KNAUF INSULATION

Knauf Data Sheet | PE-DS-8E 09-09

Elevated Temperature Blanket 1000°F

with ECOSE® Technology

with ECOSE® TECHNOLOGY

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with ECOSE® Technology

Description

Knauf Elevated Temperature Blanket 1000°F with ECOSE Technology is a lightweight thermal insulation blanket (1.1 PCF, 17.6 kg/m^3) made from highly resilient, inorganic glass fibers bonded by ECOSE Technology.

Application

Knauf Elevated Temperature Blanket 1000°F with ECOSE Technology is for industrial heating equipment to 1000°F (538°C), such as industrial furnaces, panel systems, marine applications and irregular surfaces.

ECOSE Technology

ECOSE Technology is a revolutionary new 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 fiber glass insulation products. ECOSE Technology reduces binder embodied energy and does not contain phenol, formaldehyde, acrylics or artificial colors.

Features and Benefits

Excellent Thermal Properties

- Low thermal conductivity ratings to 1000°F (538°C).
- Increases system efficiency and decreases fuel usage.

Low-Cost Installation

- Lightweight, and easy to handle and fabricate.
- Flexibility makes it ideal for flat or irregular surfaces.

Damage Resistant

- Tough and resilient.
- Resists damage in shipment, and during and after installation.
- Certified for indoor air quality as a low emitting product by The GREENGUARD Environmental Institute to both the GREENGUARD Certification Program℠ and the more stringent GREENGUARD Children and Schools℠ standard.
- 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.
  - Fiber glass insulation with ECOSE Technology contains three primary ingredients:
    - Sand, one of the world's most abundant and renewable resources
    - Post-consumer recycled bottle glass
    - ECOSE Technology which reduces binder embodied energy by up to 70%

Specification Compliance

In U.S.:

- HH-I-558C; Form B, Class 7, 8
- MIL-I-22023D; Type I, Class 3; Type II, Class 3
- USCG 164.109/18/0
- GREENGUARD Indoor Air Quality Certified®
- GREENGUARD Children and Schools℠

In Canada:

- CAN/ULC S102-M88
- CCG F1-314
- CGSB 51-GP-11M

Technical Data

Surface Burning Characteristics

- Does not exceed 25 Flame Spread, 50 Smoke Developed when tested in accordance with ASTM E 84, CAN/ULC S102-M88, and UL 723.

Water Vapor Sorption (ASTM C 1104)

- 0.1% or less by volume.

Temperature Limit (ASTM C 411)

- Up to 1000°F (538°C)

Microbial Growth (ASTM C 1338)

- No growth.
- Will not rot.
- Will not sustain vermin.

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.

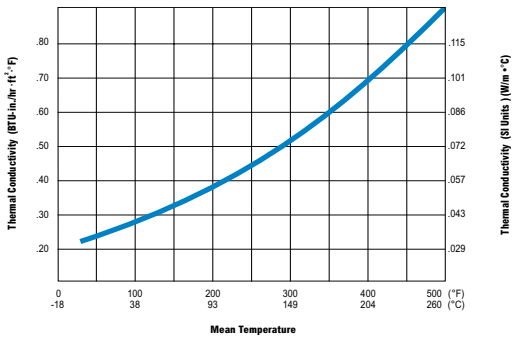
Precautions

- During initial heat-up to operating temperatures above 350°F (177°C), a slight odor and some smoke may be given off as a portion of the bonding material used in the insulation begins to undergo a controlled decomposition.
- If natural convection is not adequate in confined areas, forced ventilation should be provided in order to protect against any harmful fumes and vapors that might be generated.

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. If it shows signs of facing degradation from wetting, it should be replaced.

Thermal Efficiency (ASTM C 177)



Mean Temperature	k	k(SI)
100°F (38°C)	.28	.040
200°F (93°C)	.38	.055
300°F (149°C)	.52	.075
400°F (204°C)	.70	.101
500°F (260°C)	.90	.130

Standard Sizes (Rolls)

Thickness	Width	Length
1" (25 mm)	48" (1219 mm)	75' (22.90 m)
1½" (38 mm)		50' (15.20 m)
2" (51 mm)		75' (22.90 m)
2½" (64 mm)		60' (18.30 m)
3" (76 mm)		50' (15.20 m)
3½" (89 mm)		45' (13.70 m)
4" (102 mm)		40' (12.20 m)

Made-To-Order Sizes

Thickness	Width	Length
1" (25 mm)	24" (610 mm) 36" (914 mm) 48" (1219 mm)	Custom
1½" (38 mm)		
2" (51 mm)		
2½" (64 mm)		
3" (76 mm)		
3½" (89 mm)		
4" (102 mm)		

KNAUF INSULATION

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Notes

The chemical and physical properties of Knauf Elevated Temperature Blanket 1000° with ECOSE Technology represent typical 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

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

U.S. GREEN BUILDING COUNCIL MEMBER

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

Children & Schools GREENGUARD® Indoor Air Quality Certified

Knauf Elevated Temperature Blanket with ECOSE® Technology products are certified for indoor air quality by The GREENGUARD Environmental Institute, to both the GREENGUARD Certification Program℠ and the more stringent GREENGUARD For Children and Schools℠ Standard. www. greenguard.org

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