

افيكو AFICO

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

AFICO HD Series Blanket Insulation (HDB)

Technical Data Sheet
 Product Code: **HDB**

DESCRIPTION

AFICO HD Series Blanket Insulation is a highly efficient, resilient and easy to handle flexible blanket 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.

The semi-rigid blankets with densities from 24 to 56 kg/m³, 1.5-3.5 lb/ft³ are flexible insulation rolls for application over irregularly shaped surfaces where rigidity properties are desired.

APPLICATION

AFICO HD Series Blanket Insulation is intended for use in commercial, Institutional, industrial, agricultural and residential construction as thermal and acoustical insulation for interior, exterior and cavity wall applications, partitions, prefabricated houses, poultry farms, ceilings and as back loading of existing ceiling systems.

FACING

AFICO HD Series Blanket Insulation is available in rolls unfaced or one side laminated with factory-applied KRAFT paper, or Aluminum Foil Reinforced Kraft paper (FRK) or other specific vapor barriers.

STANDARD AVAILABLE PRODUCTS

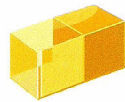
Nominal Manufacturing Specifications.
 Check for availability of other dimensions and densities

Product Type HDB	Density		Thickness		Thermal Resistance R-Value at 24°C	
	kg/m ³	lb/ft ³	mm	inch	m ² ·°K/W	hr·ft ² ·°F/Btu
120	12	0.75	25	1	0.625	3.55 (4)
140	14	0.875	25	1	0.641	3.64 (4)
160	16	1.0	50	2	1.282	7.28 (7)
180	18	1.125	50	2	1.316	7.47 (7)
200	20	1.25	50	2	1.351	7.67 (8)
240	24	1.5	50	2	1.429	8.11 (8)
320	32	2.0	50	2	1.429	8.11 (8)
480	48	3.0	50	2	1.515	8.60 (9)
560	56	3.5	50	2	1.515	8.60 (9)



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Performance & Physical Characteristics

Standard Available Products

Nominal Manufacturing Specifications.
Check for availability of other dimensions

THICKNESS		WIDTH		LENGTH	
mm	inch	mm	inch	m	h
25	1				
38	1 1/2	400	15	10	32
50	2	410	16	15	49
64	2 1/2	600	23	20	65
75	3	610	24	25	82
89	3 1/2	1200	47	30	98
100	4	1220	48	35	114
150	6				

- Depending on Thickness & Density

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
120	0.036	0.25	0.038	0.27	0.040	0.28	0.048	0.34	0.059	0.41	0.065	0.45
140	0.035	0.24	0.037	0.26	0.039	0.27	0.046	0.32	0.055	0.38	0.061	0.42
160	0.034	0.23	0.036	0.25	0.038	0.27	0.044	0.31	0.051	0.35	0.057	0.40
180	0.033	0.23	0.035	0.24	0.037	0.26	0.043	0.30	0.048	0.34	0.053	0.37
200	0.032	0.22	0.034	0.23	0.036	0.25	0.041	0.28	0.046	0.32	0.051	0.36
240	0.031	0.21	0.032	0.22	0.035	0.24	0.039	0.27	0.043	0.30	0.047	0.33
320	0.030	0.20	0.031	0.22	0.033	0.23	0.037	0.25	0.040	0.27	0.044	0.30
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
560	0.030	0.21	0.031	0.21	0.032	0.23	0.036	0.24	0.038	0.26	0.042	0.29

Thermal Resistance "R" Value (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)

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

Thermal Conductance "C" Value (ASTM C 518, ASTM C 177)

"C" It is ability of the product to conduct heat.

$$C = \frac{1}{R} \quad ("C" = W/m²·°K or Btu/hr·ft²·°F)$$

Working Temperature Limitations (ASTM C 411)

Operating temperature -4°C to 250°C 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 (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

Surface Burning Characteristics (ASTM E 84, UL 723)

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

Facing	Flame Spread	Smoke Developed	Fuel Contributed
FRK	25	10	0

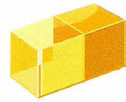
Specification Compliance

AFICO HD Series Blanket Insulation complies with the property requirements of the following specifications:

DCL : ASTM C 665
CE-EN : 1121-CPD-BA0136

Vapor Permeability (ASTM E 96 A)

FRK : 0.020 PERM
Kraft : 1.00 PERM



Performance & Physical Characteristics

Fire Properties

- B.S. 476 PART 4 : Non Combustible
- B.S. 476 PART 5 : Ignitability
- B.S. 476 PART 6 : Fire Propagation
- B.S. 476 PART 7 : Surface Spread of Flame
- Class 'O' fire rating to the building regulations sections E15

Compressive Strength

Type	120	140	160	180	200	240	320	480	560
PSF at 10 % Deformation	5	5	5	10	10	12	16	25	30
PSF at 25 % Deformation	10	10	10	15	15	20	60	90	110

Puncture Resistance (ASTM D 781)

Aluminum Foil Reinforced Kraft Paper Laminate (FRK): 25 Units

Sound Absorption Coefficients (ASTM C 384)

Insulation Thickness	Sound Absorption Coefficient at Frequencies (Hz)					
	125	250	500	1000	2000	NRC
Flexible						
25 mm (1in)	0.14	0.27	0.53	0.69	0.84	0.60
50 mm (2in)	0.22	0.36	0.58	0.92	0.94	0.70
Semi-Rigid						
25 mm (1in)	0.09	0.26	0.64	0.90	1.10	0.70
50 mm (2in)	0.28	0.80	1.12	1.18	1.10	1.05

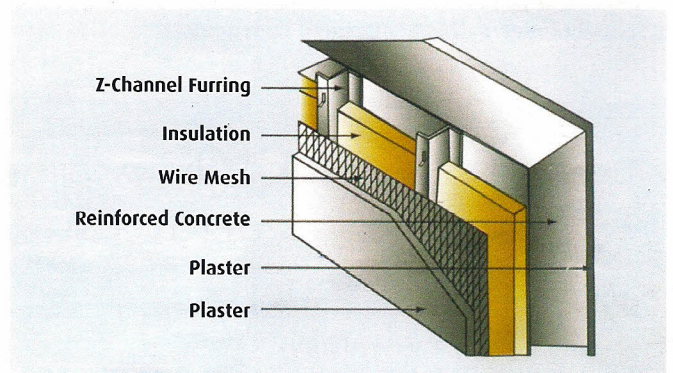
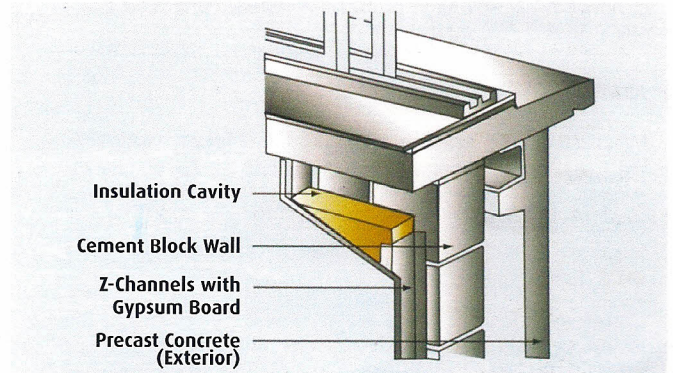
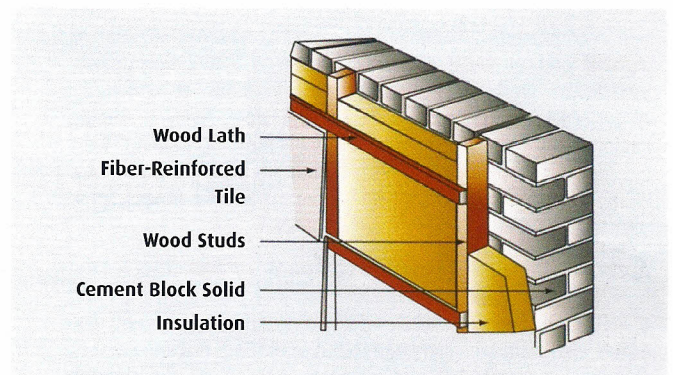
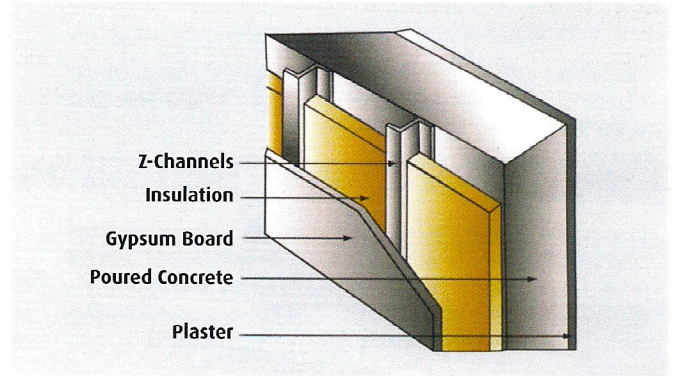
Installation Recommendation

AFICO HD Series Blanket Insulation can be installed quickly and easily in virtually any type of construction.

Between metal studs or Z channels, the insulation can be friction-fit in place while the interior finish is applied. In areas where it will be applied in heights over 2.5m, supplementary support should be provided to hold the insulation in place while the interior finish is applied.

When applied to masonry walls, the insulation can be fixed by impaling on pins or other similar attachments and then affixing a locking washer to hold the insulation in place.

For ceiling installations, the insulation is simply laid out on top of ceiling panels or other suspension systems.



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MAINTENANCE

No maintenance is required. **AFICO HD Series Blanket Insulation** 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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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.

Authorized Distributor