DATA SHEET

Elevated Temperature Batt 1000° and HD Blanket 1000° *with ECOSE® Technology*

DESCRIPTION

Elevated Temperature Batt 1000° and HD Blanket 1000° are semi-rigid thermal insulation products made from highly resilient inorganic glass fibers bonded with ECOSE Technology.

APPLICATION

- High-temperature marine applications, industrial furnaces, boilers, vessels and industrial ovens
- Applications where lighter-weight insulation or flexible/semi-rigid high-temperature insulations are needed for curved and irregular surfaces

SPECIFICATION COMPLIANCE

U.S.

- ASTM C553, Type I, II, V, VI
- ASTM C1139; Type I, Grade 3; Type 2, Grade 3 (withdrawn 2019)
- Conformity for Marine Equipment IMO 1408
- USCG 164.109/18/1
- UL/ULC Classified (UL 723)
- ASTM C795, MIL-I-24244, NRC Reg. Guide 1.36 (Certification needs to be specified at time of order)

Canada

- CAN/ULC S102

INDOOR AIR QUALITY

- 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

CONTRACTOR: _____

JOB: _____

DATE: _____

DOING MORE FOR THE WORLD WE LIVE IN.

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.

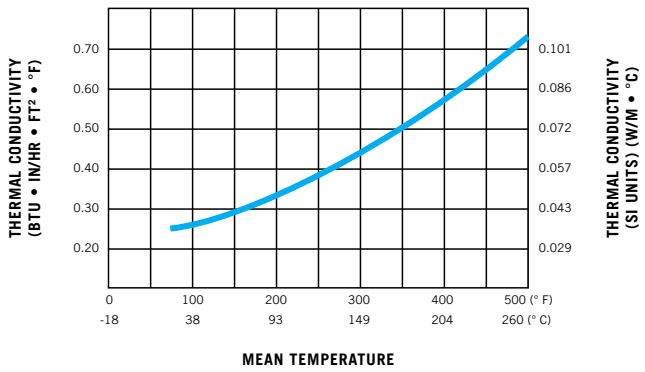
All of our products are made from sustainable resources, such as recycled glass and sand. And we're proud to be putting glass bottles back to work rather than into landfills. Our products are made with a minimum of 50% recycled glass—totaling an average of 26 million bottles each month.

TECHNICAL DATA		
Property (Unit)	**Test**	**Performance**
Corrosiveness	ASTM C665	Does not accelerate corrosion of steel
Corrosion	ASTM C1617	Pass
Water Vapor Sorption (by weight)	ASTM C1104	5% or less
Maximum Service Temperature	ASTM C411	1000° F (538° C)
Mold Growth	ASTM C1338	Pass
Surface Burning Characteristics (flame spread/smoke developed)	ASTM E84, NFPA 90A and 90B, UL 723, CAN/ULC S102	UL/ULC Classified FHC 25/50

ET BATT 1000° FORMS AVAILABLE			
Density	**Thickness**	**Width**	**Length**
1.6 PCF (25.6 kg/m³)	1½" (38 mm)	24" (610 mm)	48" (1,219 mm)
	2" (51 mm)		
	2½" (64 mm)		
	3" (76 mm)		
	3½" (89 mm)		
	4" (102 mm)		

HD BLANKET 1000° FORMS AVAILABLE			
Density	**Thickness**	**Width**	**Length**
1.6 PCF (25.6 kg/m³)	1½" (38 mm)	48" (1,219 mm)	120' (36.6 m)
	2" (51 mm)		80' (24.4 m)
	2½" (64 mm)		70' (21.3 m)
	3" (76 mm)		60' (18.3 m)
	3½" (89 mm)		50' (15.2 m)
	4" (102 mm)		40' (12.2 m)

THERMAL CONDUCTIVITY | ASTM C177



Mean Temperature	k	k(SI)
100° F (38° C)	0.24	0.035
200° F (93° C)	0.33	0.048
300° F (149° C)	0.44	0.063
400° F (204° C)	0.57	0.082
500° F (260° C)	0.72	0.104

CERTIFICATIONS

APPLICATION & SPECIFICATION GUIDELINES

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.

Storage

- Protect material from water damage or other abuse. Protect from welding sparks and open flame. The material may be stored outside if the packaging is not damaged.

Preparation

- Apply the product on clean, dry surfaces.

Application

- There is no heat-up cycle required.
- The product should be secured with welded pins or studs and covered with sheet metal. An alternate method entails covering the insulation with a metal mesh and insulating cement, canvassing and painting.
- Pins and studs shall be located a maximum of 4" (102 mm) from each edge and spaced no greater than 16" (406 mm) on center.
- Care should be taken to avoid over compressing the insulation with the retaining washer.
- For application of this product over 500° F (260° C), double layer application is recommended with staggered joints.
- When using the products at 1000° F (538° C), it is recommended that no more than 6" (152 mm) thickness should be used. For thicknesses in excess of 6", contact your Knauf Insulation Territory Manager.

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.

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.

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

Visit **knaufnorthamerica.com** to learn more.

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