



Acoustical Board Smooth

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Description

Knauf Acoustical Board Smooth is a thermal and acoustical insulation product made from inorganic glass fibers pre-formed into boards and bonded by a thermosetting resin.

Application

Knauf Acoustical Board Smooth is a versatile product for thermal and acoustical applications such as office partitions, interior panels and sound baffles.

Features and Benefits

Density and Size Availability

- Knauf Acoustical Board Smooth is available in the densities and sizes required by panel and ceiling manufacturers. Special items not shown on the price and data sheet can be made based on our process capability.

Surface Smoothness

- The top surface is smooth which allows for flatness and uniformity.

Precision Tolerances

- Tolerances are $\pm 1/16$ " (1.59 mm) for thickness and $\pm 1/8$ " (3.18 mm) for width and length.

Fabrication

- The board is suitable for machining.

Noise Reduction

- Excellent sound absorption characteristics, an important benefit for today's office and interiors.

Packaging

- Available on pallets and in cartons. See Packaging table on right page.

Specification Compliance

In U.S.:

- ASTM C 612; Type IA and Type IB
- ASTM C 795
- California Title 24
- HH-I-558C
— Form A, Class 1 and Class 2
- NFPA 90A and 90B

In Canada:

- CAN/ULC S102-M88
- CGSB 51-GP-10M

Technical Data

Surface Burning Characteristics (UL Classified)

- Does not exceed 25 Flame Spread, 50 Smoke Developed when tested in accordance with ASTM E 84, CAN/ULC S102-M88, NFPA 90A and 90B, NFPA 255 and UL 723.

Temperature Range (ASTM C 411)

- Operating temperatures from 0°F to 450°F (-18°C to 232°C).

Corrosiveness (ASTM C 665)

- Will not accelerate corrosion of aluminum, steel or copper.

Shrinkage (ASTM C 356)

- Less than 0.3% linear shrinkage.

Mold Growth (ASTM C 1338)

- Does not promote growth.

Water Vapor Sorption (ASTM C 1104)

- Less than 5% by weight.

Odor (ASTM C 1304)

- Not objectionable.

Product Availability

1. Stock items are listed. The remainder of the product line is made-to-order.
2. Acoustical Board Smooth is skidded smooth on one side except for $1/2$ " thick which is bisected as noted below.
3. Product tolerances: $\pm 1/16$ " (1.59 mm) thickness; $\pm 1/8$ " (3.18 mm) width and length.
4. It is recommended that Acoustical Board Smooth be sampled and evaluated prior to ordering.
5. For requirements not listed, contact your Knauf Insulation sales representative.

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. Air handling insulation used in the air stream must be discarded if exposed to water.

Notes

The chemical and physical properties of Knauf Acoustical Board Smooth 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.



Sound Absorption Coefficients
(ASTM C 423, Type A Mounting)

| Density | Thickness | ¹ / ₃ Octave Band Center Frequency (cycles/sec.) | | | | | | |
|----------------------------------|-------------|--|------|------|------|------|------|------|
| | | 125 | 250 | 500 | 1000 | 2000 | 4000 | NRC |
| 3.0 PCF (48 kg/m ³) | 1" (25 mm) | .08 | .23 | .62 | .88 | .96 | .99 | .65 |
| | 1½" (38 mm) | .09 | .39 | .89 | 1.03 | 1.06 | 1.01 | .85 |
| | 2" (51 mm) | .29 | .65 | 1.11 | 1.13 | 1.06 | 1.03 | 1.00 |
| | 3" (76 mm) | .54 | 1.01 | 1.18 | 1.07 | 1.07 | 1.04 | 1.10 |
| 4.25 PCF (68 kg/m ³) | 1" (25 mm) | .06 | .24 | .69 | .99 | 1.05 | 1.02 | .75 |
| 6.0 PCF (96 kg/m ³) | 1" (25 mm) | .05 | .26 | .77 | 1.04 | 1.04 | 1.03 | .80 |
| | 1½" (38 mm) | .13 | .58 | 1.01 | 1.05 | 1.00 | 1.01 | .90 |
| | 2" (51 mm) | .32 | .81 | 1.08 | 1.06 | 1.03 | 1.04 | 1.00 |

Thermal Conductivity
(ASTM C 177) @ 75°F Mean Temperature

| Density | Thermal Conductivity BTU-in. ft ² °F |
|----------------------------------|--|
| 3.0 PCF (48 kg/m ³) | 0.23 |
| 4.25 PCF (64 kg/m ³) | 0.23 |
| 6.0 PCF (96 kg/m ³) | 0.22 |

Packaging Available

| Product Dimensions | Carton | Pallet |
|--------------------|--------|--------|
| 24" x 48" | • | |
| 48" x 96" | • | • |
| 48" x 120" | • | • |
| 48" x 144" | | • |
| 49" x 97" | | • |
| 49" x 121" | | • |
| 49" x 145" | | • |

Forms Available

Made-To-Order Sizes

| Density | Thickness | Width [†] | Length | Minimum Order | | |
|----------------------------------|--------------|--|---|---------------|--|----------|
| 3.0 PCF (48 kg/m ³) | 1" (25 mm) | 24" (610 mm) 48" (1219 mm) 49" (1245 mm) | 48" (1219 mm) 96" (2438 mm) 97" (2464 mm) 120" (3048 mm) 121" (3073 mm) 144" (3658 mm) 145" (3683 mm) | 24 MSF | | |
| | 1½" (38 mm) | | | 16 MSF | | |
| | 2" (51 mm) | | | 12 MSF | | |
| | 3" (76 mm) | | | 8 MSF | | |
| 4.25 PCF (68 kg/m ³) | ½" (13 mm) | | | | | 36 MSF |
| | 1" (25 mm) | | | | | 18 MSF |
| | 1½" (38 mm) | | | | | 14 MSF |
| | 2" (51 mm) | | | | | 9 MSF |
| 6.0 PCF (96 kg/m ³) | ½" * (13 mm) | | | | | 24 MSF |
| | ¾" (19 mm) | | | | | 18 MSF |
| | 7/8" (22 mm) | | | | | 13.7 MSF |
| | 1" (25 mm) | | | | | 12 MSF |
| | 1½" (38 mm) | | | 9 MSF | | |
| | 2" (51 mm) | | | 6 MSF | | |

Stock Sizes Minimum Order is 1 Pallet

| Density | Thickness | Width | Length | Minimum Order |
|---------------------------------|------------|---------------|----------------|---------------|
| 6.0 PCF (96 kg/m ³) | 1" (25 mm) | 49" (1245 mm) | 97" (2464 mm) | 42 sheets |
| | 1" (25 mm) | | 121" (3073 mm) | 42 sheets |
| | 2" (51 mm) | | 97" (2464 mm) | 21 sheets |
| | 2" (51 mm) | | 121" (3073 mm) | 21 sheets |

[†] Tolerances: Width: ± 1/8" (3.18 mm); Length: ± 1/8" (3.18 mm); Thickness: ± 1/16" (1.59 mm) (On 6.0 PCF, Knauf Insulation will attempt to hold the tolerance to ± 1/16"; however, we cannot guarantee the tolerance due to process limitations.)

* ½" thick acoustical boards are achieved when 1" thick boards are bisected.

Minimum Runs: Based on the density/thickness combination

For requirements not listed, contact your Knauf Insulation sales representative.

KNAUF INSULATION



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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