



Performance+[®]

Elevated Temperature Panel 1000° with ECOSE[®] Technology

Product-Data-Sheet



Description

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

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- ASTM C1139; Type I, Grade 5, Type II, Grade 5 (withdrawn 2019)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)

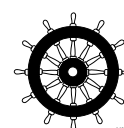
Canada

- CAN/ULC S102

Indoor Air Quality

- **Asthma & Allergy Friendly[®]** Certified
- Verified Healthier Air[™]
- 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

Certifications



The Asthma & Allergy Friendly[®] Certification Mark is a Registered Certification Mark of the Asthma Allergy Foundation of America (AAFA) and Allergy Standards Ltd (ASL). Verified Healthier Air[™] is a trademark of Airmid Healthgroup. USGBC[®] and the related logo are trademarks owned by the U.S. Green Building Council[®] and are used with permission.

Contractor: _____

Job: _____

Date: _____

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	UL/ULC Classified FHC 25/50

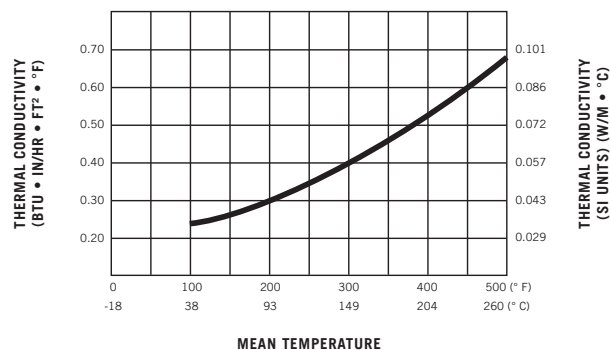
Forms Available

Density (PCF)	Thickness	Width	Length
2.4	1"	24"	96"
	2"	24"	48"
	2"	24"	96"
	3"	24"	48"
	4"	24"	48"

*Custom forms are available. Please contact your TM.

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



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. 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.

Check with your Knauf 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.

Consult with or follow local building and energy codes to determine appropriate R-values and need for and placement of a vapor retarder.

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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.

This product is covered by one or more U.S. and/or other patents.

See patent www.knaufnorthamerica.com/patents

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