ADVANTAGES

Improves Indoor Building Environment. Permacote Linacoustic R-300 helps improve indoor environmental quality by helping to control both temperature and sound.

Absorbs Disturbing Sound. Permacote Linacoustic R-300 has exceptional sound-absorbing properties far exceeding the requirements of ASTM C1071. Duct-transmitted noise, such as crosstalk and sound energy from air movement and mechanical equipment, is noticeably reduced.

Resistant to Dust and Dirt. The tough, acrylic polymer Permacote coating helps guard against 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 fungus and bacteria.

Permacote Linacoustic R-300 passes ASTM C1071 fungi testing, as well as the more stringent ASTM G-21. Bacteria tests were conducted in accordance with ASTM G-22. 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.

Withstands High Velocity. Permacote Linacoustic R-300 has been tested to the recommended maximum velocity of 6,000 fpm (30.5 m/sec). Fiber erosion test results were determined using the Isokinetic Sampling Method described in Johns Manville Fiber Erosion Testing Fact Sheet HSE-133FS.

Cleanability. If necessary, the surface may be cleaned using standard industry-recognized dry methods. See the North American Insulation Manufacturers Association (NAIMA) “Cleaning Fibrous Glass Insulated Air Duct Systems.”

SUSTAINABLE 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**

All portions of duct designated to receive duct liner should be completely covered with Pemacote Linacoustic R-300. The smooth, black Permacote surface of the Linacoustic R-300 must face the airstream. All Pemacote Linacoustic R-300 should be cut to ensure tight, overlapped corner joints. The top pieces should be supported by the side pieces.

Pemacote Linacoustic R-300 must be adhered to the sheet metal with full coverage of an approved adhesive that meets ASTM C-916, and all exposed leading edges and transverse edges should be coated with Johns Manville SuperSeal® HV, Johns Manville SuperSeal® Edge Treatment, or an approved adhesive.

The Pemacote Linacoustic R-300 must be additionally secured with mechanical fasteners spaced per the schedule shown in the diagram below. The pin length should be such as to hold the material firmly in place with minimum compression of the material.

All material must be installed in accordance with the NAIMA Fibrous Glass Duct Liner Installation Standard.

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**THERMAL PERFORMANCE**

<table>
<thead>
<tr>
<th>THICKNESS</th>
<th>R-VALUE</th>
<th>CONDUCTANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>in mm</td>
<td>m²·°C/W</td>
<td>BTU/(HR·FT²·°F)</td>
</tr>
<tr>
<td>1 25</td>
<td>4.3</td>
<td>0.76</td>
</tr>
<tr>
<td>1½ 38</td>
<td>6.3</td>
<td>1.11</td>
</tr>
<tr>
<td>2 51</td>
<td>8.7</td>
<td>1.53</td>
</tr>
<tr>
<td>3 76.2</td>
<td>13.0</td>
<td>2.34</td>
</tr>
<tr>
<td>4 101.6</td>
<td>17.4</td>
<td>3.13</td>
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</tbody>
</table>

- Thickness and conductance are calculated from the material thermal conductivity tested in accordance with ASTM C918 at 75°F (24°C) mean temperature.

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**SOUND ABSORPTION COEFFICIENTS (TYPE “A” MOUNTING)**

<table>
<thead>
<tr>
<th>THICKNESS</th>
<th>CYCLES PER SECOND</th>
<th>SOUND ABSORPTION COEFFICIENT AT FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>in mm</td>
<td>125 250 500 1000 2000 4000 NRC</td>
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</tr>
<tr>
<td>1 25</td>
<td>0.04 0.26 0.69 1.00 1.07 1.02 0.75</td>
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</tr>
<tr>
<td>1½ 38</td>
<td>0.14 0.52 1.01 1.07 1.03 0.97 0.90</td>
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<td>2 51</td>
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<tr>
<td>3 76.2</td>
<td>0.56 1.18 1.24 1.12 1.04 1.03 1.15</td>
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</tr>
<tr>
<td>4 101.6</td>
<td>0.81 1.30 1.26 1.12 1.04 1.05 1.20</td>
<td></td>
</tr>
</tbody>
</table>

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

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**RECYCLED CONTENT**

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.

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**DATA SHEET**

**LINACOUSTIC® R-300**

**COATED RIGID FIBERGLASS PLENUM LINER BOARD**

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Fax: 419-784-7866

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Denver, CO 80217
800-308-2431
Fax: 303-978-4661

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**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® R-300 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.**