

## DESCRIPTION

These equipment insulations are both made from strong, flame-attenuated borosilicate glass fibers bonded with a thermosetting resin.

**Exact-O-Mat®** is a flexible, resilient, blanket-type fiberglass insulation faced on one side with a smooth, durable, nonwoven, treated mat. It is recommended specifically for use as a thermal and acoustical control liner in HVAC equipment. It is also suited for other equipment applications requiring effective thermal and acoustical control, low air friction, damage resistance and attractive appearance. Exact-O-Mat can be manufactured to extremely close thickness tolerances so it is especially suitable for applications in which the restriction of air flow is critical. This strong, resilient insulation resists damage and withstands the effects of high air velocities. This product is easily die-cut, trimmed, and folded to specified configurations. It is compression packaged yielding potential shipping and storage savings. An amber core is standard and a black core is available on request.

**Exact-O-Board®** is a rugged, board-type fiberglass insulation specifically designed for use in air conditioning units and other air handling equipment applications. It is also suitable for other equipment applications requiring strength and durability, high thermal and acoustical values, space adaptability and attractive appearance. Exact-O-Board liners are formed to close thickness tolerances with smooth uniform surfaces. Their porosity and inherent structure results in highly effective thermal and acoustical control in a minimum amount of space. The standard product is furnished in a black color.

### EXACT-O-MAT STANDARD THICKNESSES & DENSITY

Density		Thicknesses		Width	
pcf	kg/m <sup>3</sup>	in	mm	in	mm
3.0	48	¼	6	24 - 56	610 - 1,422
2.0	32	¼, ⅜	6, 10	24 - 56	610 - 1,422
1.5	24	½	13	24 - 56	610 - 1,422
1.0	16	1	25	24 - 56	610 - 1,422
0.75	12	1	25	24 - 56	610 - 1,422

\*Standard roll length is 100' x 2' (30m x 0.6m) - all thicknesses

### EXACT-O-BOARD STANDARD THICKNESSES & DENSITY

Density		Thicknesses		Width		Length (rolls)	
pcf	kg/m <sup>3</sup>	in	mm	in	mm	ft	m
3.0	48	¼	6	12 - 72	305 - 1,829	100	30
2.0	32	⅜	10	12 - 72	305 - 1,829	100	30

## CUSTOM FABRICATION

The Johns Manville nationwide network of Approved Fabricators specializes in secondary processing to supply custom parts to meet specific customer requirements. Die-cutting, laminating, special packaging and just-in-time delivery are just a few of the multiple capabilities our fabricators can provide.



## SPECIFICATIONS

Temperature Limit	Exact-O-Mat: 250°F (121°C) Exact-O-Board: 350°F (177°C)
Fire Hazard Classification ASTM E84, UL 723, and CAN/ ULC S102, Meets NFPA 90A and 90B	25 Flame Spread 50 Smoke Developed
Maximum Air Velocity	Exact-O-Mat: 5,000 fpm (25.4 m/sec) and tested at two and one-half times (12,500 fpm [63.5 m/sec]) this velocity. Meets the erosion requirements of UL 181.  Exact-O-Board: Tested at two and one-half times the recommended service velocities. Meets the erosion requirements of UL 181 (see table on next page).
ASTM C1071	Both products meet all requirements.

## APPLICATIONS

- Air Conditioners
- Furnaces
- Other HVAC Equipment

## ADVANTAGES

- High Thermal and Acoustical Performance
- Resistant to Air Erosion
- Close Thickness Tolerances
- Excellent for Minimum Space Requirements
- Ease of Handling, Fabrication and Installation



## EXACT-O-MAT® AND EXACT-O-BOARD®

### HVAC EQUIPMENT LINERS

## DATA SHEET

#### EXACT-O-BOARD THERMAL CONDUCTIVITY (K)

Density		Thickness		Mean Temp. @ 75°F (24°C)	
pcf	kg/m <sup>3</sup>	in	mm	Btu•in/(hr•ft <sup>2</sup> •°F)	W/m•°C
3.0	48	¼	6	0.22	0.032
2.0	32	⅜	10	0.23	0.032

#### EXACT-O-MAT THERMAL CONDUCTIVITY

Density		Mean Temp. @ 75°F (24°C)	
pcf	kg/m <sup>3</sup>	Btu•in/(hr•ft <sup>2</sup> •°F)	W/m•°C
3.0	48	0.24	.035
2.0	32	0.25	.036
1.5	24	0.25	.036
1.0	16	0.27	.039
0.75	12	0.28	.040

#### EXACT-O-BOARD ACOUSTICAL PERFORMANCE

Type "A" Mounting Sound Absorption Coefficients\*

Density		Thickness		Frequency (Hz)						
pcf	kg/m <sup>3</sup>	in	mm	125	250	500	1000	2000	4000	NRC**
3.0	48	¼	6	0.02	0.04	0.08	0.22	0.43	0.61	0.20
2.0	32	⅜	10	0.03	0.10	0.19	0.40	0.57	0.73	0.30

\*Tested in accordance with ASTM C423, Type A mounting per ASTM E795.

\*\* Noise reduction coefficient.

#### EXACT-O-MAT ACOUSTICAL PERFORMANCE

Type "A" Mounting Sound Absorption Coefficients\*

Density		Thickness		Frequency (Hz)						
pcf	kg/m <sup>3</sup>	in	mm	125	250	500	1000	2000	4000	NRC**
0.75	12	1	25	0.12	0.30	0.52	0.67	0.77	0.82	0.55
1	16	1	25	0.14	0.27	0.53	0.69	0.79	0.84	0.55
1.5	24	½	13	0.03	0.15	0.38	0.55	0.71	0.87	0.45
2.0	32	¼	6	0.03	0.06	0.16	0.33	0.50	0.69	0.25
2.0	32	⅜	10	0.00	0.06	0.19	0.43	0.64	0.87	0.35
3.0	48	¼	6	0.01	0.01	0.10	0.26	0.48	0.75	0.20

\*Tested in accordance with ASTM C423, Type A mounting per ASTM E795.

\*\* Noise reduction coefficient.

#### EXACT-O-BOARD MAXIMUM AIR VELOCITY\*

Thicknesses		Actual Test		Recommended Maximum	
in	mm	fpm	m/sec	fpm	m/sec
¼	6	5,000	25.4	2,000	10.2
⅜	10	4,000	20.3	1,600	8.1

\*Smoother surface should face the air stream.



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#### INSULATION SYSTEMS OEM INSULATION

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#### PRODUCT & TECHNICAL INFORMATION

800-654-3103

Technical specifications as shown in this literature are intended to be used as general guidelines only. Please refer to the Safety Data Sheet and product label prior to using this product. The physical and chemical properties of Exact-O-Mat and Exact-O-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. Any references to numerical flame spread or smoke developed ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions.

All Johns Manville products are sold subject to Johns Manville's standard Terms and Conditions, which includes a Limited Warranty and Limitation of Remedy. For a copy of the Johns Manville standard Terms and Conditions or for information on other Johns Manville thermal insulation and systems, visit [www2.jm.com/terms-conditions](http://www2.jm.com/terms-conditions) or call (800) 654-3103.