



Knauf Data Sheet

OEM-KN-DS 11-13

KN Series

with ECOSE® Technology



KN Series with ECOSE® Technology

Description

Knauf Insulation Type KN Series are flexible to semi-rigid blankets of glass fibers bonded with ECOSE® Technology. KN Series products are used as thermal and/or acoustical insulation in the appliance, equipment, industrial, commercial and marine markets up to 650°F (343°C).

ECOSE Technology

ECOSE Technology is a revolutionary binder chemistry that makes Knauf Insulation products even more sustainable than ever. It is based on rapidly renewable bio-based materials rather than non-renewable petroleum-based chemicals traditionally used in fiberglass insulation products. ECOSE Technology reduces binder embodied energy and does not contain phenol, formaldehyde, acrylics or artificial colors.

Sustainability

- Carbon-negative - meaning: 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.
- Fiber glass insulation with ECOSE Technology contains three primary ingredients:

- More than 60% recycled post-consumer glass content verified every 6 months by UL Environment. For the current postconsumer glass content percentage refer to: www.knaufinsulation.com/sustainability
- Sand, one of the world's most abundant resources
- Our green chemistry initiative ECOSE Technology, which reduces binder embodied energy by up to 70%

Packaging

KN Series Insulation is placed in a poly bag and then stretch wrapped into units of 4 or 6 rolls.

Technical Data

Surface Burning Characteristics (UL Classified)

- Does not exceed 25 Flame Spread, 50 Smoke Developed when tested in accordance with ASTM E 84 and UL 723.

Maximum Service Temperature (ASTM C 411)

- Designed for applications to a maximum operating temperature of 650°F (271°C).

Odor (ASTM C 1304)

- Not objectionable.

Mold Growth (ASTM C 1338)

- No growth.

Water Vapor Sorption (ASTM C 1104)

- Less than 3% by weight when exposed to air at 120°F (49°C) and 95% humidity for 96 hours.

Specification Compliance

Complies to the property requirements of the following specifications:

- ASTM C 553: Type I, Type II
- MIL-I-22023D (except pH requirement)
Type I and II, Class 2 through 5

- Knauf Insulation achieved GREENGUARD Gold Certification and is verified to be formaldehyde free. Products are certified to GREENGUARD standards for low chemical emissions into indoor air during product usage. Knauf Insulation has achieved a UL Environment claim validation for over 50% post-consumer recycled glass content in our insulation products.

Applications

Knauf Insulation KN Series products with ECOSE Technology are used as thermal and/or acoustical insulation in the appliance, equipment, industrial, commercial and marine markets up to 650°F (271°C).

Fiber Glass and Mold

Fiber glass 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.

Notes

The chemical and physical properties of Knauf Insulation KN Series with ECOSE Technology represent typical average values determined in accordance with accepted test methods. The data is subject to normal 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 material under actual fire conditions.

Check with your Knauf Insulation sales representative to assure information is current.



**Thermal Conductivity (ASTM C 518)
@ 75°F Mean Temperature**

Density	Thermal Conductivity BTU-in. ft ² °F
.75 PCF (12 kg/m ³)	0.28
1.00 PCF (16 kg/m ³)	0.26
1.50 PCF (24 kg/m ³)	0.24
2.00 PCF (32 kg/m ³)	0.23
2.50 PCF (40 kg/m ³)	0.22

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

Density	Thickness	Octave Band Center Frequency (cycles/sec.)						
		125	250	500	1000	2000	4000	NRC
.75 PCF (12 kg/m ³)	1½" (38 mm)	.20	.42	.82	.87	.94	.91	.75
1.0 PCF (16 kg/m ³)	1" (25 mm)	.17	.24	.62	.79	.88	.96	.65
	1½" (38 mm)	.31	.50	.89	.98	1.01	1.01	.85
1.5 PCF (24 kg/m ³)	1" (25 mm)	.03	.28	.56	.82	.90	.94	.65
	1½" (38 mm)	.21	.51	.97	1.08	1.07	1.06	.90
	2" (51 mm)	.38	.89	1.08	1.14	1.11	1.08	1.05
2.0 PCF (32 kg/m ³)	1" (25 mm)	.06	.29	.67	.86	.94	.95	.70
	1½" (38 mm)	.26	.57	.97	1.06	1.06	1.04	.90
	2" (51 mm)	.22	.78	1.19	1.08	1.11	1.06	1.05

Forms Available

Type	Thickness	Width	Length ¹	Layer
KN-75	1½" (38 mm)	36"-48", 72"-96" (914-1219 mm, 1829-2438 mm)	80' (24.38 m)	Double
	2" (51 mm)		115' (35.08 m)	Single
	2½" (64 mm)		95' (28.96 m)	Single
	3" (76 mm)		80' (24.38 m)	Single
	4" (102 mm)		60' (18.29 m)	Single
	5" (127 mm)		50' (15.24 m)	Single
	6" (152 mm)		40' (12.19 m)	Single
KN-100	1" (25 mm)	36"-48", 72"-96" (914-1219 mm, 1829-2438 mm)	95' (28.96 m)	Double
	1½" (38 mm)		125' (38.10 m)	Single
	2" (51 mm)		95' (28.96 m)	Single
	2½" (64 mm)		75' (22.86 m)	Single
	3" (76 mm)		60' (18.29 m)	Single
	4" (102 mm)		45' (13.72 m)	Single
	5" (127 mm)		35' (10.67 m)	Single
	6" (152 mm)		30' (9.14 m)	Single
KN-150	1" (25 mm)	36"-48", 72"-96" (914-1219 mm, 1829-2438 mm)	125' (38.10 m)	Single
	1½" (38 mm)		85' (25.91 m)	Single
	2" (51 mm)		60' (18.29 m)	Single
KN-200	1" (25 mm)	36"-48", 72"-96" (914-1219 mm, 1829-2438 mm)	95' (28.96 m)	Single
	1½" (38 mm)		60' (18.29 m)	Single
	2" (51 mm)		45' (13.72 m)	Single
KN-250	1" (25 mm)	36"-48", 72"-96" (914-1219 mm, 1829-2438 mm)	75' (22.86 m)	Single
	1½" (38 mm)		50' (15.24 m)	Single

KN Series Insulation is made-to-order and is available in rolls.

For requirements not listed, contact your Knauf Insulation sales representative.

For more information call (800) 825-4434, ext. 8283

or visit us online at www.knaufinsulation.us



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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.

MR Credit 4.1 – 4.2 Recycled Content

MR Credit 5.1 – 5.2 Regional Materials



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



GREENGUARD GoldSM

Knauf Insulation achieved GREENGUARD Gold Certification and is verified to be formaldehyde free.

GREENGUARD Certification ProgramSM

Products are certified to GREENGUARD standards for low chemical emissions into indoor air during product usage. For more information, visit ul.com/gg.

Knauf Insulation has achieved a UL Environment claim validation for over 50% post-consumer recycled glass content in our insulation products.