

EnviroAire™
Formaldehyde-free™ Fiber Glass Duct Board

Description

EnviroAire™ Formaldehyde-free™ Fiber Glass Duct Board is produced from durable glass fibers, bonded with a thermosetting resin. The airstream side of the duct board features a fiber glass mat for use at velocities up to 6,000 fpm (30.5 m/sec.). The opposite side features a fire-resistant Foil-Scrim-Kraft facing extending the full width of the male edge to serve as an integral closure flap for section joints.

The Formaldehyde-free™ formula also addresses indoor air quality concerns by providing a healthier, safer home for your family.

EnviroAire Duct Board also features the exclusive blue EnviroCoate™ Reinforced Coating System which is a high tensile strength fiber glass mat on the airstream side. It is protected from damage by mold and bacteria with an antimicrobial agent specifically registered with the EPA for HVAC applications. Microbial resistance testing was conducted in accordance with ASTM C 1071, as well as the more stringent ASTM G 21. Bacteria tests were conducted in accordance with ASTM G 22.

Uses

EnviroAire Duct Board is ideal for residential HVAC applications to quietly and efficiently distribute cool or warm air for greater room-to-room comfort.

Advantages

Energy Efficient. Low leakage means more efficient delivery of cool or warm air, and less wasted energy.

Quiet Comfort. The outstanding acoustical properties of EnviroAire Duct Board eliminate the “popping,” vibrations, equipment rumbles and other noises typically associated with noisy metal duct systems. It also easily absorbs crosstalk and other ductborne sounds.

Healthier, Safer Home. In addition to the Formaldehyde-free™ formula which addresses indoor air quality concerns, EnviroAire Duct Board is manufactured with FirePak™. This new protection system meets all industry standards without the health and environmental concerns of ordinary fire retardants. No Antimony Trioxide, no PBDE.

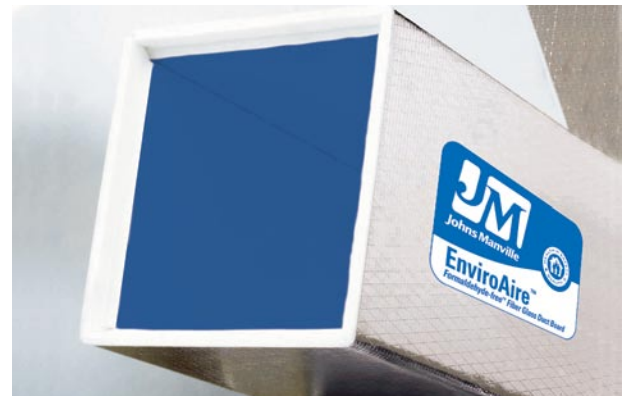


Cleanability. If cleaning is necessary, the airstream surface may be cleaned using standard industry-recognized dry methods. See the North American Insulation Manufacturers Association (NAIMA) “Cleaning Fibrous Glass Insulated Air Duct Systems.”

Available Forms

To facilitate cost-effective fabrication and installation, EnviroAire Duct Board is available in cartons or on pallets in several size configurations. (1½” and 2” [38 mm and 51 mm] thicknesses available as Type 800 only.)

Size		Thickness	
(inches)	(mm)	(inches)	(mm)
48 x 120	1219 x 3048	1, 1½, 2	25, 38, 51



Operating Temperature Limit: 250°F (121°C)

Specification Data

General Properties

Thickness	1 in. (25 mm), 1½ in.* (38 mm)*, 2 in.** (51 mm)**
Air Velocity (max.)	6000 fpm (30.5 m/sec.)
Operating Temperature (max.)	250°F (121°C)
Internal Pressure (max.)	Per UL 181
	2” w.c. (498 Pa)
	Johns Manville M.P. Spec
	4” w.c. (996 Pa)

*Type 800 only. ♦ Type 800, 2” available on a Special Product Price Inquiry (SPPI) basis only.

Thermal Conductivity

Thickness		Mean Temperature	
(in)	(mm)	75°F	24°C
1	25	.23*	.033**
1½	38	.23*	.033**
2	51	.24*	.035**

Conductivity per ASTM C 518: *Btu•in/(hr•ft²•°F) **W/m•°C

Permeance

FSK Facing	.02 perms
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Thermal Performance

Thickness		R-Value	
(in)	(mm)	(hr•ft²•°F)/Btu	m²•°C/W
1	25	4.3	0.76
1½	38	6.4	1.15
2	51	8.3	1.46

UL Fire Hazard Classification

Flame Spread	not over 25
Smoke Developed	not over 50

Specification Data (Continued)

Easy, Effective Closure Systems.

Johns Manville recommends these closure systems which fully comply with the requirements of UL 181.

Heat-Activated Tapes: Tapes that have met the requirements of the UL 181A-H standard and are registered with Underwriters Laboratories.

Pressure Sensitive Tapes: Tapes that have met the requirements of the UL 181A-P standard and are registered with Underwriters Laboratories. Tapes in compliance with this standard must be imprinted with this information.

Glass Fabric and Mastic: Glass fabric and mastic that have met the requirements of the UL 181A-M standard and are registered with Underwriters Laboratories.

Limitation of Liability

If the closure system used is not one of the approved systems noted above, and if the application is not in accordance with the tape or glass fabric and mastic manufacturer's stated procedures, the UL 181 Class 1 air duct rating and the Johns Manville product warranty are void.

Flexural Rigidity

EnviroAire Duct Board is available in stiffness values of 475 and 800 EI. The stiffness or flexural rigidity is the product of Young's Modulus of Elasticity (E) and the Moment of Inertia (I), as determined in accordance with NAIMA AHC-100-74 (REF, ASTM D 1037).

Maximum Unreinforced Duct Dimensions

Thickness	Internal Pressure (in. water column)	Positive (inches)	Negative (inches)
Type 475 1"	0.5	36	34
	1.0	24	22
	2.0	15	14
Type 800 1½", 2"	0.5	36	36
	1.0	24	24
	2.0	18	18

Thickness	Internal Pressure (Pa)	Positive (mm)	Negative (mm)
Type 475 25 mm	125	914	864
	249	610	559
	498	381	356
Type 800 38, 51 mm	125	914	914
	249	610	610
	498	457	457

This table summarizes span/pressure limitations for unreinforced duct. For larger duct sizes, see The Pocket Installer, AHS-3.

EnviroAire Duct Board Noise Reduction Coefficients (Type "A" Mounting)*

Type	Thickness		NRC
	(in)	(mm)	
475	1	25	0.75
800	1½	38	0.90
800	2	51	1.00

* Coefficients determined on Type "A" mounting in accordance with ASTM C 423-90 test procedure.

Specification Compliance

- UL 181, Class 1 Rigid Air Duct Listed
- NFPA 90A and 90B
- Conforms to ASHRAE 62-2001
- ASTM G 21 and G 22
- ICC Compliant
- State of Washington Building Services Department requirements for emissions of total volatile organic compounds (TVOC) and formaldehyde (CHOH) in accordance with ASTM D 5116-90
- Canada: CGSB 51.10-92; CAN/ULC-S110M
- Building Officials Conference of America (BOCA)
- International Conference of Building Officials (ICBO)
- Southern Building Code Congress (SBCC)
- Federal Housing Authority "Minimum Property Standards"
- General Services Administration, Public Building Services, "Standard Air Conditioning Specifications"
- Corps of Engineers "Air Conditioning Guide Specifications"
- Department of Army Guide Specifications—Family Housing
- Department of Defense Guide Specifications—Family Housing



Johns Manville

Insulation Systems

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The physical and chemical properties of EnviroAire™ Formaldehyde-free™ Fiber Glass Duct 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, and information on other Johns Manville thermal insulations and systems, call (800) 654-3103.**

