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Data Sheet

November 2013



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



Knauf Metal Building Insulation with ECOSE® Technology products are certified for indoor air quality as a low emitting product by The GREENGUARD Environmental Institute to both the GREENGUARD Indoor Air Quality Certification Program<sup>SM</sup> and the more stringent GREENGUARD Children & Schools standard and are verified to be formaldehyde free.

[www.greenguard.org](http://www.greenguard.org)

The GREENGUARD INDOOR AIR QUALITY CERTIFIED Mark is a registered certification mark used under license through the GREENGUARD Environmental Institute.

## Metal Building Insulation with ECOSE® Technology



# Metal Building Insulation with ECOSE® Technology

## Description

Knauf Insulation Metal Building Insulation with ECOSE® Technology is a resilient, flexible unfaced blanket insulation made from Glass Mineral Wool bonded by thermosetting resin. The blanket is suitable for application of facings and has sufficient tensile and bond strength for normal handling by the laminator and contractor. The blanket may also be used unfaced as additional insulation to fill voids in walls and roofs of metal buildings.

## ECOSE® Technology

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

## Application

When Knauf Insulation Metal Building Insulation is faced with a suitable vapor retarder, it can be installed in exterior wall and roof surfaces of pre-engineered buildings. The product may be used unfaced to fill voids in walls and roof cavities of pre-engineered buildings.

## Features

- Low thermal conductivity
- Superior acoustical performance
- Fire-resistant, non-corrosive, tough and resilient
- Certified for indoor air quality as a low emitting product by The GREENGUARD Environmental Institute to both the GREENGUARD Indoor Air Quality Certification Program<sup>SM</sup> and the more stringent GREENGUARD Children & Schools standard and is verified to be formaldehyde free.
- Sustainability
  - Carbon negative: meaning Knauf Insulation products used for thermal insulating purposes recover the energy that it took to make them in just hours or a few 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 primary ingredients:
    - Sand, one of the world's most abundant and renewable resources
    - 60% recycled post-consumer glass content and ULE verification every 6 months
    - ECOSE Technology which reduces binder embodied energy by up to 70%

## Benefits

- Energy conservation
- Better temperature control
- Lower operating costs
- Noise control
- Withstands damage from normal handling and shop abuse
- Condensation control

## Technical Data

### Surface Burning Characteristics

- Does not exceed 25 Flame Spread, 50 Smoke Developed when tested in accordance with ASTM E 84, NFPA-255 and UL 723.

### Odor (ASTM C 1304)

- No objectionable odor emission.

### Water Vapor Sorption (ASTM C 1104)

- Less than 0.2% by volume or 5% by weight.

### Corrosiveness (ASTM C 665)

- Does not accelerate corrosion on steel, copper or aluminum.

### Corrosion (ASTM C 1617)

- The corrosion rate in mils/yr will not exceed that of the 1 ppm chloride solution.

### Resistance to Microbial Growth (ASTM C 1338)

- Does not promote microbial growth.

### Noncombustibility (ASTM E 136)

- Noncombustible.

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

	<sup>1</sup> / <sub>3</sub> Octave Band Center Frequency (cycles/sec.)						
	125	250	500	1000	2000	4000	NRC
3"	.36	.76	1.04	.94	.98	1.00	.95
4"	.59	1.01	.97	.96	1.06	1.08	1.00
6"	1.18	1.36	1.02	1.02	1.12	1.07	1.15

## Forms Available

Thickness	Width	Length
3/4" (83 mm)	36"-60" (915-1524 mm)	100' (30.48 m)
3 1/2" (89 mm)		100' (30.48 m)
4 1/4" (108 mm)	72"-96" (1829-2438 mm)	75' (22.86 m)
5" (127 mm)	72"-96" (1829-2438 mm)	50' (15.24 m)
6" (152 mm)	36"-60" (915-1524 mm)	50' (15.24 m)
8" (203 mm)		40' (12.19 m)
9 1/4" (235 mm)		25' (7.62 m)

All products meet NAIMA 202-96 (REV. 2000)

## R-Value (ASTM C 518) Mean Temperature 75°F

Thickness	R-Value
3/4"	10
3 1/2"	11
4 1/4"	13
5"	16
6"	19
8"	25
9 1/4"	30

## Specification Compliance

- ASTM C 553 Type I, II
- ASTM C 991 Type I
- GREENGUARD Children & Schools Certified<sup>SM</sup> and verified to be formaldehyde free
- HH-I-558C Form B, Class 6
- NAIMA Standard 202-96 (REV.2000)
- ASTM E 136

## 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. If it shows signs of facing degradation from wetting, it should be replaced. Air handling insulation used in the air stream must be discarded if exposed to water.

## Notes

The chemical and physical properties of Knauf Insulation Metal Building Insulation represent typical average values determined in accordance with accepted test methods. 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.

