

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 the exclusive, blue EnviroCoate™ Reinforced Coating System, which is a high tensile strength fiber glass mat. The exterior surface 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.

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. EnviroAire is also effective for commercial HVAC systems.

Facing Information

FSK Facing	0.02 perms*
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* Per ASTM E 96, Procedure A for facing material prior to lamination. After lamination, permeance values may be higher.

General Properties

Operating temperature (max.) - ASTM C 411	250°F (121°C)
Air velocity (max.) - ASTM C 1071	6000 fpm (30.5 m/sec.)
Internal pressure (max.) - UL 181	2" w.c. (498 Pa)
Fungi resistance - ASTM C 1338	Does not breed or promote
Fungi resistance - ASTM G 21	No growth
Bacteria resistance - ASTM G 22	No growth

Standard Thicknesses and Packaging*

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

Size		Thickness	
in	mm	in	mm
48 x 120	1219 x 3048	1, 1½	25, 38

* Limited availability. Contact your local JM sales representative for further information.

Surface Burning Characteristics

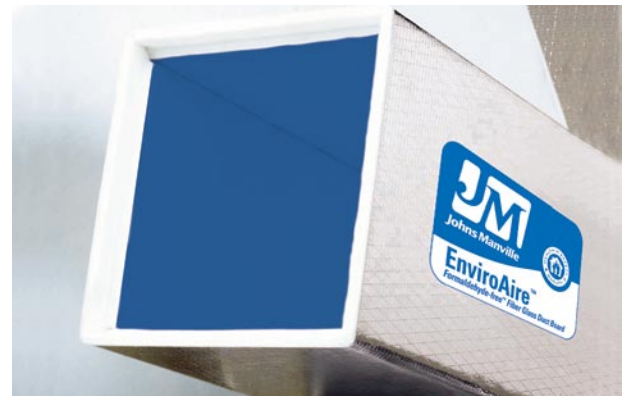
EnviroAire meets the Surface Burning Characteristics and Limited Combustibility of the following standards:

Standard/Test Method		
• ASTM E 84	Maximum Flame Spread Index	25
• UL 723	Maximum Smoke Developed Index	50
• NFPA 90A and 90B		

UL labels supplied on packages when requested on order.

Specification Compliance

- UL 181 Class 1 Rigid Air Duct Listed
- ASHRAE 62
- ICC Compliant
- Universal Building Code (UBC)
- International Mechanical Code (IMC)
- State of Washington Building Services Department requirements for emissions of total volatile organic compounds (TVOC) and formaldehyde (CHOH) in accordance with ASTM D 5116
- Canada: CGSB 51.10-92; CAN/ULC-S110M



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.

Will Not Support Microbial Growth. The EnviroCoate Reinforced Coating System incorporates an antimicrobial agent specifically formulated to protect against the potential growth of fungi and bacteria. The protective agent is EPA registered for HVAC applications. EnviroAire passes UL 181 mold growth resistance testing. Tests were conducted in accordance with ASTM C 1338 and ASTM G 21 (fungi testing) and ASTM G 22 (bacteria resistance testing). Detailed information is available in Johns Manville fact sheet HSE-103FS.

Note: As with any type of surface, microbial growth may occur in accumulated duct system dirt, given certain conditions. This risk is minimized with proper design, filtration, maintenance and operation of the HVAC system.

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.”

**JM Formaldehyde-free™
Fiber Glass Insulation**

JM Formaldehyde-free™ fiber glass insulation offers superior thermal and acoustical performance—and it improves indoor air quality, because it’s made without formaldehyde. Why is that important? Because the U.S. Environmental Protection Agency (U.S. EPA) recommends limiting exposure to formaldehyde as much as possible, and the California Air Resources Board, a division of the California EPA, recommends that builders and architects use building materials and insulation made without formaldehyde.

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Application Recommendations

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 in	Negative in
Type 475 1"	0.5	36	34
	1.0	24	22
	2.0	15	14
Type 800 1½"	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 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.

Thermal Conductivity

Thickness	Mean Temp. @ 75°F (24°C)	
	in	mm
1	25	0.23
1½	38	0.23

Conductivity per ASTM C 518.

Thermal Performance

Thickness	R-Value	
	in	mm
1	25	4.3
1½	38	6.5

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

Type	Thickness		NRC
	in	mm	
475	1	25	0.75
800	1½	38	0.90

** Coefficients were tested in accordance with ASTM C 423 and ASTM E 795.*



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The physical and chemical properties of EnviroAire™ Formaldehyde-free™ Fiber Glass Duct Board 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.**