DESCRIPTION
Linacoustic® R-300 is a rigid fiber glass board that meets or exceeds all ASTM C1071 Type II duct liner requirements. The airstream surface and the long edges are coated with the tough, smooth, state-of-the-art acrylic polymer, Permacote®. R-300 offers exceptional durability and superior acoustical and thermal performance.

USES
R-300 is specifically designed for use as an extended performance lining insulation for HVAC plenums and air distribution ductwork.

STORAGE
Linacoustic R-300 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 6000 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

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.
- Resists Damage. The specially designed Permacote airstream surface enhances the ability of R-300 to resist damage from typical in-shop handling, fabrication and jobsite shipment.

SHIPPING
Shipped With E3 Pallet™ Technology: The E3 Pallet™ is designed to simplify repurposing our 4x8’ and 4x10’ pallets into more functional, 48x48” and 48x40” pallets (respectively). See instructions on page 3.

SURFACE BURNING CHARACTERISTICS
Linacoustic R-300 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 298
  - CAN/ULC S102

UL labels supplied on packages when requested on order.

SPECIFICATION COMPLIANCE
- ASTM C1071, Type II
- ASHRAE 62
- MEA 383-93-M
- SMACNA Application Standards for Duct Liners
- NAIMA Fibrous Glass Duct Liner Installation Standard
- Canada: CGSB 51.10-92

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.

NON-Standard THICKNESSES AND PACKAGING
<table>
<thead>
<tr>
<th>Thickness (in)</th>
<th>Width (mm)</th>
<th>Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>25</td>
<td>48 x 1219</td>
</tr>
<tr>
<td>1½</td>
<td>38</td>
<td>48 x 1219</td>
</tr>
<tr>
<td>2</td>
<td>51</td>
<td>48 x 1219</td>
</tr>
<tr>
<td>3</td>
<td>76.2</td>
<td>48 x 1219</td>
</tr>
<tr>
<td>4</td>
<td>101.6</td>
<td>48 x 1219</td>
</tr>
</tbody>
</table>

Non-standard sizes up to 4” (102 mm) thickness and 120” (3.1 m) lengths available on special request.

MAXIMUM FLAME SPREAD INDEX 25
MAXIMUM SMOKE DEVELOPED INDEX 50

DATA SHEET
HVAC-156 08/21/20 (Replaces 08/04/20)
INSTALLATION

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

Permacote 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 Permacote 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.

---

PermaCote 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 Permacote 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.

---

**THERMAL PERFORMANCE**

<table>
<thead>
<tr>
<th>THICKNESS</th>
<th>R-VALUE</th>
<th>CONDUCTANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>mm</td>
<td>HR•FT•°F/BTU</td>
<td>M²•°C/W BTU/HR•FT•°F</td>
</tr>
<tr>
<td>1</td>
<td>25</td>
<td>4.3</td>
</tr>
<tr>
<td>1½</td>
<td>38</td>
<td>6.3</td>
</tr>
<tr>
<td>2</td>
<td>51</td>
<td>8.7</td>
</tr>
<tr>
<td>3</td>
<td>76.2</td>
<td>13.0</td>
</tr>
<tr>
<td>4</td>
<td>101.6</td>
<td>17.4</td>
</tr>
</tbody>
</table>

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)**

<table>
<thead>
<tr>
<th>THICKNESS</th>
<th>SOUND ABSORPTION COEFFICIENT AT FREQUENCY (CYCLES PER SECOND) OF:</th>
</tr>
</thead>
<tbody>
<tr>
<td>mm</td>
<td>125 250 500 1000 2000 4000 NRC</td>
</tr>
<tr>
<td>1</td>
<td>0.04 0.26 0.69 1.00 1.07 1.02 0.75</td>
</tr>
<tr>
<td>1½</td>
<td>0.14 0.52 1.01 1.07 1.03 0.97 0.90</td>
</tr>
<tr>
<td>2</td>
<td>0.26 0.73 1.10 1.10 1.04 1.03 1.00</td>
</tr>
<tr>
<td>3</td>
<td>0.56 1.18 1.24 1.12 1.04 1.03 1.15</td>
</tr>
<tr>
<td>4</td>
<td>0.81 1.30 1.26 1.12 1.04 1.05 1.20</td>
</tr>
</tbody>
</table>

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

---

**RECYCLED CONTENT**

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.

---

**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.
4x8' E³ PALLETT™ CUT DOWN INSTRUCTIONS

The 4x8' E³ Pallet™ can be cut down into two 48x48” pallets. Simply use a circular saw to cut along the red dotted lines shown in the images below.

<table>
<thead>
<tr>
<th>48x48” Cut Down</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Load Capacity (Evenly Distributed)</td>
</tr>
<tr>
<td>Lateral Collapse Resistance</td>
</tr>
</tbody>
</table>

*All pallets are subject to abuse, aging and normal wear and tear during use and storage. The data reported in this document represent initial performance of a new pallet after manufacture and do not take into account damage that may occur during handling and use of the pallets.

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.