**AFICO Duct Liner Board (DLB)**

**DESCRIPTION**

**AFICO** Duct Liner Board is a highly efficient, semi-rigid insulation composed of fine, stable and uniformly textured inorganic glass fibers bonded together by a non-water soluble and fire retardant thermosetting and heat resistant resin. It is free from coarse fibers and shot due to its mineral composition.

**FACING**

**AFICO** Duct Liner Board is supplied semi-rigid and rigid faced with a strong, dimensionally stable Non-Woven Black Glass Tissue (BGT).

**APPLICATION**

**AFICO** Duct Liner Board is intended for use in commercial, institutional, industrial and residential construction as thermal and acoustical insulation of heating air-conditioning and interior of dual temperature duct work, air handling equipment and plenums operating at air-velocities up to 30 m/s (6000 FPM) and temperatures up to 260°C (500°F). Also used as an efficient sound absorption treatment of walls and ceilings, acoustic enclosures, generator rooms, studios, curtain walls, auditoriums, conference rooms, theaters and others.

**STANDARD AVAILABLE PRODUCTS**

Nominal Manufacturing Specifications. Check for availability of other dimensions and densities.

<table>
<thead>
<tr>
<th>Product Type QLb</th>
<th>Density</th>
<th>Thickness</th>
<th>Width</th>
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AFICO Duct Liner Board
Technical Data Sheet
Product Code: DLB

Performance & Physical Characteristics

Nominal Thermal Conductivity

W/m·°C or Btu-in/hr·ft²·°F (ASTM C 518)
“K” or “λ” value at mean temperatures

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<th>10 °C</th>
<th>50 °F</th>
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<th>75 °C</th>
<th>50 °C</th>
<th>122 °F</th>
<th>75 °C</th>
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<td>0.039</td>
<td>0.27</td>
<td>0.043</td>
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</table>

Thermal Resistance “R” Value (Excluding Facings) (ASTM C 167)

“R” is a measure of the resistance to heat flow of a material of any given thickness.

(“R” = m²·°C/W or hr·ft²·°F/Btu)

\[ R = \frac{T}{K} \]

where “T” = Thickness

and “K” or “λ” = Thermal Conductivity

Working Temperature Limitations (ASTM C 411)

Operating temperature up to 260°C (500°F) for the BGT faced product. At excessive temperatures, limited migration of binder may occur in the insulation in contact with the surface. This is in no way impairs the performance of the insulation.

Mold Growth (ASTM D 2020, UL 181)

Does not breed or sustain mold, fungus, bacteria or rodents

Corrosiveness (ASTM C 665)

Chemically inert. Will not cause or accelerate corrosion of steel, stainless steel, copper or aluminum, due to its particular inorganic and mineral composition.

Alkalinity

pH 9

Friction Loss

According to TIMA AHS-152T Pressure loss, in W.G., AFICO Duct Liner Board

This chart is to be used in place of the standard friction loss chart published in the ASHRAE Handbook of Fundamentals.

For conversion of round equivalents to rectangular sizes, use Table C2 “Circular Equivalents of Rectangular Ducts for Equal Friction and Capacity” from the same reference. Tests conducted in accordance with TIMA AHS 152T.

Surface Burning Characteristics (ASTM E 84, UL 723)

Base glass fiber is non-combustible when tested to ASTM E 84.

<table>
<thead>
<tr>
<th>Facing</th>
<th>Flame Spread</th>
<th>Smoke Developed</th>
<th>Fuel Contributed</th>
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Specification Compliance

AFICO Duct Liner Board insulation complies with the property requirements of the following specifications:

- ASTM C 1071 : For Acoustical Performance
- NEPA 90 A : For Fire Resistance
- DCL : ASTM C 612
- CE-EN : 1121-CPD-BA0137
**Acoustical Performance (ASTM C 423)**

Reverberation Chamber Method

Sound Absorption Coefficients at Frequencies (Hz)

<table>
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<th>Type</th>
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<th>250</th>
<th>500</th>
<th>1000</th>
<th>2000</th>
<th>4000</th>
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<td>0.81</td>
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<td>0.28</td>
<td>0.81</td>
<td>1.04</td>
<td>1.10</td>
<td>1.06</td>
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**Installation Recommendation for Board**

**AFICO Duct Liner Board** is applied to the interior of ducts and plenums with the black surface facing the air stream.

Transverse joints are to be neatly butted, with no interruptions or gaps. Longitudinal corner joints are to be overlapped and tight. Top pieces are to be supported by side pieces.

**AFICO Duct Liner Board** should be adhered to sheet metal ducts with 100% coverage of adhesive. The adhesive shall conform to standard ASC-A7001C-1972 or as approved by the project consultant. In addition, mechanical fasteners should be used according to the following schedule:

**For velocities to 10 m/s:** On horizontal runs where duct width or height exceeds 500 mm, the liner should transverse edges and spaced at a maximum of 375 mm on centers and 375 mm from longitudinal joints. On vertical runs, fasteners should be similarly spaced where either dimension exceeds 300 mm.

**For velocities from 10 to 20 m/s:** On horizontal runs where duct width exceeds 300 mm or duct height exceeds 400 mm, the liner should be secured with fasteners starting within 75 mm of the upstream transverse edges and spaced at a maximum of 375 mm on centers and 375 mm from longitudinal joints.

On vertical runs, fasteners should be similarly spaced where either dimension exceeds 300 mm.

**For velocities up to 20 to 30 m/s:** Same as for 10 to 20 m/s, except that fasteners should be spaced at a maximum of 300 mm on centers and metal nosing should be installed to secure liner at all upstream transverse edges.

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**No. of Pins**

- 0 - 8"dn
- 2 - 16 - "9"'
- 3 - 28 - "17"'
- 4 - 40 - "29"'
- 5 - 52 - "41"'
- 6 - 64 - "53"'
- 7 - 76 - "65"'
- 8 - 88 - "77"'
- 9 - 100 - "89"'

When velocity exceeds 4000 FPM use metal nosing on every leading edge. Nosing may be formed on duct or by channel or Zee attach by screws, rivets or welds.

Maximum spacing for fasteners. Actual intervals are approximate.

<table>
<thead>
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<th>Velocity</th>
<th>Dimensions</th>
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<th>B</th>
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</table>
AFICO Duct Liner Board
Technical Data Sheet
Product Code: DLB

MAINTENANCE
No maintenance is required. AFICO Duct Liner Board have a high resistance to accidental damage from knocks and handling during installation and maintenance. Dimensionally stable under varying conditions of temperature and humidity, rot-proof, odorless, non-hygroscopic and will not sustain vermin or fungus due to its inorganic and mineral compositions.

The product will maintain its thermal properties throughout the lifetime of the construction and will not age. AFICO fiberglass is non toxic and not hazardous to health.

STORAGE
To avoid moisture in the building construction, AFICO insulation products stored outside must be kept dry. We recommend AFICO products to be always stored in covered and dry areas. AFICO is not liable for the damage resulting from inadequate utilization, loading and off loading and mishandling of its products.

WARRANTY
See manufacturer’s General Terms and Conditions of Sale. As AFICO and/or OCF has no control over installation design, installation workmanship, accessory materials, or conditions of application, AFICO and/or OCF does not warrant the performance or results of any installation containing their products. This warranty disclaimer includes all implied warranties, including the warranties or merchantability and fitness for a particular purpose.

Arabian Fiberglass Insulation Company AFICO reserves the right to alter product specifications without prior notice, as part of its policy of continued development and improvement. The installation methods described in this leaflet are not compulsory. The choice of materials and methods of fixing are the decision of the specifier, consultant or contractor. For further information or advice on specification of products, contact your local sales office.

AVAILABILITY
Manufactured by Arabian Fiberglass Insulation Company, Ltd. AFICO member of Zamil Industrial Co. ZI, with head-quarter and production facilities located in Dammam, Saudi Arabia, under license from and utilizing the manufacturing specifications and technology of Owens-Corning Corporation OCF, Toledo, Ohio, U.S.A.

Marketed throughout Saudi Arabia, the G.C.C. countries, the Middle East and the Far East. AFICO products are available directly from as well as through a vast and reliable network of local distributors.

Special products are manufactured on request.

Our GREEN promise:
the healthy solution

- ENERGY SAVING
- ENVIRONMENTALLY FRIENDLY
- RECYCLED MATERIALS
- SOLUTION FOR GLOBAL WARMING

AFICO is committed to a greener, cleaner environment. AFICO have responded to this call for conservation by increasing the amounts of recycled materials in our products.

For more information call the insulation professionals:

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Tel: +961 1 900962
Fax: +961 1 900963
E-mail: info@afico.com.sa

Authorized Distributor

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- Acoustical Ceiling Panels
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- Board Insulation
- Roof Deck Board Insulation
- Cavity Wall Insulation
- Pre-engineered Metal Building Insulation
- Faced Duct Wrap
- Duct Liner
- Heavy Density Pipe Insulation
- Pipe Wrap Insulation
- Thermal Insulating Wool
- Quiet Liner
- Quiet Liner Board

PRODUCTS CODE

- ACP
- BKT
- BD
- RI/BD
- CWI
- MBI
- FDW
- DL
- PI
- PWI
- TIW
- QL
- QLB

For more information call the insulation professionals: