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 1 ¼” 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 airstream 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.

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

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.

Typical Physical Property

<table>
<thead>
<tr>
<th>Property</th>
<th>Test Method</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum temperature limits</td>
<td>UL 181</td>
<td>Internal: 250°F (121°C)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>External: 150°F (66°C)</td>
</tr>
<tr>
<td>Maximum air velocity</td>
<td>UL 181</td>
<td>6,000 fpm (30.5 m/s)</td>
</tr>
<tr>
<td>Water vapor sorption</td>
<td>ASTM C 1104</td>
<td>&lt;3% by weight at 120°F (49°C), 95% R.H.</td>
</tr>
<tr>
<td>Mold growth</td>
<td>UL 181</td>
<td>Meets requirements</td>
</tr>
<tr>
<td>Fungi resistance</td>
<td>ASTM G 21</td>
<td>Meets requirements</td>
</tr>
<tr>
<td>Bacteria resistance</td>
<td>ASTM G 22</td>
<td>Meets requirements</td>
</tr>
<tr>
<td>Surface burning characteristics</td>
<td>UL 723*</td>
<td>Flame spread &lt;25, Smoke developed &lt;50</td>
</tr>
</tbody>
</table>

* The 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.
Cleaning Fibrous Glass Insulated Air Duct Systems, Recommended Practice.

Duct Liner Coating
Duct liner coating should be designed for HVAC 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.

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.
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.

Product Availability
QuietZone Spiral Duct Liner is available in the following thickness and board sizes:
48" x 120" x 1" thickness (1220mm x 3048mm x 25mm)
48" x 120" x 1 1/2" thickness (1220mm x 3048mm x 38mm)

Thermal Performance, at 75°F (24°C) Mean Temperature

<table>
<thead>
<tr>
<th>Thickness</th>
<th>1&quot; (25mm)</th>
<th>1 1/2&quot; (38mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>R-value: hr · ft² · °F/Btu (RSl: m² · °C/W)</td>
<td>4.3 (0.76)</td>
<td>6.5 (1.15)</td>
</tr>
<tr>
<td>k-value: BTU · in/hr · ft² · °F (l W/m² · °C)</td>
<td>0.23 (0.033)</td>
<td>0.23 (0.033)</td>
</tr>
</tbody>
</table>

Acoustical Performance
Sound absorption coefficients at octave band center frequencies, Hz.

<table>
<thead>
<tr>
<th>Thickness</th>
<th>125</th>
<th>250</th>
<th>500</th>
<th>1000</th>
<th>2000</th>
<th>4000</th>
<th>NRC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&quot;</td>
<td>0.08</td>
<td>0.19</td>
<td>0.69</td>
<td>0.94</td>
<td>0.99</td>
<td>0.98</td>
<td>0.70</td>
</tr>
<tr>
<td>1 1/2&quot;</td>
<td>0.12</td>
<td>0.33</td>
<td>0.92</td>
<td>1.04</td>
<td>1.03</td>
<td>1.02</td>
<td>0.85</td>
</tr>
</tbody>
</table>

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 C423. Mounting A (material placed against a solid backing).