DATA SHEET

Elevated Temperature Panel 1000°

with ECOSE® Technology

DESCRIPTION

Elevated Temperature Panel 1000° is a semi-rigid thermal insulation board made from highly resilient, inorganic glass fibers bonded with ECOSE Technology.

CONTRACTOR: _____

JOB: _____

DATE: _____

APPLICATION

- High-temperature panel systems for ducts and precipitators, boilers, H-Bar systems, vessels and industrial ovens up to 1000° F (538° C)
- Ideal for use in metal mesh blankets

SPECIFICATION COMPLIANCE

U.S.

- ASTM C612; Type IA, Type IB, Type II and III, Category I
- Conformity for Marine Equipment IMO 1408
- USCG 164.109/17/1
- ASTM C1139; Type I, Grade 5, Type II, Grade 5 (withdrawn 2019)
- 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

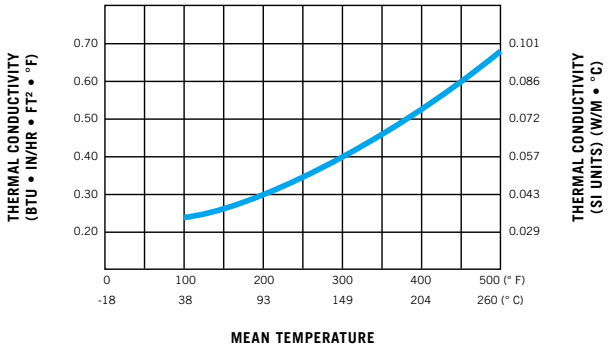
DOING MORE FOR THE WORLD WE LIVE IN.

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
Maximum Service Temperature	ASTM C411, ASTM C447	1000 °F (538 °C) at a maximum recommended thickness of 6"
Mold Growth	ASTM C1338	Pass
Water Vapor Sorption (by weight)	ASTM C1104	Less than 5%
Surface Burning Characteristics (flame spread/smoke developed)	ASTM E84, CAN/ULC S102, NFPA 90A and 90B, and UL 723	UI/ULC Classfied FHC 25/50

THERMAL CONDUCTIVITY | ASTM C177



Mean Temperature	k	k (SI)
100° F (38° C)	0.25	0.036
200° F (93° C)	0.32	0.046
300° F (149° C)	0.40	0.058
400° F (204° C)	0.52	0.075
500° F (260° C)	0.68	0.098

FORMS AVAILABLE

Density	Thickness	Width	Length
2.4 PCF (38.4 kg/m³)	1" (25 mm)	24" (610 mm) to 48" (1,219 mm)	48" (1,219 mm) to 120" (3,048 mm)
	1½" (38 mm)		
	2" (51 mm)		
	2½" (64 mm)		
	3" (76 mm)		
	3½" (89 mm)		
	4" (102 mm)		

CERTIFICATIONS

GREENGUARD GOLD
GREENGUARD
VALIDATED
U.S. GREEN BUILDING COUNCIL MEMBER
EUCEB
CLASSIFIED UL US

APPLICATION & SPECIFICATION GUIDELINES

Precaution

- 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. Cartons are not designed for outside storage. Vacuum packaged material can be stored outside if care is taken not to puncture the poly bag.

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 washers 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.
- In temperatures over 550° F (288° C) and designed thickness over 3" (76 mm) dual layer application with staggered joints is recommended.
- When using the products at 1000° F (538° C), it is recommended that no more than 6" (152 mm) thickness should be used.

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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