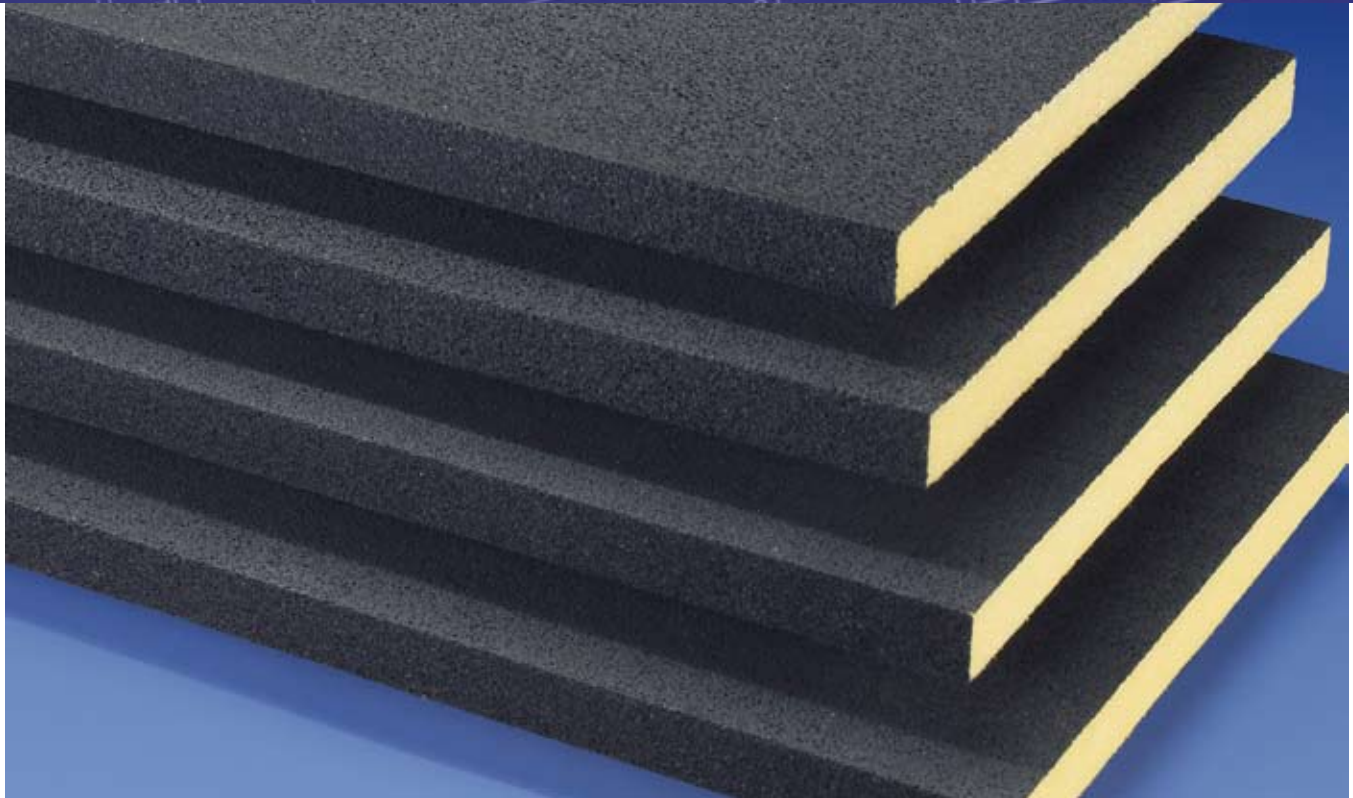


High Performance SOLCOUSTIC[®] Duct Liner for Air Handling Systems





DESCRIPTION

SOLCOUSTIC duct liner is made of flexible polyimide foam coated with an acrylic polymer. Polyimide foam is an inherently fire-resistant, high temperature foam with excellent sound absorption properties. Applied to the foam, the coating provides a uniform protective barrier against dust and moisture. SOLCOUSTIC liner is the only non-fibrous product on the market today with comparable performance to fibrous liners.

APPLICATIONS

SOLCOUSTIC duct liner is specifically designed as an acoustical and thermal lining for sheet metal plenums and ducts in air conditioning, heating, and ventilating systems with service temperatures up to 250°F (121°C). SOLCOUSTIC liner is the ideal choice for schools, hospitals, performance halls and other commercial buildings that require an environmentally safe, fiber-free environment.

ADVANTAGES

SOLCOUSTIC liner meets or exceeds the requirements called out in ASTM C 1071 for surface burning characteristics, temperature resistance, moisture absorption, erosion resistance, corrosiveness, and bacteria and fungi resistance.

Significant Noise Reduction

- **SOLCOUSTIC liner offers better sound absorbing properties** than other non-fibrous duct liner products. The foam liner reduces cross talk and sound energy from air movement and mechanical equipment, providing a quiet interior environment.

Conserves Energy

- **SOLCOUSTIC liner provides thermal properties** that are comparable to typical fiberglass at 1/2 the weight. In addition, SOLCOUSTIC liner maintains its design thickness and dimensions providing consistent performance properties for the life of the system.

Eliminates Health and Safety Concerns

- **With SOLCOUSTIC liner, there is no concern about fibers** being liberated into the air stream. The product has been successfully tested for air velocities up to 5,000 fpm (25.4 m/s), allowing it to be used in virtually any system.
- **SOLCOUSTIC duct liner is non-irritating** to the skin, making for more comfortable fabrication and assembly. Its lighter weight allows for easier hoisting or hand lifting of the ductwork in the field.

- **SOLCOUSTIC duct liner coating contains an immobilized, EPA-registered preservative** that will not support the growth of fungi or bacteria. The coated airstream surface protects the liner from dust and dirt, further reducing the potential for biological growth*. It also provides a du-

urable surface that can be cleaned using standard duct liner cleaning methods.

- **SOLCOUSTIC liner is formaldehyde-free**, minimizing indoor air quality concerns.

Typical SOLCOUSTIC Duct Liner System Properties

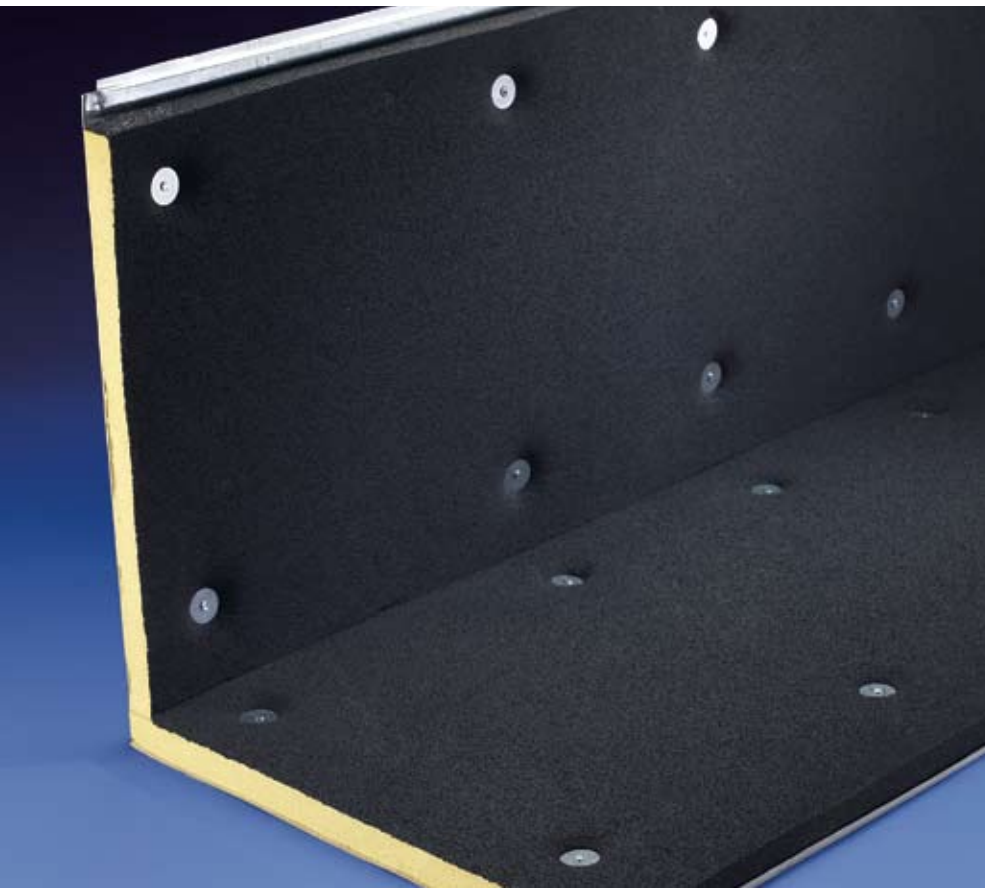
PROPERTY	TEST METHOD	U.S. VALUE/METRIC
Thermal Conductivity (k)	ASTM C 518 at mean temperature of 75°F (24°C)	0.30 (Btu·in)/(hr·ft ² ·°F) (0.049 W/m·K)
R-Value per Inch Thickness	ASTM C 518 at mean temperature of 75°F (24°C)	3.3 (hr·ft ² ·°F)/(Btu) (0.58 m ² ·K/W)
Surface Burning Characteristics	ASTM E 84	Flame Spread <25 Smoke Developed <50
Temperature Resistance	ASTM C 411 @ 250°F (121°C)	Pass
Hot Shrinkage	ASTM C 356 @250°F (121°C)	< 1% Length < 1% Width < 1% Height
Water Vapor Sorption	ASTM C 1104	< 2% by Weight
Air Velocity (max. tested)	ASTM C 1071	5,000 fpm (25.4 m/sec)
Corrosiveness	ASTM C 665	Steel: Pass
Fungi Resistance	ASTM G 21	No Growth
Bacterial Resistance	ASTM G 22	No Growth
Odor Emission	ASTM C 1304	Pass
Potential Heat	NFPA 259	7248 Btu/lb
Density	ASTM D 3574, A	0.80 lb/ft ³

ACOUSTICAL ABSORPTION COEFFICIENTS (sabins/ft² or metric sabins/m²) ASTM C 423 and E 795, Type A Mounting

Thickness	Frequency (Hz)						NRC
	125	250	500	1,000	2,000	4,000	
1 Inch (25mm)	0.11	0.30	0.73	1.02	0.73	0.66	0.70

The above are typical values subject to normal manufacturing variation.

*Note: As with any type of surface, under certain conditions microbial growth may occur in accumulated duct system dirt. This risk is minimized with proper design, filtration, maintenance and operation of the HVAC system.



Application of SOLCOUSTIC duct liner to metal air ducts shall be in accordance with the SMACNA HVAC Duct Construction Standards, with the following exceptions:

1. All pins or mechanical fasteners shall have beveled or cupped contact edges.
2. Installed pin length, measured from metal duct surface to underside of pin contact washer, shall equal the thickness of the SOLCOUSTIC liner, within a tolerance range of plus or minus 1/16" (1.6 mm).
3. Tough Coat coating and duct butter (or equivalent) should be used to butter all fabrication cuts, including insulation panel seams.
4. Tough Coat coating products (or equivalent) should be used to repair any tears or damage to the airstream surface that occur prior to final installation.

Tough Coat is an air-dry version of SOLCOUSTIC liner's factory-applied coating. Using this product maintains the performance and code compliance of the liner.

AVAILABLE FORMS

SOLCOUSTIC liner is readily available in 4' x 8' sheets with a thickness of 1 inch, 1 ½ inch or 2 inch. Please inquire if other thicknesses or alternate sizes are needed.

CODE COMPLIANCE

SOLCOUSTIC duct liner is UL Classified as to Surface Burning Characteristics and exhibits a Flame Spread Index of <25 and a Smoke Developed Index of <50. In addition, SOLCOUSTIC duct liner meets the requirements of Section 2-3.3 of NFPA 90A. This section addresses Supplementary Materials for Air Distribution Systems, which includes duct liner materials. However, SOLCOUSTIC liner is not classified as limited combustible* under NFPA requirements.

SOLCOUSTIC GUIDE SPECIFICATION

The contractor shall supply SOLCOUSTIC duct liner with a factory-applied acrylic polymer coating formulated with an EPA-registered preservative.

* Note: NFPA 90A defines materials as "limited-combustible" if they exhibit a potential heat content of less than 3,500 Btu/lb when tested in accordance with NFPA 259. Evonik Foams is unaware of any organic foam or other non-fibrous duct liner currently available that meets this NFPA performance requirement.

For pricing and availability on SOLCOUSTIC duct liner or Tough Coat, please contact us at:

SOLCOUSTIC[®]
COATED POLYIMIDE FOAM DUCT LINER

Evonik Foams, Inc.
800 N. Watters Road
Suite 190
Allen, Texas 75013 USA

T +1-972-516-0702
F +1-972-516-0624
www.evonikfoams.com

