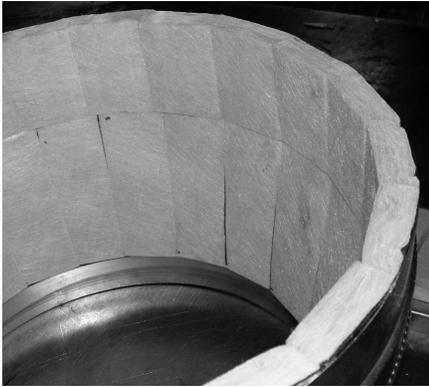




INNOVATIONS FOR LIVING™

QuietZone® Spiral Duct Liner

Product Data Sheet



Typical Physical Properties

Property	Test Method	Values
Maximum Temperature Limits	UL 181	Internal
		External
Maximum Air Velocity	UL 181 Erosion Test	250°F (121°C) 150°F (66°C)
Water Vapor Sorption	ASTM C 1104	6,000 fpm (30.5 m/s)
Mold Growth	UL 181	<3% by weight at 120°F (49°C), 95% R.H.
Fungi Resistance	ASTM G 21	Meets Requirements
Bacteria Resistance	ASTM G 22	Meets Requirements
Surface Burning Characteristics	UL 723 ¹	Flame Spread
		Smoke Developed
		<25 <50

¹The surface burning characteristics of these products have been determined in accordance with UL 723. This standard 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. ASTM E 84, UL 723, and NFPA 255 are considered by most officials to be synonymous surface burning test methods.

Description

QuietZone Spiral Duct Liner is an acoustical and thermal insulation for round sheet metal ductwork and plenums from 10" to 48" OD. The smooth, durable, fire-resistant airstream surface isolates the glass fiber from the airstream and inhibits the penetration of the insulation by dirt, dust and pollutants. This surface is rated for internal air velocities up to 6,000 fpm (30.5 m/s). It is available in two (2) thicknesses 1" and 1½" to meet a range of thermal and acoustical applications.

Environmentally Enhancing

QuietZone Spiral Duct Liner enhances indoor environmental quality by absorbing noise and by lowering heat loss or gain through duct walls.

Product Attributes

Bacterial and Fungal Growth Resistance

A durable air stream surface includes an EPA registered biocide that protects the air stream surface from microbial growth and meets requirements

of ASTM C 1338, ASTM G 21, (fungi test) and ASTM G 22 (bacteria test).

Tips to Avoid Mold Growth in Ducts

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 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.

Assured Thermal Performance

R-values as published for *QuietZone* Spiral Duct Liner are superior to those of compressible insulation of equal thicknesses.

Factory control of thickness assures that installed R-values will be as published for the product.

Note: *QuietZone* Spiral Duct Liner is tailored to fit your specific duct size, so compression at grooves and joints is kept to a minimum, providing consistent thermal performance throughout the entire duct system.

Cleanable

QuietZone Spiral Duct Liner features a durable air stream surface that isolates the glass fiber substrate from the airstream and inhibits penetration of the insulation by dirt, dust and other pollutants. This durable air stream surface makes it easy to clean the duct system using methods and equipment described in the North American Insulation Manufacturers Association (NAIMA) Publication AH 122, Cleaning Fibrous Glass Insulated Air Duct Systems, Recommended Practice.



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Duct Liner Coating

Duct liner coating should be designed for Duct Solutions interior ductwork that contains an EPA-registered antimicrobial (biocide). The coating is applied to the edges, fabrication cuts, and repair of airstream surface when needed.

Installation

Refer to Owens Corning QuietZone Spiral Duct Liner installation manual for proper installation of the liner.

Application Limitations

QuietZone Spiral Duct Liner is not recommended for the following applications:

- A. Ducts which will be subjected to operating temperatures exceeding 250°F (inside surface).
- B. Ducts which will be subjected to temperatures exceeding 150°F on the outside surface.
- C. Kitchen or fume exhaust ducts or to convey solids or corrosive gases.
- D. Burying in concrete or buried below grade.
- E. Installation immediately adjacent to high-temperature electric heating coils without radiation protection and to equipment such as evaporative coolers, humidifiers, cooling coils and outside intakes.
- F. With coal or wood-fueled equipment, or with equipment of any type which does not include automatic maximum temperature controls.

Product Availability

QuietZone Spiral Duct Liner is available in the following thickness and board sizes:

Thickness

48" x 120" x 1" thickness (1,220mm x 3,048mm x 25mm)

48" x 120" x 1½" thickness (1,220mm x 3,048mm x 38mm)

Thermal Performance

at 75°F (24°C) Mean Temperature

	1" (25mm)	1½" (38mm)
R-value: ft²•°F/BTU (RSI: m²•°C/W)	4.3 (0.76)	6.5 (1.15)
k-value: BTU•in/hr•ft²•°F (l W/m²•°C)	0.23 (0.033)	0.23 (0.033)

Acoustical Performance

Sound absorption coefficients at octave band center frequencies

Thickness	125	250	500	1000	2000	4000	NRC
1"	0.08	0.19	0.69	0.94	0.99	0.98	0.70
1½"	0.12	0.33	0.92	1.04	1.03	1.02	0.85

This data was collected using a limited sample size and are not absolute values. Therefore, reasonable tolerances must be applied. Tests were conducted in accordance with ASTM C 423, Mounting A (material applied against a solid backing)

- G. Ducts which will be subject to liquid water; liner should be protected with a sheet metal sleeve and drip pan adjacent.
- H. Inside fire damper sleeves.
- I. When duct systems run through unconditioned space and are used for cooling only (when heating is from another source), register openings must be tightly sealed to prevent accumulation of water vapor in the duct system during the heating season

Code Compliance

Meets the following model codes and most other applicable codes: National Fire Protection Association Standards NFPA 90A/90B, ICC International Mechanical Code, SBCCI, ICBO, BOCA, CABO, Corps of Engineers Guide Spec., NYC MEA# 186-69.



Recycled Content

QuietZone Spiral Duct Liner is eligible to bear the Green Cross label for recycled content. The board is certified on average to contain at least 30% recycled glass, with 4% post-consumer and 26% pre-consumer content.



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