



QuietR® Rotary Duct Liner

Product Data Sheet

Availability and Thermal Performance

QuietR® Rotary Duct Liner is available in the following combinations of thicknesses and types.

Thickness		R-Value		Roll Length	
in	mm	(hr•ft²•°F)/Btu	(m²•°C)/W	ft	m
½	13	2.2	0.38	100	31
1	25	4.2	0.74	100	31
1½	38	6.3	1.11	50	15
2	51	8.0	1.41	50	15



Description

QuietR® Rotary Duct Liner enhances indoor quality by absorbing noise within sheet metal ducts, and contributes to indoor comfort by lowering heat loss or gain through duct walls.

Key Features

- Absorbs fan and air turbulence noise and reduces popping noises within sheet metal ducts.
- Outstanding thermal and acoustical performance.
- Bacterial and fungal growth resistant with an EPA registered biocide that protects the airstream surface from microbial growth.

Product Applications/ Installation

All portions of duct designated to receive QuietR® Rotary Duct Liner shall be completely covered with duct liner, adhered to the sheet metal with 90% coverage of adhesive complying with ASTM C 916. Transverse joints shall be neatly butted and there shall be no interruptions or gaps. All transverse joints shall be edge-coated. Metal nosing on leading edges must be used where duct liner is preceded by unlined metal, and on all upstream edges when

Typical Physical Properties

Property	Test Method	Value	
Operating Temperature	ASTM C411	250°F (121°C)	
Maximum Air Velocity	UL 181 Erosion Test ASTM C1071	6,000 fpm (30.5 m/sec)	
Water Vapor Sorption (by weight)	ASTM C1104	<3% at 120°F (49°C), 95% R.H.	
Fungi Resistance	ASTM C1338	Meets requirements	
Fungi Resistance	ASTM G21	Meets requirements	
Bacteria Resistance	ASTM G22	Meets requirements	
Corrosiveness¹	ASTM C665 (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 C518	Btu•in/hr•ft²•°F	W/m•°C
R-2.2		0.23	0.034
R-4.2		0.24	0.035
R-6.3		0.24	0.035
R-8		0.24	0.035
Surface Burning Characteristics²	ASTM E84, UL 723, CAN/ULC-S102	25	50
Flame Spread		25	
Smoke Developed		50	

1. When wet, coated surfaces of QuietR® Rotary Duct Liner 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 or CAN/ULC-S102. 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. UL 723 and ASTM E84 are the same test methods.

velocity exceeds 4,000 fpm (20.3 m/s). The black mat faced surface of the duct liner shall face the airstream.

QuietR® Rotary Duct Liner shall also be secured with mechanical fasteners, either impact-driven or weld-secured, which shall compress the duct liner sufficiently to hold it firmly in place. For fastener spacing, see Figure 1.

Duct Liner shall be cut to assure overlapped and compressed

longitudinal corner joints. For details, refer to NAIMA Publication AH124, Fibrous Glass Duct Liner Standard.

Minor damage and small tears may be repaired by coating with adhesive.

After installation, and prior to occupancy, blow out duct system to remove any cutting scraps or foreign material remaining in the duct.

Installing two layers of material to meet a specific liner thickness is



Product Data Sheet

not recommended. If the specification forces the use of multiple layers, the following steps must be taken:

1. Adhere bottom layer of duct liner to duct in normal manner.
2. Adhere top layer to bottom layer of liner using a minimum of 90% adhesive coverage.
3. Treat all leading edges with metal nosings to prevent separation of the two layers.
4. Use mechanical fasteners of the proper length for double layer.

Application Limitations

Use of QuietR[®] Rotary Duct Liner is not recommended for the following applications:

- With wood or coal fired equipment, or equipment of any type which does not include automatic maximum temperature controls and where operating temperatures of 250°F (121°C) may be exceeded.
- In kitchen or fume exhaust ducts, or ducts conveying solids or corrosive gases
- In any application where the duct liner may come in direct contact with liquid water (such as cooling coils, humidifiers, and evaporative coolers) unless protected from the water source.
- Inside fire damper sleeves.

Acoustic Performance

Tested Values—QuietR[®] Duct Liner

Sound absorption coefficients at octave band center frequencies (Hz)							
Thickness in (mm)	125	250	500	1000	2000	4000	NRC
½ (13)	0.04	0.12	0.39	0.64	0.78	0.74	0.50
1 (25)	0.05	0.30	0.60	0.87	0.98	1.05	0.70
1½ (38)	0.05	0.47	0.85	1.01	1.01	1.01	0.85
2 (51)	0.12	0.66	1.04	1.08	1.04	1.07	0.95

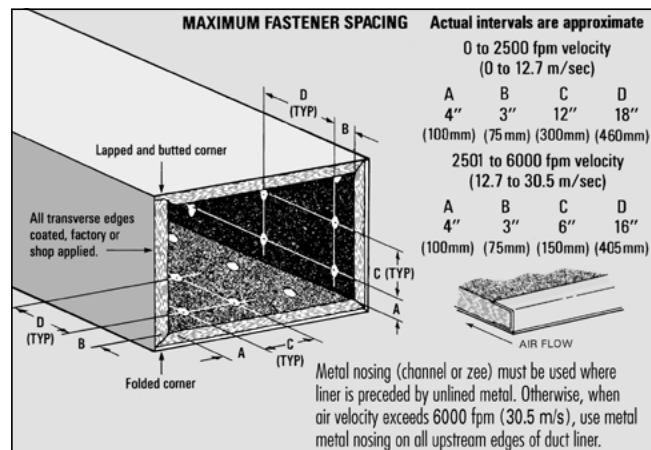
These data were collected using a limited sample size and are not absolute values. Reasonable tolerances must therefore be applied. All tests were conducted in accordance with ASTM C423, Mounting A (material placed against a solid backing such as a block wall). For more information, call your Owens Corning Representative.

Insertion Loss, dB per ft of Lined Duct

1" Liner							2" Liner						
Octave band center frequencies, Hz							Octave band center frequencies, Hz						
P/A, ft/ft²	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	0.1	1.0	2.0	1.2	1.2	0.2	0.5	1.8	2.3	1.1	1.1	

Duct Liner Insertion Loss—Data extracted from ASHRAE Handbook, HVAC Applications, Chapter 43, 1999
P/A = duct perimeter, ft/duct cross sectional area (ft²). Example: 12" x 12", P/A = 4 (1/ft). For more information, call your Owens Corning Representative.

Figure 1





Product Data Sheet

- Immediately adjacent to high temperature heating coils without radiation protection.

Standards, Code Compliance

- ASTM C1071, Type I, Flexible (replaces obsolete Federal Specification HH-I-545B.)
- NFPA 90A/90B
- ICC Compliant
- California Title 24
- SMACNA Application Standard for Duct Liners
- NAIMA Fibrous Glass Duct Liner Installation Standard
- Conforms to ASHRAE 62-2001

Certifications and Sustainable Features of QuietR® Rotary Duct Liner

- Certified by SCS Global Services to contain a minimum of 53% recycled glass content, 31% pre-consumer and 22% post-consumer.
- Certified to meet indoor air quality standards under the stringent GREENGUARD Certification Program and the GREENGUARD Gold Certification*.

* Duct Liner up to and including 1" is GREENGUARD Gold Certified.

- Recognized by the GREENGUARD Environmental Institute as resistant or highly resistant to mold growth based on independent testing using GREENGUARD Test Method GGTM.P040 for microbial resistance.

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 <http://sustainability.owenscorning.com>.



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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.



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