

افيكو AFICO

Arabian Fiberglass Insulation Company Ltd.
 J.V. of Zamil Industrial & Owens Corning Corp.

AFICO Quiet Liner Board (QLB)

Technical Data Sheet
 Product Code: QLB

DESCRIPTION

AFICO Quiet Liner Board is highly efficient resilient fiber 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 fiber and shot due to its mineral composition

APPLICATION

AFICO Quiet 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).

FACING

AFICO Quiet Liner Board is supplied in semi-rigid and rigid faced with a strong, dimensionally stable Black Woven Glass Fiber Fabric (WGF).

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.

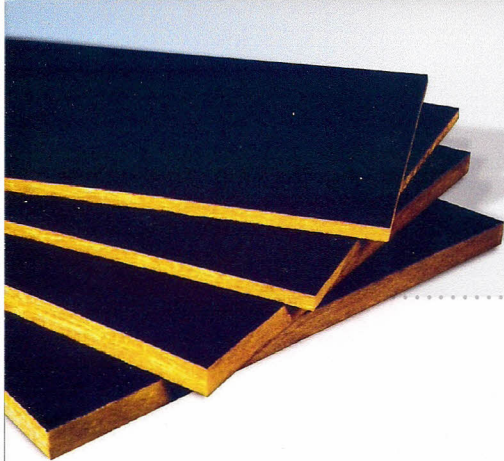
STANDARD AVAILABLE PRODUCTS

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

Product Type QLB	Density		Thickness		Width		Length	
	kg/m ³	lb/ft ³	mm	inch	m	ft	m	ft
480*	48	3.0	15	1/2	1.2	4	0.6	2
			25	1	1.2	4	1.0	3.3
			38	1 1/2	1.2	4	2.4	8
			50	2	1.2	4		
640*	64	4.0	15	1/2	1.2	4	0.6	2
			25	1	1.2	4	1.0	3.3
			38	1 1/2	1.2	4	2.4	8
			50	2	1.2	4		
800	80	5.0	15	1/2	1.2	4	0.6	2
			25	1	1.2	4	1.0	3.3
			38	1 1/2	1.2	4	2.4	8
			50	2	1.2	4		
960*	96	6.0	15	1/2	1.2	4	0.6	2
			25	1	1.2	4	1.0	3.3
			38	1 1/2	1.2	4	2.4	8
			50	2	1.2	4		



* Standard Products and Sizes



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Performance & Physical Characteristics

Nominal Thermal Conductivity

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

Type	0 °C	32 °F	10 °C	50 °F	24 °C	75 °F	50 °C	122 °F	75 °C	167 °F	100 °C	212 °F
480	0.029	0.20	0.030	0.21	0.031	0.22	0.035	0.24	0.037	0.26	0.041	0.29
640	0.030	0.21	0.031	0.21	0.032	0.22	0.036	0.24	0.038	0.26	0.042	0.29
800	0.030	0.21	0.031	0.21	0.032	0.22	0.036	0.25	0.039	0.27	0.043	0.30
960	0.030	0.21	0.031	0.21	0.032	0.22	0.036	0.25	0.039	0.27	0.043	0.30

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·°K/W or hr·ft²·°F/Btu)

$$R = \frac{T}{K} \quad \text{where "T" = Thickness and "K" or "λ" = Thermal Conductivity}$$

Working Temperature Limitations (ASTM C 411)

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

Mold Growth (ASTM D 2020, UL 181)

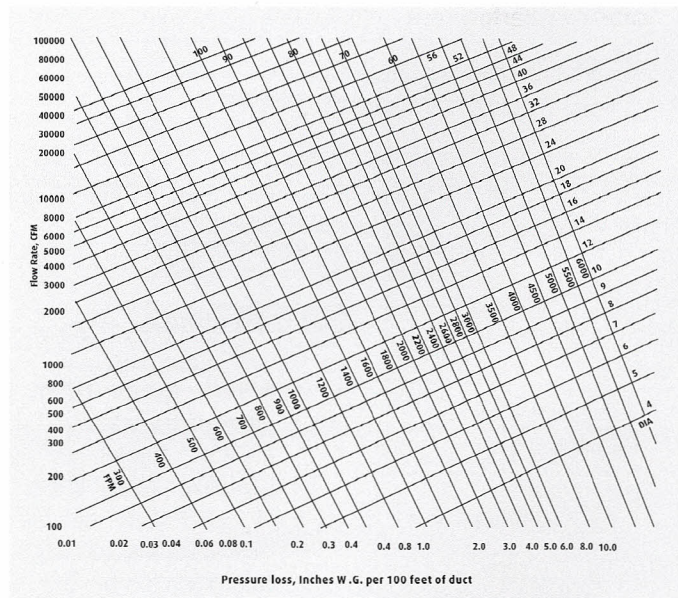
Does not breed or sustain mold, fungus, bacteria or rodents

Corrosiveness

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





Performance & Physical Characteristics

Acoustical Performance (ASTM C 423)

Reverberation Chamber Method

Sound Absorption Coefficients at Frequencies (Hz)

Type	Thickness		125	250	500	1000	2000	4000	NRC
	mm	inch							
480	15	½	0.18	0.43	0.42	0.52	0.62	0.71	0.50
	25	1	0.14	0.52	0.73	0.96	1.10	1.09	0.85
	38	1 ½	0.25	0.72	1.05	1.04	1.02	1.08	0.95
640	50	2	0.31	0.81	1.16	1.09	1.06	1.13	1.05
	25	1	0.09	0.22	0.63	0.86	0.86	0.96	0.65
	38	1 ½	0.15	0.57	0.95	0.99	0.87	0.93	0.85
800	50	2	0.28	0.81	1.04	1.10	1.06	1.09	1.00
	25	1	0.09	0.30	0.75	0.87	0.92	1.00	0.70
	38	1 ½	0.14	0.65	0.97	0.98	0.81	0.92	0.85
960	50	2	0.25	0.74	1.17	1.13	1.06	1.07	1.05
	25	1	0.06	0.26	0.77	0.96	1.01	1.07	0.75
	38	1 ½	0.22	0.72	1.03	1.07	0.95	1.00	0.95
	50	2	0.48	0.82	1.21	1.10	1.02	1.05	1.05

Installation Recommendation for Board

AFICO Quiet Liner Board are available in rolls and board types. The desired application length can be easily measured and cut from the full roll. **AFICO Quiet 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 Quiet 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 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.

No. Pins	Liner Interior Width
0	8" dn
2	9" - 16"
3	17" - 28"
4	29" - 40"
5	41" - 52"
6	53" - 64"
7	65" - 76"
8	77" - 88"
9	89" - 100"

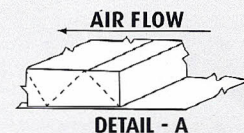
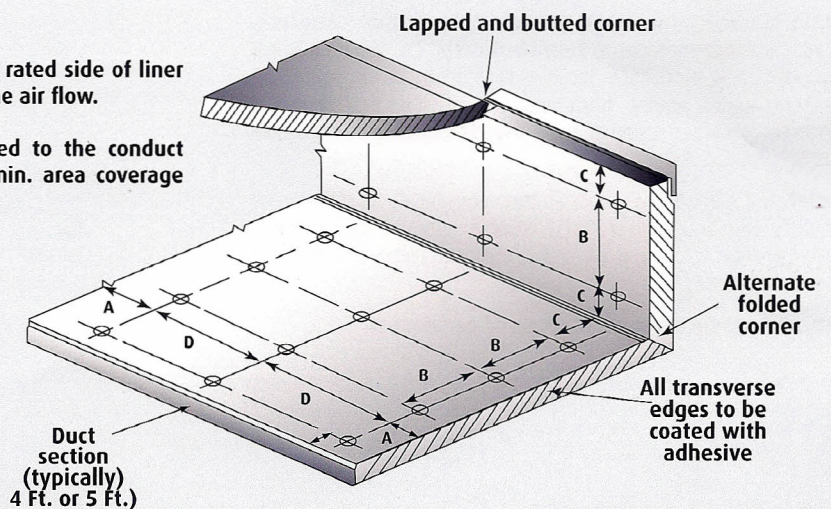
When velocity exceeds 4000 FPM use metal nosing on every leading edge. Nosing may be formed on duct or by channel or Zee attach by screws, rivets or welds.

Maximum spacing for fasteners.
Actual intervals are approximate.

Velocity	Dimensions			
	A	B	C	D
0 - 2500 FPM	3"	12"	4"	18"
2501 - 6000 FPM	3"	6"	4"	16"

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

Liner adhered to the conduct with 90% min. area coverage of adhesive.



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MAINTENANCE

No maintenance is required. **AFICO Quiet 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 of 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 headquarters 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.

AFICO PRODUCTS

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

PRODUCTS CODE

ACP
BKT
HDB
BD
RI/RD
CWI
MBI
FDW
DL
DLB
MBD
PI
PWI
TIW
QL
QLB

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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.