Insul-SHIELD®

THERMAL AND ACOUSTICAL FLEXIBLE, SEMI-RIGID AND RIGID BOARD AND ROLL PRODUCTS

COMPANY

Johns Manville, a Berkshire Hathaway company, was founded in 1858. Our ownership by Berkshire Hathaway, one of the most admired companies in the world and one of the most financially secure, allows JM to invest for the future. This enables JM to continue delivering the broadest range of insulation products in the industry and offering innovative solutions that meet your needs.

DESCRIPTION

Insul-SHIELD is a series of flexible, semi-rigid or rigid thermal and acoustical fiberglass insulating boards for custom curtain wall applications. They vary in density and are made from inorganic glass fibers bonded with a thermosetting binder. Black-faced Insul-SHIELD is available in rolls.

USE

New and Retrofit Construction – Insul-SHIELD insulation provides thermal and acoustical insulating values for exterior curtain wall cavities, parking structures, mechanical rooms, theaters, casinos and other commercial construction applications.

Custom Curtain Wall Construction – Insul-SHIELD is exceptionally well suited to curtain wall construction in terms of both installation and performance. When used in the exterior envelope of steel-framed buildings, it helps reduce heat loss in the winter and heat gain in the summer. The result is an attractive, efficient thermal enclosure that cuts long-term energy expenses and improves life-cycle costs.

Standard Metal Panel Construction – Insul-SHIELD offers a variety of sizes, densities and facings for on-the-job or in-the-shop insulation of metal panel buildings such as power plants, assembly buildings, sports arenas and other commercial facilities.

General Construction – Insul-SHIELD provides thermal protection for masonry or concrete structures such as shopping centers, banks and many other types of low-rise commercial or institutional buildings. It is also ideal for use in parking garage ceilings.

Theaters – Insul-SHIELD Black Faced, Black Coated Roll is an ideal backdrop for theater screens. The opaque surface absorbs light, eliminating concern about back-scatter into the viewing arena.

INSTALLATION

Insul-SHIELD boards faced with an FSK vapor retarder can be easily cut and friction-fit between vertical or Z-shaped framing or hat channels applied directly to a masonry surface. The insulation can also be installed with impaling pins or with suitable adhesives. Normally, gypsum board and/or architectural panels are then used as interior surfaces.

In standard metal panel construction applications, Insul-SHIELD is field-installed between an interior liner and the outer metal panel. Normally, gypsum board and/or architectural panels are then used as interior surfaces. Some trimming may be necessary if used in ceiling grids, as this product is a commercial-use board.

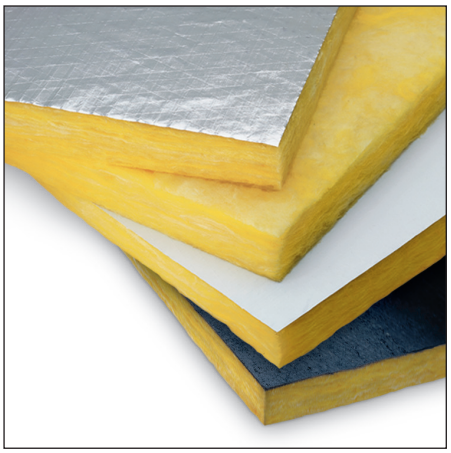
Note: In colder climate areas, vapor retarders (whether attached to the insulation or applied separately) are often placed toward the heated or conditioned side of the wall. This is done to reduce water vapor penetration into the wall from the building interior. Check your local building codes for vapor retarder requirements.

RECOMMENDED STORAGE AND TRANSPORT

Store insulation indoors. Keep insulation clean and dry at all times. When transporting, cover completely with a waterproof tarpaulin as necessary.

LIMITATIONS OF USE

Check applicable building codes.



PERFORMANCE ADVANTAGES

Cost-effective: lightweight, and easy to handle and fabricate so installation is fast and total applied cost is low.

Thermally Efficient: provides effective resistance to heat transfer.

Sound Control: reduces transmission of sound through roofs, ceilings, floors and walls.

Fire-resistant and Noncombustible: all Insul-SHIELD products provide fire resistance. In addition, Insul-SHIELD unfaced I/S 300 is also rated non-combustible.

Moisture-resistant: vapor-retarder facings resist water vapor transmission.

Noncorrosive: does not accelerate corrosion of pipes, wiring or metal studs.

Durable: It will not rot, mildew or otherwise deteriorate, preventing slumping and uninsulated voids.

Easy to Handle: unlike some products that are friable, fiber glass maintains its physical integrity during handling.

Self-supporting: Insul-SHIELD boards are rigid enough to be self-supporting, and can be attached with minimal securement to a variety of surfaces.

ENERGY AND ENVIRONMENT

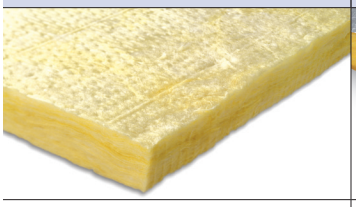
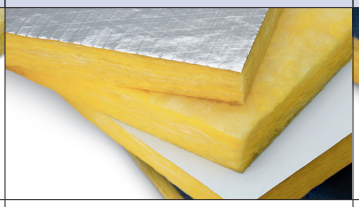
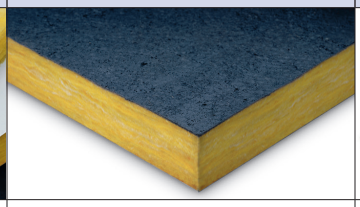
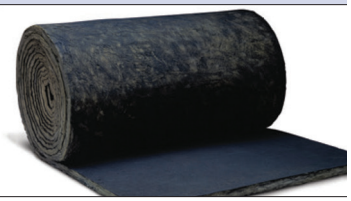
CERTIFIED RECYCLED CONTENT

NORTH AMERICAN AVERAGE
29% POST-CONSUMER RECYCLED CONTENT
ACTUAL RECYCLED CONTENT WILL VARY

Johns Manville
A Berkshire Hathaway Company

Insul-SHIELD®

THERMAL AND ACOUSTICAL FLEXIBLE, SEMI-RIGID AND RIGID BOARD AND ROLL PRODUCTS

Unfaced Boards	FSK-Faced Boards	Black Faced Boards	Black-Faced (Black Core) Rolls
			
Insul-SHIELD boards are designed for custom curtain wall applications.	Faced Insul-SHIELD boards can be used where a vapor barrier is needed. FSK facing has the best fire performance characteristics and helps maximize lighting efficiency.	Insul-SHIELD Black Faced provides a semi-rigid substrate beneath the fabric treatment used on theater side walls. The black, mat-faced insulation provides adequate shadowing behind any surface treatment.	Insul-SHIELD Black-Faced rolls are an ideal backdrop for theater applications.

STANDARD DIMENSIONAL DATA AND FACINGS*

Type	Density		Size		"k"-Values Btu•in/(hr•ft²•°F)	(w/m•°K)	Thickness (in)	Thickness (mm)	Facing**
	pcf	kg/m³	Width (in)	Length (ft)					
I/S 300	3.0	48.1	24"	4'	0.23	0.033	1, 1½, 2, 2½, 3	25, 38, 51, 64, 76	Unfaced, FSK, Black
I/S 600	6.0	96.1	24"	4'	0.22	0.032	1, 1½, 2	25, 38, 51	Unfaced, FSK, Black
I/S Black-Faced roll	1.5	24.0	48"	50' and 100'	0.25	0.036	1, 2	25, 51	Black

* Product sizes vary by plant locations and minimum quantities may apply; consult your Johns Manville sales representative for other available sizes and additional, special order facing options.
**Consult Product Availability Listing for most current and accurate sizing and availability of all Insul-SHIELD products.

SOUND ABSORPTION DATA***

Type	Density		Typical Coefficients by Frequency (Hz)							Thermal Data		Thickness & Facing
	pcf	kg/m³	125	250	500	1000	2000	4000	Noise Reduction Coefficient	"R" (hr•ft² •°F)/Btu	"RSI" m²•°K/w	Type "A" Mounting*
I/S 300	3.0	48.1	0.06	0.29	0.75	0.99	1.04	1.02	0.75	4.3	0.76	1" (25 mm) Unfaced
I/S 600	6.0	96.1	0.10	0.35	0.85	1.04	1.05	1.03	0.80	4.5	0.79	
I/S 300	3.0	48.1	0.13	0.62	1.07	1.08	1.06	1.04	0.95	6.5	1.14	1½" (38 mm) Unfaced
I/S 600	6.0	96.1	0.14	0.60	1.01	1.08	1.06	1.05	0.95	6.8	1.20	
I/S 300	3.0	48.1	0.24	1.00	1.11	1.08	1.06	1.05	1.05	8.7	1.53	2" (51 mm) Unfaced
I/S 600	6.0	96.1	0.38	0.93	1.10	1.07	1.07	1.07	1.05	9.1	1.60	
I/S 300	3.0	48.1	0.53	0.83	1.01	0.85	0.50	0.28	0.80	8.7	1.53	2" (51 mm) FSK Faced
I/S 600	6.0	96.1	0.54	0.48	0.87	0.73	0.52	0.22	0.65	9.1	1.60	
I/S Roll	1.5	24.0	0.08	0.31	0.64	0.84	0.97	1.03	0.70	4.2	0.74	1" (25 mm) Black-Faced
I/S Roll	1.5	24.0	0.25	0.66	1.00	1.05	1.02	1.01	0.95	8.0	1.41	2" (51 mm) Black-Faced

*** PER ASTM C 423. Type "A" Mounting per ASTM E 795.

SPECIFICATION COMPLIANCE[1]

Insul-SHIELD complies with applicable ASTM standards and International Building Code (IBC).
It meets air erosion standards up to 1,800 fpm (9.14 m/s) per UL 181.

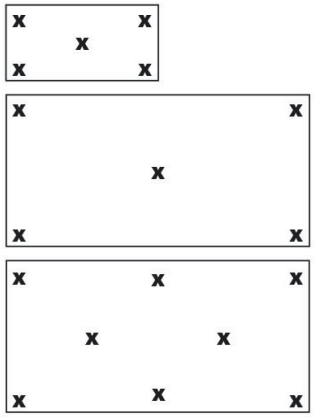
Type	I/S 300	I/S 600	I/S Black-Faced Roll
ASTM C 612, Type IA, Category 1[2]	X	X	X
ASTM C 612, Type IB, Category 1[2]	X	X	
ASTM C553, Types I, II, III			X
ASTM E 136 (Noncombustible)	(Unfaced)		
ASTM E 84 (Flame/Smoke 25/50 or less)	X	X	X

1. When ordering material to comply with any government specification (or any other listed specification), a statement of that fact must appear on the purchase order.
2. Exceptions to ASTM standards: Not tested for compression resistance. Not tested for use at elevated temperatures. Corrosiveness is tested in galvanized steel instead of plain low-carbon steel.

RECOMMENDED PIN PATTERNS FOR BOARD AND ROLL*

Pins should be placed approximately 3″– 5″ (76 mm –127 mm) from the edges of the product.

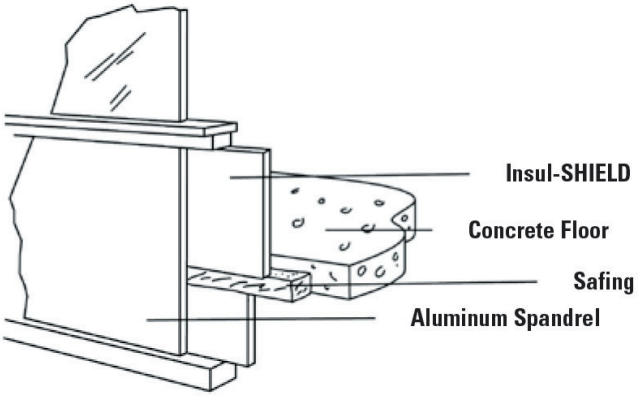
*For standard metal panel contruction applications, refer to panel manufacturer's recommendations for proper installation.



Walls and ceilings up to 24" x 48" (0.61 m x 1.22 m)

Walls up to 48" x 96" (1.22 m x 2.44 m)

Ceilings up to 48" x 96" (1.22 m x 2.44 m)



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