

ASTM C 795 (Cleburne material only)

MIL-I-24244B (Cleburne material only)

NRC 1.36 (Cleburne material only)

ASTM E 84; UL 723; NFPA 255 - Fire Safety

Flame Spread - Not exceeding 25

Smoke Developed - Not exceeding 50

NFPA 90A and 90B Standards

ASTM C 518 - Thermal Conductivity

ASTM C 411 - Hot Face Temperature

ASTM C 356 - Shrinkage (none)

ASTM C 665 - Odor emission (no objectionable odor)

- Fungi and bacteria resistance (does not breed or promote)

- Corrosion resistance (will not cause corrosion of aluminum, copper or steel)

Capillarity - Negligible (after 24 hours)

ISO 9000 Certification

Johns Manville mechanical insulation products are designed, manufactured and tested in our own facilities, which are certified and registered to stringent ISO 9000 (ANSI/ASQC 90) series quality standards. This certification, along with regular, independent third-party auditing for compliance, is your assurance that Johns Manville products deliver consistent high quality.



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The physical and chemical properties of Fabrication Board 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 this 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 Limited Warranty and Limitation of Remedy. For a copy of the Johns Manville Limited Warranty and Limitation of Remedy, call the 800 number below.** For information on other Johns Manville thermal insulations and systems and a copy of the Spec-Line® CSI formatted specification, call **1-800-654-3103**. To access automated fax-on-demand service in the United States and Canada, simply call **1-888-INSULFX (1-888-467-8539)** from a fax or phone.

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