

# Elevated Temperature Panel 1000°

Submittal Date \_\_\_\_\_

# KNAUFINSULATION

## Description

Knauf Elevated Temperature Panel 1000° is a semi-rigid thermal insulation board (2.4 pcf, 38.4 kg/m<sup>3</sup>), made from highly resilient, inorganic glass fibers bonded by a high-temperature thermosetting resin.

## Application

Knauf Elevated Temperature Panel 1000° is suitable for use in industrial heating applications to 1000°F (538°C), such as high-temperature panel systems for ducts and precipitators, boilers, vessels and industrial ovens. It is ideal for use in metal mesh blankets.

## Features and Benefits

### Excellent Thermal Properties

- Reduces operating cost.

### Low Installed Cost

- Lightweight.
- Easy to fabricate.
- Sizes up to 4' x 10' available.

### Polybag and Sleeve Packaging

- Damage resistant.
- Reduces storage space.

### Resilient Fiber Glass

- Maintains integrity at elevated temperatures.

## Specification Compliance

### In U.S.:

- ASTM C 612; Type II and III
- ASTM C 795
- HH-I-558C; Form A, Class 1, 3
- MIL-I-24244C
- NRC Reg. Guide 1.36
- USCG 164.109/17/0

### In Canada:

- CAN/ULC S102-M88
- CCG 100/F1-316
- CGSB 51-GP-10M
- DND 15280-02 E2

## 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.

### Corrosiveness (ASTM C 665)

- Will not accelerate corrosion of steel.
- Complies to stress corrosion requirements of ASTM C 795, MIL-I-24244C and NRC Reg. Guide 1.36.

### Temperature Limitation (ASTM C 411)

- Up to 1000°F (538°C).

### Microbial Growth (ASTM C 1338)

- Does not promote microbial growth.

## Application and 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 for Knauf ET Panel 1000°.
- 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.

## Caution

Fiber glass may cause temporary skin irritation. Wear long-sleeved, loose-fitting clothing, head covering, gloves and eye protection when handling and applying material. Wash with soap and warm water after handling. Wash work clothes separately and rinse washer. A disposable mask designed for nuisance type dusts should be used where sensitivity to dust and airborne particles may cause irritation to the nose or throat.

### 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 with organic materials. 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.

## Notes

The chemical and physical properties of Knauf Elevated Temperature Panel 1000° 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.

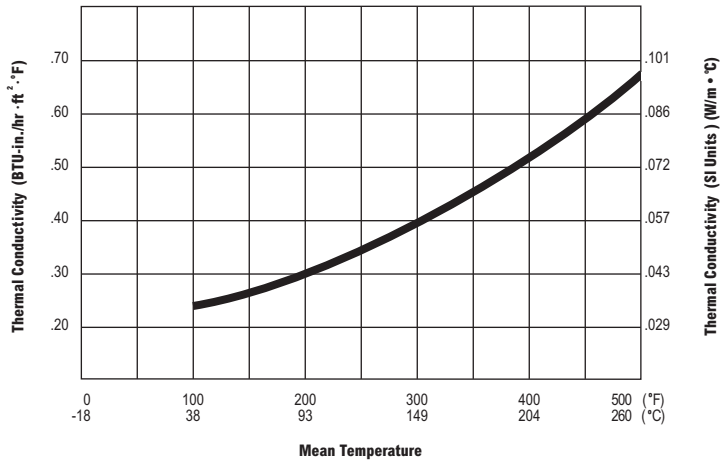
Check with your Knauf sales representative to assure information is current.

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## Thermal Efficiency (ASTM C 177)



Mean Temperature	k	k(SI)
100°F (38°C)	.25	.036
200°F (93°C)	.32	.046
300°F (149°C)	.40	.058
400°F (204°C)	.52	.075
500°F (260°C)	.68	.098

## Standard Sizes

Thickness	Width	Length
1" (25 mm)	24" (610 mm)	48" (1219 mm) and 96" (2438 mm)
1½" (38 mm)		
2" (51 mm)		
2½" (64 mm)		
3" (76 mm)		
3½" (89 mm)		
4" (102 mm)		

## Made-To-Order Sizes

Thickness	Width	Length
1" (25 mm)	24" (610 mm) to 48" (1219 mm)	48" (1219 mm) and 120" (3048 mm)
1½" (38 mm)		
2" (51 mm)		
2½" (64 mm)		
3" (76 mm)		
3½" (89 mm)		
4" (102 mm)		