QuietR® Duct Liner Board

Description

QuietR® Duct Liner Board is a bonded board of glass fibers designed to be installed inside sheet metal ductwork or plenums with metal fasteners and adhesives. The smooth, fire-resistant airstream surface resists damage during installation and in service. It is ideal for use in large ducts and plenums where air velocities do not exceed 6,000 fpm (30.5 m/s).

Features

- Outstanding thermal and acoustical performance
- Absorbs noise within the duct that helps create quiet and comfortable environments
- Tough, abuse-resistant surface which reduces installation costs because these products resist damage
- Cleanable surface with a black mat facing that provides a smooth, durable surface making it easy to clean the duct liners using methods and equipment described in North American Insulation Manufacturers Association (NAIMA) Publication AH122, Cleaning Fibrous Glass Insulated Duct Systems: Recommended Practice
- Does not support bacterial and fungal growth with an EPA registered biocide that protects the airstream surface from microbial growth

Availability

QuietR® Duct Liners are available in the following combinations of thicknesses and types:
R-values, hr•ft²•°F/Btu (RSI, m²•°C/W) at 75°F (24°C) mean temperature

Product Type and Thickness	Nominal Density pcf (kg/m³)	1.0 in (25mm)	2.0 in (51mm)
QuietR® Duct Liner Board	3.0 (48)	4.3 (0.76)	8.7 (1.53)

QuietR® Duct Liner Board is available in the following standard sizes: 1" x 48" x 96" (25mm x 1219mm x 2438mm), 2" x 48" x 96" (51mm x 1219mm x 2438mm). MTO available at Width: 48", Length: 24"-120".

Physical Properties

Property	Test Method	Value
Operating Temperature	ASTM C 411	250°F (121°C)
Maximum Air Velocity	UL 181 and ASTM C 1071Erosion Test	6,000 fpm (30.5 m/s)
Water Vapor Sorption	ASTM C 1104	3% by weight at 120°F (49°C), 95% R.H.
Fungi Resistance	ASTM C 1338	Meets requirements
Fungi Resistance	ASTM G 21	Meets requirements
Bacteria Resistance	ASTM G 22	Meets requirements
Corrosiveness[1]	ASTM C 665 Corrosiveness Test	Will not cause corrosion greater than caused by sterile cotton on aluminum or steel
Thermal conductivity k at 75°F (λ at 24°C mean)	ASTM C 518	Btu•in/hr•ft²•°F 0.23 W/m•°C (0.033)
Surface Burning Characteristics[2]	ASTM E 84, NFPA 255, UL 723, and CAN ULC-S102	
Flame Spread		25
Smoke Developed		50

1. When wet, coated surfaces of QuietR® Duct Liner Board in contact with galvanized steel may cause discoloration of the sheet metal.
2. The surface burning characteristics of these products have been determined in accordance with UL 723, ASTM E 84, NFPA 255, and CAN/ULC-S102. These standards should be used to measure and describe the properties of materials, products or assemblies in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of materials, products or assemblies under actual fire conditions. However, results of this test may be used as elements of a fire risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard of a particular end use. Values are reported to the nearest 5 rating.

Technical Information

Mold in duct systems occurs when moisture comes into contact with dirt or dust collected on the duct system surfaces. Proper filters will minimize the collection of dust and dirt, but care needs to be exercised to help prevent water formation in the duct. A properly sized, installed and operated air conditioning unit will minimize the likelihood of water formation. The system must be maintained and operated to insure that sufficient dehumidification is occurring and that filters are installed and changed as recommended by the equipment manufacturer.

Acoustic Performance per ASTM C423; Type A Mounting

Tested Values - QuietR® Duct Liner Board

Thickness (in)	Sound Absorption Coefficients at Octave Band Center Frequencies (Hz)						
	125	250	500	1000	2000	4000	NRC
Duct Liner Board 1.0 (25mm)	0.04	0.26	0.63	0.91	0.99	0.99	0.70
2.0 (50mm)	0.11	0.64	1.12	1.14	1.06	1.08	1.00

NOTE – Acoustical Performance: These data were collected using a limited sample size and are not absolute values.
Reasonable tolerances must therefore be applied. All tests were conducted in accordance with ASTM C 423, Mounting A (material placed against a solid backing). For more information, call your Owens Corning Sales Representative.

Insertion Loss, dB per ft. of Lined Duct

P/A, ft/ft²	1" Liner Octave band center frequencies, Hz						2" Liner Octave band center frequencies, Hz					
	125	250	500	1000	2000	4000	125	250	500	1000	2000	4000
8	0.6	1.5	2.7	5.8	7.4	4.3	0.8	2.9	4.9	7.2	7.4	4.3
6	0.5	1.2	2.3	5.0	5.8	3.6	0.6	2.3	4.2	6.2	5.8	3.6
4	0.4	0.8	1.9	4.0	4.1	2.8	0.5	1.6	3.5	5.0	4.1	2.8
2	0.2	0.5	1.4	2.8	2.2	1.8	0.3	0.8	2.3	3.3	2.0	1.7
1	0.1	0.3	1.0	2.0	1.2	1.2	0.2	0.5	1.8	2.3	1.1	1.1

Data extracted from ASHRAE Handbook, HVAC Applications, Chapter 43
P/A = Duct Perimeter, (ft)/Duct Cross Sectional Area (ft2). Example: 12" x 24" duct, P/A = 3 ft/ft².

Standards, Codes Compliance

- ASTM C1071; Type II Rigid Board
- NFPA 90A and 90B Compliant
- ICC Compliant
- California Title 24
- SMACNA Application Standard for Duct Liners
- NAIMA Fibrous Glass Duct Liner Installation Standard (AH 124)
- Conforms to ASHRAE 62-2001
- Meets requirements of ASTM C 1338, ASTM G 21 (fungi test), and ASTM G 22 (bacteria test).

Installation

- For complete installation instructions and recommendations see "QuietR® Duct Liner Board and HD-Roll Insulation Installation Instructions" (Pub. No. 10021549).

Environmental and Sustainability

Owens Corning is a worldwide leader in building material systems, insulation and composite solutions, delivering a broad range of high-quality products and services. Owens Corning is committed to driving sustainability by delivering solutions, transforming markets and enhancing lives. More information can be found at www.owenscorning.com.

Notes

For additional information, refer to the Safe Use Instruction Sheet (SUIS) found in the SDS Database via http://sds.owenscorning.com

Certifications and Sustainable Features

- Certified by SCS Global Services to contain a minimum of 53% recycled glass content, 31% pre-consumer and 22% post-consumer
- GREENGUARD Certified products are certified to GREENGUARD standards for low chemical emissions into indoor air during product usage. For more information, visit ul.com/gg
- Material Health Certificate from Cradle to Cradle Products Innovation Institute

GREENGUARD GOLD
PRODUCT CERTIFIED FOR LOW CHEMICAL EMISSIONS
UL.COM/GG
UL 2818

CERTIFIED RECYCLED CONTENT
SCS GLOBAL SERVICES
AVERAGE 53% RECYCLED CONTENT
31% PRE-CONSUMER
22% POST-CONSUMER

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