



Data Sheet

OEM-KN-DS

10-17

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 enhances the sustainability of our products. The “binder” is the bond that holds our glass mineral wool product together and gives the product its shape and brown color. ECOSE Technology is a plant-based, sustainable chemistry that replaces the phenol/formaldehyde (PF) binder traditionally used in glass mineral wool products. Products using ECOSE Technology are formaldehyde-free and have reduced global warming potential when compared to our products of the past.

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 every six months 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

PACKAGING

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

SPECIFICATION COMPLIANCE

- ASTM C553; Type I, Type II
- MIL-DTL-32585; Type 1, Form 2, Facing A

INDOOR AIR QUALITY

- UL Environment
 - GREENGUARD certified
 - GREENGUARD Gold certified
 - Validated to be formaldehyde-free
- EUCEB

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 (343° C).

GLASS MINERAL WOOL AND MOLD

Glass mineral wool 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 Territory Manager to ensure information is current.

Technical Data

Property (Unit)	Test	Performance
Odor Emission	ASTM C1304	Pass
Water Vapor Sorption (by weight)	ASTM C1104	Less than 3%
Maximum Service Temperature	ASTM C411	650° F (343° C)
Mold Growth	ASTM C1338	Pass.
Surface Burning Characteristics (flame spread/smoke developed)	ASTM E84, UL 723	UL Classified FHC 25/50

Forms Available

Type	Thickness	Width	Length	Layer	Current Minimum (ft ²)
KN-75	1 ½" (38 mm)	36"-48" (914-1,219 mm) 60"-96" (1,829-2,438 mm)	80' (24.38 m)	Double	134,000
	2" (51 mm)		115' (35.08 m)	Single	92,000
	2 ½" (64 mm)		95' (28.96 m)	Single	80,000
	3" (76 mm)		80' (24.38 m)	Single	68,000
	4" (102 mm)		60' (18.29 m)	Single	50,000
	5" (127 mm)		50' (15.24 m)	Single	41,000
	6" (152 mm)		40' (12.19 m)	Single	34,000
KN-100	1" (25 mm)		95' (28.96 m)	Double	150,000
	1 ½" (38 mm)		125' (38.10 m)	Single	100,000
	2" (51 mm)		95' (28.96 m)	Single	75,000
	2 ½" (64 mm)		75' (22.86 m)	Single	60,000
	3" (76 mm)		60' (18.29 m)	Single	50,000
	4" (102 mm)		45' (13.72 m)	Single	39,000
	5" (127 mm)		35' (10.67 m)	Single	31,000
KN-150	1" (25 mm)	30' (9.14 m)	Single	25,000	
	1 ½" (38 mm)	125' (38.10 m)	Single	100,000	
	2" (51 mm)	85' (25.91 m)	Single	68,000	
KN-200	1" (25 mm)	60' (18.29 m)	Single	50,000	
	1 ½" (38 mm)	95' (28.96 m)	Single	75,000	
	2" (51 mm)	45' (13.72 m)	Single	39,000	
KN-250	1" (25 mm)	75' (22.86 m)	Single	60,000	
	1 ½" (38 mm)	50' (15.24 m)	Single	42,000	

KN Series Insulation is made-to-order and is available in rolls. For requirements not listed, contact your Knauf Insulation Territory Manager.

Thermal Conductivity | ASTM C518 @ 75° F Mean Temperature

Density	k
0.75 PCF (12 kg/m ³)	0.28
1.0 PCF (16 kg/m ³)	0.26
1.50 PCF (24 kg/m ³)	0.24
2.0 PCF (32 kg/m ³)	0.23
2.50 PCF (40 kg/m ³)	0.22

Sound Absorption Coefficients | ASTM C423, Type A Mounting

Density	Thickness	Octave Band Center Frequency (cycles/sec.)						
		125	250	500	1000	2000	4000	NRC
0.75 PCF (12 kg/m ³)	1 ½" (38 mm)	0.20	0.42	0.82	0.87	0.94	0.91	0.75
	1" (25 mm)	0.17	0.24	0.62	0.79	0.88	0.96	0.65
1.0 PCF (16 kg/m ³)	1 ½" (38 mm)	0.31	0.50	0.89	0.98	1.01	1.01	0.85
	1" (25 mm)	0.03	0.28	0.56	0.82	0.90	0.94	0.65
1.5 PCF (24 kg/m ³)	1 ½" (38 mm)	0.21	0.51	0.97	1.08	1.07	1.06	0.90
	2" (51 mm)	0.38	0.89	1.08	1.14	1.11	1.08	1.05
2.0 PCF (32 kg/m ³)	1" (25 mm)	0.06	0.29	0.67	0.86	0.94	0.95	0.70
	1 ½" (38 mm)	0.26	0.57	0.97	1.06	1.06	1.04	0.90
	2" (51 mm)	0.22	0.78	1.19	1.08	1.11	1.06	1.05

KNAUFINSULATION



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UL Environment GREENGUARD Certification Program

KN Series insulation is 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 KN Series insulation.

UL Environment Validated Formaldehyde Free

Knauf Insulation has achieved UL Environment validation that KN Series insulation is formaldehyde-free.

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.

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

Declare.



Declare is a voluntary self-disclosure program aiming to transform the building materials industry towards healthier and more ecological products through ingredient transparency.

Participating in Declare means this product has voluntarily self-disclosed all ingredients in order to promote transparency.

Living Building Challenge Compliant means this product meets the requirements of the Red-List Imperative of the Living Building Challenge due to a temporary exception.

Living Building Challenge Red List Free means this product does not contain any ingredients on the Living Building Challenge's Red List.



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 EUCEB requirements.