DESCRIPTION
Linacoustic® RC insulation is a flexible duct liner made from strong glass fibers bonded with a thermosetting resin. The airstream surface is protected with JM's exclusive Reinforced Coating system, which combines our state-of-the-art Permacote® acrylic coating with a flexible glass mat reinforcement to provide a smooth airstream surface.

FACTORY-APPLIED EDGE COATING
Edge coating is factory applied to the edges of the liner core, ensuring coverage of the leading edges per NAIMA/SMACNA requirements. Shop fabrication cuts may be coated with SuperSeal® edge treatment (refer to publication AHS-202).

USES
Linacoustic RC insulation is specifically designed for lining sheet metal ducts in air conditioning, heating and ventilating systems, providing superior acoustical and thermal performance.

STORAGE
Linacoustic RC should be kept clean and dry during storage, transport, fabrication, installation, and system operation.

GENERAL PROPERTIES
Operating temperature (max.) – ASTM C411 250°F (121°C)
Air velocity (max.) – ASTM C1071 6,000 fpm (30.5 m/sec)
Water repellency – INDA IST 80.6 ≥6
Fungi resistance – ASTM C1338 Does not breed or promote
Fungi resistance – ASTM G21 No growth
Bacteria resistance – ASTM G22 No growth

STANDARD THICKNESSES AND PACKAGING
<table>
<thead>
<tr>
<th>Thickness</th>
<th>Roll Length</th>
<th>Roll Widths for All Thicknesses*</th>
</tr>
</thead>
<tbody>
<tr>
<td>in mm</td>
<td>lineal feet</td>
<td>lineal meters in mm</td>
</tr>
<tr>
<td>½ 13</td>
<td>100, 150, 200</td>
<td>31, 46, 61 34 to 72 864 to 1829</td>
</tr>
<tr>
<td>1 25</td>
<td>50, 100, 150, 200</td>
<td>15, 31, 46, 61 34 to 72 864 to 1829</td>
</tr>
<tr>
<td>1½ 38</td>
<td>50, 100</td>
<td>15, 31 34 to 72 864 to 1829</td>
</tr>
<tr>
<td>2 51</td>
<td>50</td>
<td>15 34 to 72 864 to 1829</td>
</tr>
<tr>
<td>3 76.2</td>
<td>50</td>
<td>15 55 to 60 1422 to 1524</td>
</tr>
</tbody>
</table>

*Available in ¼” (6.4 mm) increment.

SURFACE BURNING CHARACTERISTICS
Linacoustic RC duct liner meets the Surface Burning Characteristics and Limited Combustibility of the following standards:

Standard/Test Method
- ASTM E84
- UL 723
- NFPA 255
- NFPA 90A and 90B
- NFPA 259
- CAN/ULC S102

<table>
<thead>
<tr>
<th>Maximum Flame Spread Index</th>
<th>25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Smoke Developed Index</td>
<td>50</td>
</tr>
</tbody>
</table>

UL labels supplied on packages when requested on order.

SPECIFICATION COMPLIANCE
- ASTM C1071, Type I
- ICC Compliant
- California Title 24
- MEA #253-93-M
- Conforms to ASHRAE 62
- SMACNA Application Standards for Duct Liners
- NAIMA Fibrous Glass Duct Liner Installation Standard
- Canada: CGSB 51-6P-11M and CAN/CGSB 51.11

ADVANTAGES
Improves Indoor Building Environment. Linacoustic RC duct liner improves indoor environmental quality by helping to control both temperature and sound.

Resistant to Dust and Dirt. The tough acrylic polymer Permacote coating helps guard against the incursion of dust or dirt into the substrate, minimizing the potential for biological growth.

Will Not Support Microbial Growth. Permacote coating is formulated with an immobilized EPA-registered protective agent to protect the coating from potential growth of fungi and bacteria.

Linacoustic RC duct liner meets all requirements for fungi and bacterial resistance. Tests were conducted in accordance with ASTM C1338 and ASTM G21 (fungi testing) and ASTM G22 (bacteria resistance testing). Detailed information is available in Johns Manville fact sheet HSE-103FS.

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

Cleanability. If HVAC system cleaning is required, the Reinforced Coating airstream surface may be cleaned with industry-recognized dry methods. See the North American Insulation Manufacturers Association (NAIMA) "Cleaning Fibrous Glass Insulated Air Duct Systems."

Highly Resistant to Water. The reinforced coating surface provides superior resistance to penetration of incidental water into the fiber glass wool core.
GREEN BUILDING ATTRIBUTES

GREENGUARD® certification is not intended for residential environments. Instead, the certification is intended only for buildings meeting ASHRAE 62.1-2007 commercial building ventilation rates. This certification is proof that the product meets the GREENGUARD Environmental Institute’s indoor air quality standards and product emission standards for VOCs.

INSTALLATION

Linacoustic RC duct liner installation must be performed in accordance with the requirements of the NAIMA Fibrous Glass Duct Liner Standards or SMACNA HVAC Duct Construction Standard. All transverse edges, or any edges exposed to airflow, must be coated with an approved duct liner coating material, such as Johns Manville SuperSeal products.

Minimizes Pre-installation Damage. Linacoustic RC duct liner’s Reinforced Coating System is highly resistant to damage that can occur during in-shop handling, fabrication, jobsite shipping and installation.

Easy to Fabricate. Linacoustic RC duct liner is lightweight and easy to handle. Clean, even edges can be accurately cut with regular shop tools.

THERMAL PERFORMANCE

Thickness | R-value | Conductance
--- | --- | ---
\(\frac{1}{2}\) in | 13 | 2.2 | 0.39 | 0.46 | 2.61
1 in | 25 | 4.2 | 0.74 | 0.24 | 1.36
1\(\frac{1}{2}\) in | 38 | 6.3 | 1.11 | 0.16 | 0.91
2 in | 51 | 8.0 | 1.41 | 0.13 | 0.74
3 in | 76.2 | 12.0 | 2.11 | 0.08 | 0.47

R-value and conductance are calculated from the material thermal conductivity tested in accordance with ASTM C518 at 75°F (24°C) mean temperature.

SOUND ABSORPTION COEFFICIENTS (TYPE “A” MOUNTING)

Thickness | Sound Absorption Coefficient at Frequency (Cycles per Second) of 125, 250, 500, 1000, 2000, 4000 and NRC
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
\(\frac{1}{2}\) in | 13 | 0.07 | 0.20 | 0.44 | 0.66 | 0.84 | 0.93 | 0.55
1 in | 25 | 0.08 | 0.31 | 0.64 | 0.84 | 0.97 | 1.03 | 0.70
1\(\frac{1}{2}\) in | 38 | 0.10 | 0.47 | 0.85 | 1.01 | 1.02 | 0.99 | 0.85
2 in | 51 | 0.25 | 0.66 | 1.00 | 1.05 | 1.02 | 1.01 | 0.95
3 in | 76.2 | 0.47 | 0.96 | 1.17 | 1.10 | 1.02 | 1.05 | 1.05

Coefficients were tested in accordance with ASTM C423 and ASTM E795.

ISO 9000 CERTIFICATION

Johns Manville mechanical insulation products are designed, manufactured and tested in our own facilities, which are certified and registered to stringent ISO 9000 (ANSI/ASQC 90) series quality standards. This certification, along with regular, independent third-party auditing for compliance, is your assurance that Johns Manville products deliver consistent high quality.
**DUCT LINER INSTALLATION**

When velocity exceeds 4000 fpm (20.3 m/sec), use metal nosing on every leading edge. Nosing may be formed on duct or be channel or zee attached by screws, rivets or welds. A metal nosing shall also be installed at the fan discharge and at any point where lined duct is preceded by unlined duct.

All Transverse Edges to be Coated with Adhesive

Alternate Folded Corner

Lapped and Butted Corner

Air Flow

The velocity-rated side of liner must face the air flow.

Maximum spacing for fasteners. Actual intervals are approximate.

<table>
<thead>
<tr>
<th>Velocity*</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–2500 fpm (0–12.7 m/sec)</td>
<td>3</td>
<td>76</td>
<td>12</td>
<td>305</td>
</tr>
<tr>
<td>2501–6000 fpm (12.7–30.5 m/sec)</td>
<td>3</td>
<td>76</td>
<td>12</td>
<td>152</td>
</tr>
</tbody>
</table>

*Liner adhered to the duct with 90% minimum area coverage of adhesive. Adhesive shall conform to ASTM C 916.

Shop or field cuts shall be liberally coated with SuperSeal Edge Treatment or approved adhesive.

**LINER FASTENERS**

**Type 1**
Clinched Pin: Integral Head (Impact Applied)

**Type 2**
Welded Pin: Integral Head

**Type 3**
Welded Pin: Press-on Head

**Type 4**
Adhered Pin: Press-on Head

Technical specifications as shown in this literature are intended to be used as general guidelines only. Please refer to the Safety Data Sheet and product label prior to using this product. The physical and chemical properties of Linacoustic RC listed herein represent typical, average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Any references to numerical flame spread or smoke developed ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions.

All Johns Manville products are sold subject to Johns Manville’s standard Terms and Conditions, which includes a Limited Warranty and Limitation of Remedy. For a copy of the Johns Manville standard Terms and Conditions or for information on other Johns Manville thermal insulation and systems, visit www.jm.com/terms-conditions or call (800)654-3103.