



DRYWALL ACOUSTICAL INSULATION PRODUCTS



Think of it as green... only browner.

ECOSE® TECHNOLOGY

All Knauf Insulation products are sustainable. Our fiberglass insulation with ECOSE Technology takes that standard to a whole new level. It is based on rapidly renewable, bio-based material. ECOSE Technology is a revolutionary more sustainable binder that contains no phenol, formaldehyde, acrylics or artificial colors.

Knauf Insulation's insulation combines ECOSE Technology with sand—one of the world's most abundant resources—and a high degree of recycled bottle glass. Our acoustical drywall insulation products deliver the same exceptional quality, handling and durability that you have come to expect from Knauf Insulation, with an even higher level of sustainability.





Our insulation is naturally brown—ensures no phenol, formaldehyde, acrylics or artificial colors are used in the manufacturing process.



Our insulation ensures the professional touch—consistent quality, low dust and easy to cut—handling characteristics that you've come to expect from Knauf Insulation.

LAB-TESTED, MOTHER NATURE APPROVED

Our drywall acoustical insulation products are interior friendly. They are certified to the toughest indoor air quality certification in the industry, GREENGUARD Gold, and are certified to meet CHPS Low-Emitting Materials criteria section 01350. They also meet or exceed all applicable industry performance specifications and standards.

All Knauf Insulation products are inherently sustainable because of high recycled content. They save hundreds of times more energy in use than is required to manufacture them. ECOSE Technology helps make our insulation even more sustainable because it helps reduce our carbon footprint further by eliminating the traditional non-renewable petroleum-based binder chemistry.



Knauf Insulation manufactures an assortment of insulation—a variety of widths, R-values, densities and facings.

DRYWALL ACOUSTICAL INSULATION PRODUCTS WITH ECOSE® TECHNOLOGY

PRODUCT OFFERINGS

- **EcoBatt® Batts and Blankets**
 - Unfaced
 - Kraft faced
 - Foil faced
 - FSK foil faced
- **Insulation Board**
 - Plain
 - FSK faced
 - PSK faced
 - ASJ faced
- **Wall and Ceiling Liner**
- **Black Acoustical Board**

APPLICATION

Knauf Insulation EcoBatt batts and blankets are cost-effective thermal and acoustical barriers for energy-efficient construction. Their consistent quality, low dust, and easy-cutting resilient fibers make fabrication simple and installation fast. The products can be used in new and retrofit wood and metal frame applications in residential and commercial structures, as well as in manufactured housing applications. These applications include thermal and acoustical treatments to walls, ceilings and floors.

In addition, **High Density (HD)** EcoBatt batts are available where optimal thermal performance is required and space for insulation is limited. High Density EcoBatt batts for cathedral ceiling applications, for example, deliver greater R-value in less space, so builders can increase R-values and still maintain adequate space for ventilation.

Knauf Insulation **Staple-Free** EcoBatt insulation is flangeless kraft-faced batts which friction fit between wood studs, eliminating the need to staple in place. These batts are designed for use in wood framed construction where the stud spacing is no more than 16" on center.

Light Commercial Applications

This full line of standard and high-density EcoBatt batts and blankets for wood and metal frame construction is available unfaced or with kraft, foil or flame-rated (FSK) foils facings. Knauf Insulation's commercial building insulation can be used for exterior and partition walls, floors, crawlspaces and a variety of ceiling applications.

INDOOR AIR QUALITY

- UL Environment
- GREENGUARD certified
- GREENGUARD Gold certified
- Validated to be formaldehyde-free
- Environmental Product Declaration
- Tested and certified to meet all the requirements of EUCB

SPECIFICATION COMPLIANCE

- ASTM C665 (facing)
- Type I, Class A, (Unfaced)
- Type II, Class C, Category 1 (Kraft)
- Type III, Class A, Category 1 (FSK-25 foil)
- Type III, Class B, Category 1 (Foil)
- California Energy Commission
- MEA #498-90-M
- State of Minnesota

SUSTAINABILITY

Knauf Insulation's products used for thermal insulating purposes recover the energy that it took to make them in just hours or days, depending on the application. Once installed, the product continues to save energy and reduce carbon generation as long as it is in place.

Glass mineral wool insulation with ECOSE Technology contains three key ingredients:

- Recycled glass content, verified annually by UL Environment
- Sand, one of the world's most abundant resources
- Our green chemistry initiative ECOSE Technology, which is validated to be formaldehyde-free

PRODUCT FEATURES

Proven Performance

- Preferred by professional installers concerned with quality, appearance and productivity
- Excellent acoustical properties reduce sound transmission in the home when properly installed in partition walls and ceiling and floor systems

Superior Handling

- All Knauf Insulation faced products feature a wide stapling flange for faster and easier installation.
- Highly resilient insulation recovers quickly to full thickness for a snug fit and superior finished aesthetics.
- Consistent quality materials made of resilient fibers cut easily, install fast with low dust.
- Durable facing resists tears

Superior Service and Support

- Prompt, on-time delivery helps control inventory costs and meet customer expectations.
- Our committed network of distributors assures fast order fulfillment and faster inventory turns.
- 24/7 access to product submittals ensures product acceptance and helps meet quotation deadlines.

Convenient Packaging, Easier Handling

- Knauf Insulation EcoBatt insulation is packaged in a strong, poly bag that offers excellent protection from abuse, dust and moisture.
- Our packages feature complete installation instructions and a highly visible R-value label which follows industry standards and makes Knauf Insulation product sizes and specifications easy to read.
- Knauf Insulation's unitized packaging saves time at the jobsite and space in the warehouse.

DRYWALL ACOUSTICAL INSULATION PRODUCTS WITH ECOSE® TECHNOLOGY

- Master bag units ensure reduced handling costs with greater compression—more square feet per bag, more square feet per truckload, fewer trips to the job site and less warehouse space for storage.

FIBERGLASS AND MOLD

Fiberglass insulation will not sustain mold growth. However, mold can grow on almost any material when it becomes wet and contaminated. Carefully inspect any insulation

that has been exposed to water. If it shows any sign of mold, it must be discarded. If the material is wet, but shows no evidence of mold, it should be dried rapidly and thoroughly. If it shows signs of facing degradation from wetting, it should be replaced.

NOTES

The chemical and physical properties of Knauf Insulation EcoBatt insulation represent average values determined in accordance with

accepted test methods. The data is supplied as technical service 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 Insulation Territory Manager to ensure information is current.

Technical Data		
Property (Unit)	Test	Performance
Corrosion	ASTM C1617	Pass
Thermal Value	ASTM C518	See chart on next page
Water Vapor Permeance	ASTM E96	Kraft faced: 1.0 perms or less FSK foil faced: 0.04 perms Foil faced: 0.05 perms
Water Vapor Sorption (by weight)	ASTM C1104	Less than 5%
Combustibility	ASTM E136	Non-combustible (unfaced only)
Mold Growth	ASTM C1338	Pass
Surface Burning Characteristics (flame spread/smoke developed)	ASTM E84	Unfaced and flamed-rated FSK facings: 25/50 Kraft facing will burn and should not be left exposed.

STC Ratings				
	With insulation	No insulation	With insulation	No insulation
Wood Frame, 2 x 4 (3½"– 4" Batt)	(with ½" gypsum wallboard both sides)		(with ⅝" gypsum wallboard both sides)	
Single studs/Single layer gypsum	38	35	38	34
Single studs/Resilient channel	47	39	52	40
Staggered studs/Single layer gypsum	49	39	51	43
Double stud walls/Single layer gypsum	57	46	56	45
Steel Frame (2½" studs) (2½"– 2⅝" Batt)	(with ½" gypsum wallboard both sides)		(with ⅝" gypsum wallboard both sides)	
Single layer gypsum	45	36	47	39
Double layer gypsum one side/Single layer gypsum other side	50	39	52	44
Double layer both sides	56	45	57	48
Steel Frame (3⅝" studs) (3½"– 4" Batt)	(with ½" gypsum wallboard both sides)		(with ⅝" gypsum wallboard both sides)	
Single layer gypsum	47	39	50	39
Double layer gypsum one side/Single layer gypsum other side	52	42	55	47
Double layer both sides	56	50	58	52

Wall and Ceiling Liner M with ECOSE® Technology

DESCRIPTION

Wall and Ceiling Liner M with ECOSE Technology is a brown flexible fiberglass blanket with a black mat facing adhered to one surface. It provides thermal and acoustical insulation while a smooth, tough surface resists damage during installation.



APPLICATIONS

Wall and Ceiling Liner M with ECOSE Technology is designed for use as an acoustical and visual barrier for walls and ceilings where a black surface is required. It 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 can be covered with fabric or draping, or suspended above linear metal and metal pan ceiling systems to serve as both a visual and acoustical treatment.

INDOOR AIR QUALITY

- UL Environment
- GREENGUARD certified
- GREENGUARD Gold certified

TECHNICAL DATA

Surface Burning Characteristics (ASTM E84, UL 723)

- 25 Flame Spread, 50 Smoke Developed, UL Classified

Corrosiveness (ASTM C665)

- Does not accelerate corrosion on steel

Corrosion (ASTM C1617)

- Pass

Black Acoustical Board with ECOSE® Technology

DESCRIPTION

Black Acoustical Board with ECOSE Technology is a heavy density fiberglass board insulation made with ECOSE Technology. The base board is brown with a black mat applied to provide a smooth tough finish.



APPLICATIONS

Black Acoustical Board with ECOSE Technology is designed for use as acoustical insulation and/or visual barrier on walls and ceilings, where system design requires a rigid product and where additional strength and abuse resistance are required. The black surface provides a visual barrier with an aesthetic appearance, in both wall and ceiling applications. The product is typically used where framing members are not present.

INDOOR AIR QUALITY

- UL Environment
- GREENGUARD certified
- GREENGUARD Gold certified

TECHNICAL DATA

Surface Burning Characteristics (ASTM E84, UL 723)

- 25 Flame Spread, 50 Smoke Developed, UL Classified

Corrosiveness (ASTM C665)

- Does not accelerate corrosion on steel

Corrosion (ASTM C1617)

- Pass

Insulation Board with ECOSE® Technology

DESCRIPTION

Insulation Board with ECOSE Technology is a thermal and acoustical insulation product made from inorganic glass fibers preformed into boards. The board is available plain, with a factory applied foil-scrim-kraft (FSK) facing, with a factory-applied all service jacket (ASJ) or with a factory applied metalized polypropylene-scrim-kraft jacket (PSK).



APPLICATIONS

Insulation Board with ECOSE Technology is a versatile product for use on metal and masonry walls, wall and roof panel systems, curtain wall assemblies and cavity walls.

INDOOR AIR QUALITY

- UL Environment
- GREENGUARD certified
- GREENGUARD Gold certified

TECHNICAL DATA

Surface Burning Characteristics (ASTM E84, UL 723, NFPA 90A and 90B, CAN/ULC S102)

- 25 Flame Spread, 50 Smoke Developed, UL Classified

Corrosiveness (ASTM C665)

- Does not accelerate corrosion on steel

Corrosion (ASTM C1617)

- Pass

DRYWALL ACOUSTICAL INSULATION PRODUCTS WITH ECOSE® TECHNOLOGY

Wall and Ceiling Liner Sound Absorption Coefficients | ASTM C423, Type A Mounting

Type		Octave Band Center Frequency (cycles/sec.)						
		125	250	500	1000	2000	4000	NRC
1.5 PCF (24 kg/m³)	1" (25 mm)	0.18	0.28	0.73	0.85	0.91	0.90	0.70
	1.5" (38 mm)	0.23	0.50	0.87	0.92	0.93	0.93	0.80
	2" (51 mm)	0.37	0.76	1.02	1.00	0.98	0.92	0.95
2.0 PCF (32 kg/m³)	0.5" (13 mm)	0.10	0.17	0.43	0.59	0.73	0.75	0.50
	1" (25 mm)	0.25	0.35	0.69	0.89	0.96	1.01	0.70
	1.5" (38 mm)	0.27	0.55	0.87	0.99	1.00	0.98	0.85

Available in 48" (1,219 mm) wide rolls in lengths of 100' or 50' (30.48 or 15.24 m).
Contact your Knauf Insulation Territory Manager for additional information.

Black Acoustical Board Sound Absorption Coefficients | ASTM C423, Type A Mounting

Density		Octave Band Center Frequency (cycles/sec.)						
		125	250	500	1000	2000	4000	NRC
2.25 PCF (36 kg/m³)	2" (51 mm)	0.26	0.62	1.05	1.07	1.04	1.05	0.95
3.0 PCF (48 kg/m³)	1" (25 mm)	0.13	0.24	0.56	0.83	0.92	0.98	0.65
	1½" (38 mm)	0.19	0.41	0.89	1.02	1.03	1.04	0.85
	2" (51 mm)	0.33	0.67	1.07	1.07	1.03	1.06	0.95

Available 24" (610 mm) wide x 48" (1,219 mm) long.

Insulation Board Sound Absorption Coefficients | ASTM C423, E795, Type A Mounting

Type			Octave Band Center Frequency (cycles/sec.)						
			125	250	500	1000	2000	4000	NRC
2.25 PCF (36 kg/m³)	FSK	1" (25 mm)	0.05	0.24	0.59	0.86	0.97	1.00	0.65
		1½" (38 mm)	0.17	0.49	0.93	1.03	1.03	0.99	0.85
		2" (51 mm)	0.26	0.62	1.05	1.07	1.04	1.05	0.95
3.0 PCF (48 kg/m³)	Plain	1" (25 mm)	0.08	0.23	0.62	0.88	0.96	0.99	0.65
		1½" (38 mm)	0.09	0.39	0.89	1.03	1.06	1.01	0.85
		2" (51 mm)	0.29	0.65	1.11	1.13	1.06	1.03	1.00
		3" (76 mm)	0.54	1.01	1.18	1.07	1.07	1.04	1.10
		4" (102 mm)	0.95	1.11	1.17	1.07	1.07	1.06	1.10
		1" (25 mm)	0.21	0.63	0.84	0.93	0.51	0.22	0.75
	FSK	1½" (38 mm)	0.45	0.60	0.99	0.73	0.53	0.27	0.70
		2" (51 mm)	0.67	0.77	0.93	0.74	0.47	0.28	0.75

Available in widths of 24" (610 mm) and 48" (1,219 mm) and lengths of 36" (915 mm) to 120" (3,048 mm).



UL Environment GREENGUARD Certification Program

Drywall Acoustical Insulation products are certified to UL Environment GREENGUARD standards for low chemical emissions into indoor air during product usage.

UL Environment GREENGUARD Gold Certification Program

Knauf Insulation has achieved UL Environment GREENGUARD Gold Certification for Drywall Acoustical Insulation products.

UL Environment Validated Formaldehyde Free

Knauf Insulation has achieved UL Environment validation that Drywall Acoustical Insulation products insulation are formaldehyde-free.

UL Environment Certified EPD

Knauf Insulation has achieved an Environmental Product Declaration certification from UL Environment for Drywall Acoustical Insulation products. EPD Certification is documentation fully disclosing a product's environmental impact.

For more information, visit ul.com/spot



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.

LEED v2009

MR Credit 4.1 - 4.2 Recycled Content

MR Credit 5.1 - 5.2 Regional Materials

LEED v4

Knauf Insulation offers several products for both envelope and mechanical systems that have ingredient disclosure and transparency. Please contact transparency@knaufinsulation.com for products that currently contribute to MR credits.



Versions of this product have surface burning characteristics that are classified by Underwriters Laboratories and therefore subject to auditing for fire performance compliance.



This product has been tested and is certified to meet the EUCB requirements.

This product is covered by one or more U.S. and/or other patents. See patent www.knaufinsulation.us/patents