KNAUF®

Performance+

Black Diffuser Board

Product Data Sheet *11/2025*

Description

Performance+® Black Diffuser Board with ECOSE® Technology is a thermal and acoustical insulation product made from inorganic glass fibers preformed into heavy density boards. The board can be bottom faced with FSK facing. The base board is brown with a black mat facing to give the airstream a smooth, tough surface that resists damage during installation and operation. Airstream surface mat facing is treated with an EPA-registered anti-microbial agent to aid in the prevention of fungal and bacterial growth.

Application

- Heating, ventilating, and air conditioning diffusers as well as other air distribution components

Certifications

Asthma & Allergy Friendly® aafa.org/certified

VERIFIED HEALTHIER AIR

USGBC MEMBER

EUCEB

GREENGUARD GOLD

GREENGUARD

VALIDATED

CLASSIFIED UL US

Contractor: _____

Job: _____

Date: _____

Specification Compliance

U.S.
- ASTM C1071; Type II
- ASTM G21
- California Title 24

Canada
- CAN/ULC S102

Indoor Air Quality

- **Asthma & Allergy Friendly®**
- Verified Healthier Air™
- UL Environment
  - *GREENGUARD Certified*
  - *GREENGUARD Gold Certified*
  - *Validated to be Formaldehyde-Free*
- Does not contain polybrominated diphenyl ethers (PBDE) such as: Penta – BDE, Octa – BDE or Deca – BDE
- EUCEB Certified

Technical Data

Property (Unit)	Test	Performance
Corrosiveness	ASTM C665	Does not accelerate corrosion of steel
Odor Emission	ASTM C1304	Pass
Air Velocity	ASTM C1071	Max. 5,000 ft./min. (25.4 m/sec.)
Maximum Service Temperature	ASTM C411	250° F (121° C)
Mold Growth	ASTM C1338, ASTM G21, G22	Pass
Water Vapor Sorption (by weight)	ASTM C1104	3% or less
Surface Burning Characteristics (flame spread/smoke developed)	ASTM E84, UL 723, NFPA 90A and 90B	UL Classified FHC 25/50

Sound Absorption Coefficients | ASTM C423, Type A Mounting

Octave Band Center Frequency (cycles/sec.)								
Product		125	250	500	1000	2000	4000	NRC
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

Thermal Conductivity "C"[1] and Resistance "R"[2] | ASTM C177

Mean Temperature 75° F (24° C)			
Product		Conductance "C"	Resistance "R"
3.0 PCF (48 kg/m³)	1" (25 mm)	0.23 (1.31)	4.3 (0.76)
	1½" (38 mm)	0.15 (0.85)	6.5 (1.15)
	2" (51 mm)	0.11 (0.62)	8.7 (1.53)
"C Units" $\frac{BTU}{ft^2 \cdot hr \cdot {}^\circ F}\left(\frac{W}{m^2 \cdot {}^\circ C}\right)$		"R Units" $\frac{ft^2 \cdot hr \cdot {}^\circ F}{BTU}\left(\frac{m^2 \cdot {}^\circ C}{W}\right)$	

[1]The lower the value, the better the performance. [2]The higher the value, the better the performance.

Forms Available

Density	Thickness	Width	Length
3.0 PCF (48 kg/m³)	1" (25 mm)	48" (1,219 mm)	60" (1,524 mm)
			96" (2,438 mm)
			120" (3,048 mm)
	1 ⅜" (35 mm)		96" (2,438 mm)
	1 ⅞" (48 mm)		96" (2,438 mm)
	2" (51 mm)		60" (1,524 mm)
			120" (3,048 mm)
4.0 PCF (64 kg/m³)	1" (25 mm)		96" (2,438 mm)
			120" (3,048 mm)
	1 ⅜" (35 mm)		96" (2,438 mm)

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.

Insulation used in direct contact with air streams that provide conditioning to occupied spaces must be discarded if exposed to water.

Sustainability

Knauf Insulation products with ECOSE® Technology are made using our patented, bio-based binder - a smarter alternative to the phenol/formaldehyde (PF) binder traditionally used in fiberglass products. The bio-based binder holds our product together, gives the product its unique appearance and makes it formaldehyde-free. All of our products are made from sustainable resources, such as recycled glass and sand. And we're proud to be putting glass bottles back to work rather than into landfills. Our products are made with a minimum of 50% recycled glass—totaling an average of 26 million bottles.

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Check with your Knauf Insulation Territory Manager to ensure information is current.

The chemical and physical properties of this product represent average values determined in accordance with accepted test methods. The data is subject to normal manufacturing variations. The data is supplied as a 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.