



## **Commercial Building Insulation Products**



## **Knauf Commercial Building Insulation Products**

### Superior Products for Thermal and Accoustical Efficiency and Installer Productivity

Fiber glass insulation has proven to be one of the most thermally efficient and cost-effective ways to save energy when it comes to insulating light commercial buildings. Maintaining desired room temperatures for comfortable working environments, fiber glass insulation is an excellent performer.

Additionally, fiber glass insulation limits sound transmission from the outside and from one room to another. Fiber glass insulation works well to reduce unwanted noise. Fiber glass insulation therefore helps to create living and working spaces people can be productive in and enjoy.





### Knauf Light Commercial Insulation



- Batts and Blankets



- Insulation Board



- Black Acoustical Insulation

Installer productivity in a commercial project is also a primary consideration. Knauf Insulation's reputation for delivering high quality batts that installers prefer is well deserved. Features that increase productivity are:

- Knauf batts recover quickly out of the package for immediate installation.
- Consistent fiber density for a smooth clean cut with low dust every time.
- Firm batts provide an ease of handling and installation.
- Full and thick batts provide a snug fit in the wall cavity and do not slump.

Beyond batts, other Knauf Insulation products are also known for their consistent densities and ease of fabrication. From loose-fill blowing wool designed for attics and sidewall cavities in homes to Knauf Insulation Board and Acoustical Insulation for light commercial buildings, Knauf Insulation products have garnered a reputation of high quality, efficient installation and higher productivity.



The low dust and easy smooth cutting of Knauf batts keeps installers efficient and comfortable.



Unitizing 4 or 5 batt bags into one easy-to-handle package saves time on the jobsite with Knauf Master Bags.



Knauf Master Bags give you more efficient product handling and profitable installations. Large quantities of material are moved fast and easy with lift trucks onto box trucks utilizing either hydraulic clamps or forks.

- The durable poly woven bag protects batts from impact and damage.
- Product identification and information are easy to read through the translucent poly woven bag.



## Knauf Commercial Batts/Blankets/Boards

### Tough Industry Demands, Easy-Going Product

We help you meet the tough construction industry demands on time and money with products that enhance installer productivity and create long term value for the building owner. All while fulfilling your business needs with a full line of quality products that will help to ensure your finished work looks and performs to everyone's expectations. And Knauf Insulation products are backed by the most responsive service in the industry because helping you succeed in your business is how we succeed in ours. Knauf Insulation's Batts and Blankets are thermal and acoustical fiber glass products available in:

- unfaced
- kraft faced
- foil faced
- flame-rated FSK-25 (Foil-Scrim-Kraft) foil faced.





**Knauf Batts and Blankets** are cost-effective thermal and acoustical barriers for energy-efficient design. Their consistent quality, low dust and clean-cutting resilient fibers make fabrication easy and installation fast. The products can be used in wood and metal frame applications in commercial structures. These applications include thermal and acoustical treatments to walls, ceilings and floors.

**Knauf QuietTherm® Insulation's** excellent acoustical properties reduce sound transmission and assist in reducing unwanted noise. Knauf QuietTherm® Insulation can improve STC ratings in wood stud construction by 3 to 5 points and metal stud construction by 8 to 10 points, depending on the complexity of the wall configuration and layers of insulation. Knauf Commercial Batts can be used for exterior and partition walls, floors, crawlspaces and a variety of ceiling applications.



**Low dust batts:** Good morale and higher productivity are the outcomes of using Knauf batts and blankets. Professional installers prefer Knauf's consistent density, low dust and clean-cutting batts.



#### **GREENGUARD For Children and Schools™ Certified**

- Strict indoor air quality requirements for applications such as classroom and daycare facilities are met or exceeded with Knauf batts.
- Random testing by an independent party ensures ongoing compliance.



#### **Knauf QuietTherm® Insulation**

- Acoustical insulation can assist with improving the STC ratings by 8 to 10 points in metal stud construction.



Knauf Insulation Board cuts smooth and easy for a quick and trouble-free installation.



Wall and Ceiling Liner M is commonly used to provide an acoustical treatment in theaters and concourses. It is also used as a ceiling cover in small restaurants for visual aesthetics.



Knauf Black Acoustical Insulation resists damage during installation and has a consistent black surface for visual aesthetics.



**Knauf Insulation Board** is a thermal and acoustical insulation product made from inorganic glass fibers preformed into boards bonded by a thermosetting resin. Available in:

- unfaced
- foil-scrim-kraft (FSK) facing factory-applied
- polypropylene-scrim-kraft (PSK) facing factory-applied
- all-service jacket (ASJ) factory-applied.

Knauf Insulation Board is a versatile product for thermal and acoustical applications such as: metal and masonry walls, wall and roof panel systems, curtain wall assemblies and cavity walls.

#### **Lower Installation and Operating Costs**

The lightweight, stiff board is easy to handle and fabricate making for a fast installation, lowering labor costs. And the excellent thermal efficiency conserves energy and lowers operating costs.

#### **Improved Interior Surroundings**

Excellent acoustical properties effectively reduce noise and an enhanced appearance is created with FSK, PSK and ASJ vapor-retardant facings.



**Knauf Insulation Board** fulfills many thermal and acoustical applications in light commercial construction. From metal and masonry walls, curtain wall assemblies and wall cavities to wall and roof panel systems.



**Knauf's line of Black Acoustical Insulation** is specifically designed to reduce airborne sound transmission and combines the performance, appearance and abuse resistance the job may require.

**Knauf Black Acoustical Insulation** reduces sound transmission and can significantly improve STC ratings of wall configurations. These products are designed for use as acoustical insulation or as an enhancement of the visual surface on walls and ceilings.

### **Knauf Wall and Ceiling**

**Liner M** is a black flexible fiber glass blanket with a black mat facing adhered to one surface. Its smooth, tough surface resists damage during installation.

Knauf Wall and Ceiling Liner M is primarily used in theaters, sound studios, public concourses and other areas where acoustical treatment is needed. It is intended to be mechanically fastened to walls and covered with fabric or draping, or suspended above linear metal and metal pan ceiling systems to serve as both a visual and acoustical treatment.

### **Knauf Black Acoustical**

**Board** is an amber based heavy density fiber glass board with a black polymer top layer of fiber glass and a black overspray applied to provide a smooth, tough finish.

Knauf Black Acoustical Board is designed for use as acoustical insulation and/or a visual aesthetic on walls and ceilings, where a rigid product and additional strength and abuse resistance are required. The product is typically used where framing members are not present.



# Knauf Batts and Blankets Technical Information

## Metal Frame Construction

## R-Value

## Thickness

## Width

## Facings

Unfaced

Kraft

Foil\*

FSK-Foil

## Batts and Blankets



R-8 QT*	2.5" (64 mm)	16 ", 24 " (406, 610 mm)	•				
R-11	3.5" (89 mm)	16 ", 24 " (406, 610 mm)			•	•	
R-11 QT*	3.5" (89 mm)	16 ", 24 " (406, 610 mm)	•	•			
R-13	3.5" (89 mm)	16 " (406 mm)			•	•	
R-13 QT*	3.5" (89 mm)	16 ", 24 " (406, 610 mm)	•	•			
R-19	6.25" (159 mm)	16 ", 24 " (406, 610 mm)			•	•	
R-19 EF**	6.25" (159 mm)	23 " (584 mm)				•	
R-19 QT*	6.25" (159 mm)	16 ", 24 " (406, 610 mm)	•	•			
R-30	10" (254 mm)	16 ", 24 " (406, 610 mm)			•	•	
R-30 EF**	10" (254 mm)	24 " (610 mm)				•	
R-38	12" (305 mm)	24 " (610 mm)			•		

\* QT — QuietTherm insulation

\*\* EF = Extended Flange, FSK Foil Facing



Specification Compliance	Surface Burning Characteristics	Facing Permeance	Water Vapor Sorption (ASTM C 1104)	Corrosion (ASTM C 665)	Microbial Growth (ASTM C 1338)	Non-Combustibility (ASTM E 136)	Packaging
U.S.— ASTM C 665, Type I, Class A (unfaced); ASTM C 665, Type II, Class C (kraft faced); ASTM C 665, Type III, Class A (FSK-25 foil faced); ASTM C 665, Type III, Class B (foil faced); GREENGUARD Certification; GREENGUARD For Children and Schools™ Certification; California Energy Commission; Dade County, Florida; MEA #498-90-M; State of Minnesota.	Unfaced & FSK-25: Does not exceed 25 Flame Spread, 50 Smoke Developed when tested in accordance with ASTM E 84.	Kraft faced products have a moisture permeance of 1.0 or less.  FSK foil faced products have ratings of .04.  Foil faced products have ratings of .05.	5% maximum by weight.	No greater than sterile cotton.	Does not support microbial growth.	Noncombustible (unfaced)	Feature complete installation instructions and a highly visible color coding system which follows industry standards, making Knauf products easy to select.  Knauf packages are lightweight, stack without slipping and are sized to fit easily under floors and through scuttle holes.


# Knauf Batts and Blankets Technical Information

Wood Frame Construction	R-Value	Thickness	Width	Facings			
				Unfaced	Kraft	Foil	FSK-Foil
<b>Batts and Blankets</b>  	R-11	3.5" (89 mm)	11", 15", 15.25", 16", 19", 23", 23.25", 24"	•	•	•	•
	R-13		(279, 381, 406, 483, 584, 610 mm)	•	•	•	•
	R-15HD*	3.5" (89 mm)	11", 15", 15.25", 16", 19", 23" (279, 381, 406, 483, 584, 610 mm)	•	•		
	R-19	6.25" (159 mm)	11", 15", 15.25", 16", 19", 23", 23.25", 24", (279, 381, 387, 406, 483, 584, 590, 610 mm)	•	•	•	•
	R-21HD*	5.5" (140 mm)	15", 15.25", 23" (381, 406, 584 mm)	•	•		
	R-22	6.5" (165 mm)	15", 16", 19", 23" (381, 406, 483, 584 mm)	•	•		
	R-25	8.25" (210 mm)	15", 19.25", 23" (381, 489, 584 mm)	•			
	R-26	9" (229 mm)	16", 24" (406, 610 mm)	•	•		
	R-30HD*	8.25" (210 mm)	15", 23" (381, 584 mm)	•	•		
	R-30	10" (254 mm)	11", 12", 16", 19", 19.25", 24", (279, 406, 483, 489, 610 mm)	•	•	•	•
	R-38HD*	10.25" (260 mm)	15", 23" (381, 584 mm)	•	•		
	R-38	12" (305 mm)	16", 24" (406, 610 mm)	•	•		•

Specification Compliance	Surface Burning Characteristics	Facing Permeance	Water Vapor Sorption (ASTM C 1104)	Corrosion (ASTM C 665)	Microbial Growth (ASTM C 1338)	Non-Combustibility (ASTM E 136)	Packaging
<p>U.S.—ASTM C 665, Type I, Class A (unfaced); ASTM C 665, Type II, Class C (kraft faced); ASTM C 665, Type III, Class A (FSK-25 foil faced); ASTM C 665, Type III, Class B (foil faced); GREENGUARD Certification; GREENGUARD For Children and Schools™ Certification; California Energy Commission; Dade County, Florida; MEA #498-90-M; State of Minnesota.</p>	<p>Unfaced &amp; FSK-25: Does not exceed 25 Flame Spread, 50 Smoke Developed when tested in accordance with ASTM E 84.</p>	<p>Kraft faced products have a moisture permeance of 1.0 or less.</p> <p>FSK foil faced products have ratings of .04</p> <p>Foil faced products have ratings of .05</p>	<p>5% maximum by weight.</p>	<p>No greater than sterile cotton.</p>	<p>Does not support microbial growth</p>	<p>Noncombustible (Unfaced)</p>	<p>Feature complete installation instructions and a highly visible color coding system which follows industry standards, making Knauf products easy to select.</p> <p>Knauf packages are lightweight, stack without slipping and are sized to fit easily under floors and through scuttle holes.</p> <p>Most batt products are packaged in Knauf Master Bag 4-packs. However, several 15"/16" products are available in 5-packs.</p>



# Knauf Insulation Board Technical Information

						Thermal Conductivity k-Value (S.I.) (ASTM C 518)*	Thermal Resistance R-Value (S.I.)	Specification Compliance
		Thickness	Width	Length	Packaging			
<div>Insulation Board</div> 	1.6 PCF (26 kg/m³)	1½" (38 mm)	24" (610 mm) and 48" (1219 mm)	36" (915 mm) to 120" (3048 mm)	Plain: Cartons, Sleeves  Faced: Cartons Only	.24 (.035)	6.3 (1.1)	U.S.— ASTM C 612, Type IA, IB; ASTM D 795; ASTM C 1136 (facings), Type I, II, III, IV (ASJ), Type II, IV (FSK, PSK) California Title 24; HH-B-100B, Type I (ASJ facing), Type II (FSK, PSK facings); HH-1558C, Form A, Class 1, Class 2; MIL-I-24244C; NFPA 90A and 90B; NRC Reg. Guide 1.36.  Canada — CAN/ULC S102-M88, CGSB 51-GP-10M; NRC Reg. Guide 1.36
		2" (51 mm)					8.3 (1.5)	
		2½" (64 mm)					10.4 (1.8)	
		3" (76 mm)					12.5 (2.2)	
		3½" (89 mm)					14.6 (2.6)	
		4" (102 mm)					16.7 (2.9)	
	2.25 PCF (36 kg/m³)	1" (25 mm)	24" (610 mm) and 48" (1219 mm)	36" (915 mm) to 120" (3048 mm)		.23 (.033)	4.3 (0.8)	
		1½" (38 mm)					6.5 (1.1)	
		2" (51 mm)					8.7 (1.5)	
		2½" (64 mm)					10.9 (1.9)	
		3" (76 mm)					13.0 (2.3)	
		3½" (89 mm)					15.2 (2.7)	
		4" (102 mm)					17.4 (3.1)	
		3.0 PCF (48 kg/m³)					1" (25 mm)	
	1½" (38 mm)		6.5 (1.1)					
	2" (51 mm)		8.7 (1.5)					
	2½" (64 mm)		10.9 (1.9)					
	3" (76 mm)		13.0 (2.3)					
	3½" (89 mm)		15.2 (2.7)					
	4" (102 mm)		17.4 (3.1)					
	4.25 PCF (68 kg/m³)		1" (25 mm)	24" (610 mm) and 48" (1219 mm)	36" (915 mm) to 120" (3048 mm)	.23 (.033)	4.3 (0.8)	
		1½" (38 mm)	6.5 (1.1)					
		2" (51 mm)	8.7 (1.5)					
		2½" (64 mm)	10.9 (1.9)					
	6.0 PCF (96 kg/m³)	1" (25 mm)	24"(610 mm) and 48" (1219 mm)	36"(915 mm) to 120" (3048 mm)	.22 (.032)	4.4 (0.8)		
		1½" (38 mm)				6.7 (1.2)		
		2" (51 mm)				8.9 (1.6)		

\* Mean Temperature 75°F (24°C)

\* Mean Temperature 75°F (24°C)

**Acoustical Performance**  
**Sound Absorption Coefficients**  
 (ASTM C 423, Type A Mounting)

**Surface  
Burning  
Characteristics**

**Temperature  
Range**  
 (ASTM C 411)


**Puncture  
Resistance**  
 (TAPPI Test T803,  
Beach Units)


**Water  
Vapor  
Permeance**  
 (ASTM E 96,  
Procedure A)

**Water  
Vapor  
Sorption**  
 (ASTM C 1104)

<sup>1</sup> / <sub>3</sub> Octave Band Center Frequency (Cycles/Sec.)				UL Classified; Unfaced or composite (insulation, facing and adhesive) does not exceed 25 Flame Spread, 50 Smoke Developed when tested in accordance with ASTM E 84, CAN/ULC S102-M88, NFPA 90A and 90B, NFPA 255 and UL 723 (except PSK: ASTM E 84 and UL 723 only).	Up to 450°F (232°C)	FSK, PSK Facings: 25  ASJ Facing: 50	FSK, PSK and ASJ vapor retarders have a maximum vapor transmission rate of .02 perms.	Less than 5% by weight.
Density	Thickness	Facing	NRC					
1.6 PCF (26 kg/m <sup>3</sup> )	1½" (38 mm)	Plain	.80					
	2" (51 mm)		.90					
	2½" (64 mm)		1.00					
	3" (76 mm)		1.05					
2.25 PCF (36 kg/m <sup>3</sup> )	1" (25 mm)	Plain	.65					
	1½" (38 mm)		.85					
	2" (51 mm)		.95					
	1" (25 mm)	FSK	.75					
	2" (51 mm)		.75					
3.0 PCF (45 kg/m <sup>3</sup> )	1" (25 mm)	Plain	.65					
	1½" (38 mm)		.85					
	2" (51 mm)		1.00					
	3" (76 mm)		1.10					
	4" (102 mm)		1.10					
	1" (25 mm)	FSK	.75					
	1½" (38 mm)		.70					
	2" (51 mm)		.75					
	1" (25 mm)	ASJ	.65					
	1½" (38 mm)		.65					
	2" (51 mm)		.65					
4.25 PCF (68 kg/m <sup>3</sup> )	1" (25 mm)	Plain	.75					
	2½" (64 mm)	ASJ	.55					
6.0 PCF (96 kg/m <sup>3</sup> )	1" (25 mm)	Plain	.80					
	1½" (38 mm)		.90					
	2" (51 mm)		1.00					
	1" (25 mm)	FSK	.50					
	1½" (38 mm)		.60					
	2" (51 mm)		.60					
	1½" (38 mm)	ASJ	.50					
	2" (51 mm)		.50					

# Knauf Black Acoustical Insulation Technical Information

								Thermal Resistance R-Value (S.I.) (ASTM C 518)*	Specification Compliance
		Thickness	Width	Length	Packaging				
<b>Black Acoustical Board</b> 	<b>2.25 PCF</b> <b>(36 kg/m³)</b>	2" (51 mm)	24" (610 mm)	48" (1219 mm)	Unitized Cartons	8.7 (1.53)	<b>U.S.—</b> ASTM 1338, G 21, 22; NFPA 255; UL 723. <b>Canada —</b> CAN/ULC S102-M88.		
	<b>3.0 PCF</b> <b>(48 kg/m³)</b>	1" (25 mm)				4.3 (.76)			
		1.5" (38 mm)				6.5 (1.15)			
		2" (51 mm)				8.7 (1.53)			
	* Mean Temperature 75°F (24°C)								

							Specification Compliance	
		Thickness	Width	Length	R-Value			
<b>Wall and Ceiling Liner M</b> 	<b>1.0 PCF</b> <b>(16 kg/m³)</b>	1" (25 mm)	48" (1219 mm)	100' (30.48 m)	3.6	<b>U.S.—</b> ASTM C 1071, Type I; ASTM D 5116; ASTM G 21, 22; California Title 24 (1.5 PCF, 1" and above); NFPA 90A and 90B; State of Alaska IAQ Specifications; State of Washington IAQ Specifications; SMACNA Application Standard for Duct Liners; NAIMA Fibrous Duct Liner Installation Standards. <b>Canada —</b> CAN/ULC S102-M88; CAN/CGSB 51. 11-92.		
				1½" (38 mm)	50' (15.24 m)			5.4
				2" (51 mm)	50' (15.24 m)			7.1
	<b>1.5 PCF</b> <b>(24 kg/m³)</b>			½" (13 mm)	100' (30.48 m)			2.0
				1" (25 mm)	100' (30.48 m)			4.2
				1 ½" (38 mm)	50' (15.24 m)			6.0
				2" (51 mm)	50' (15.24 m)			8.0
	<b>2.0 PCF</b> <b>(32 kg/m³)</b>			½" (13 mm)	100' (30.48 m)			2.1
				1" (25 mm)	50' (15.24 m)			4.2



Surface Burning Characteristics	Service Temperature (ASTM C 411)	Air Velocity (UL 1071)	Water Vapor Sorpton (ASTM C 1104)	Sound Absorption Coefficients (ASTM C 423, Type A Mounting) 1/3 Octave Band Center Frequency (cycles/sec)						
				125	250	500	1000	2000	4000	NRC
UL/ULC Listed; Does not exceed 25 Flame Spread, 50 Smoke Developed when tested in accordance with ASTM E 84, CAN/ULC S102-M88, NFPA 255 and UL 723.	Maximum 250°F (121°C)	Maximum 4000 fpm (1219 mpm)	Less than 3% by weight.	.26	.62	1.05	1.07	1.04	1.05	.95
				.13	.24	.56	.83	.92	.98	.65
				.19	.41	.89	1.02	1.03	1.04	.85
				.33	.67	1.07	1.07	1.03	1.06	.95

Surface Burning Characteristics	Service Temperature (ASTM C 411)	Air Velocity (UL 1071)	Water Vapor Sorpton (ASTM C 1104)	Sound Absorption Coefficients (ASTM C 423, Type A Mounting)						
				125	250	500	1000	2000	4000	NRC
UL/ULC Classified; Does not exceed 25 Flame Spread, 50 Smoke Developed when tested in accordance with ASTM E 84, CAN/ULC S102-M88, NFPA 255 and UL 723.	Up to 250°F (121°C)	Maximum 6000 fpm (1829 mpm)	Less than 3% by weight.	—	—	—	—	—	—	.60
				—	—	—	—	—	—	.80
				—	—	—	—	—	—	.85
				—	—	—	—	—	—	.50
				.18	.36	.59	.86	.95	.90	.70
				.35	.51	.83	.93	.97	.96	.80
				.34	.64	.96	1.03	1.00	1.03	.90
				.09	.14	.40	.60	.73	.82	.45
				.25	.35	.69	.89	.96	1.01	.70

# KNAUF INSULATION

Knauf Insulation is registered to ISO 9001:2000 in the prevention, detection and correction of problems in production and service areas.

The descriptions of chemical and physical properties of Knauf products listed in this catalog represent typical average values determined in accordance with accepted test methods. The data is subject to normal manufacturing and testing variations, and is subject to change without notice.

References to numerical flame spread ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions.

Check with your Knauf sales representative to ensure that the information in this catalog is the most current available.



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Knauf Web Site: [www.KnaufInsulation.com](http://www.KnaufInsulation.com)

Visit our Web site to learn more about Knauf Insulation, to obtain product information and for industry news. More information about Greenguard certification and indoor air quality is also available. In addition, documents are available as PDFs including some necessary for some job situations. Literature available includes:

- MSDS
- Submittal Sheets
- Data Sheets
- Fact Sheets

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Knauf batts and blankets are certified for indoor air quality as a low emitting product by The GREENGUARD Environmental Institute™ to both the GREENGUARD Certification Program™ and the more stringent GREENGUARD For Children and Schools™ standard.  
[www.greenguard.org](http://www.greenguard.org)



At Knauf, we manufacture a wide variety of products that serve a common goal, helping to make the most of our planet's energy resources. A family-owned global company, we understand and are committed to high standards in quality, performance and environmental responsibility. Every step we take today toward energy conservation helps ensure better lives for generations to come.



## LEED Eligible Product

Use of this product may help building projects meet green building standards as set by the Leadership in Energy and Environmental Design (LEED) Green Building Rating System. Credit 4.1 - 4.2 Recycled Content  
Credit 5.1 - 5.2 Regional Materials