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OWENS CORNING
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Member of
Zamil Industrial

افيكو AFICO

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

AFICO Faced Duct Wrap Insulation



DESCRIPTION

AFICO Faced Duct Wrap Insulation is highly efficient, resilient, 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.



FACING

AFICO Faced Duct Wrap Insulation is manufactured in a roll form and subsequently faced on one side by factory laminators, with a suitable vapor retardant Aluminium Foil Reinforced Kraft Paper Laminate (FRK), All Service Jacket (ASJ) or other specific vapor barrier for installation on the exterior of ductwork. The facings have UL fire resistant ratings.



APPLICATION

AFICO Faced Duct Wrap Insulation is intended for use in commercial, institutional, industrial and residential construction as thermal and acoustical insulation of heating, air conditioning and dual temperature ducts and air handling equipment. The use of AFICO Faced Duct Wrap helps prevent condensation when properly applied to air-condition ductwork.

The semi-rigid duct wrap 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.

Technical Data Sheet
Product Code: **FDW**



STANDARD AVAILABLE PRODUCTS

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

NOMINAL THERMAL CONDUCTIVITY

W/m.°C-Btu.in./ft².hr°F (ASTM C 518) (BS 874)
"K" or "λ" value at mean temperatures

Product Type BD	Density		Thickness		Width		Length		Nominal Thermal Conductivity											
	kg/m ³	lb/ft ³	mm	inch	m	ft	m	ft	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°	12	0.75	25 38 50	1 1 1/2 2	1.2	4	30 25 20	100 80 65	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	14	0.875	25 38 50	1 1 1/2 2	1.2	4	30 25 20	100 80 65	0.036	0.24	0.037	0.26	0.039	0.27	0.046	0.32	0.055	0.38	0.061	0.42
160°	16	1.0	25 38 50	1 1 1/2 2	1.2	4	30 25 20	100 80 65	0.034	0.23	0.036	0.25	0.039	0.27	0.044	0.31	0.051	0.35	0.057	0.40
200	20	1.25	25 38 50	1 1 1/2 2	1.2	4	30 25 20	100 80 65	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°	24	1.5	25 38 50	1 1 1/2 2	1.2	4	30 25 20	100 80 65	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	32	2.0	25 38 50	1 1 1/2 2	1.2	4	20 15 10	65 50 33	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	48	3.0	25 38 50	1 1 1/2 2	1.2	4	20 15 10	65 50 33	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	56	3.5	25 38 50	1 1 1/2 2	1.2	4	20 15 10	65 50 33	0.030	0.21	0.031	0.21	0.032	0.23	0.036	0.24	0.038	0.26	0.042	0.29

* Standard Products and Sizes



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Performance & Physical Characteristics

Working Temperature Limitations (ASTM C 411)

-4°C to +350°C. At excessive temperatures a limited migration of binder may occur in the insulation in contact with the hot surface. This in no way impairs the performance of the insulation.

Alkalinity

pH 9

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.

Mold Growth (ASTM D 2020, UL 181)

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

Moisture Absorption (ASTM D-07 B, ASTM C 553)

In conditions of 95% relative humidity at 49°C for 96 hours, moisture absorption is less than 0.2% by volume, when tested in accordance with ASTM C 533. **AFICO** fiberglass products do not absorb moisture from the ambient air nor water by capillary attraction, only water under pressure can enter the insulation products but that will quickly dry out owing to the material's open cell structure.

Vapor Permeability (ASTM E 96 A)

FRK 0.02 PERM (U.S. Federal Specification HH-B-100 B TYPE I)
ASJ 0.02 PERM

Surface Burning Characteristics (UL 723, ASTM E 84, ASTM E 136)

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

Facing	Flame Spread	Smoke Developed	Fuel Contributed
FRK	0	0	0
ASJ	5	10	0

Specification Compliance

AFICO Faced Duct Wrap Insulation complies with the property requirements of the following specifications:

- U.S. Federal Specification HH-I-558 B, Form B, Type 1, Class 6,
- ASTM C 553
- DCL ASTM - C 533 - C 547 - C 612 - C 665
- CE-EN 13162

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

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.)

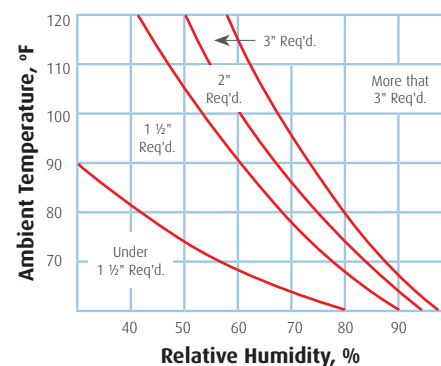
$$R = \frac{T}{K} \quad \text{where "T" = thickness}$$

and "K" or "λ" = thermal conductivity

Condensation Control

How to select appropriate thickness for condensation control: to determine thickness to prevent condensation at various ambient temperature and humidity levels based on installed thickness 75% of nominal (out-of-package) thickness, 55°F air duct internal temperature:

1. Select maximum expected relative humidity (RH) on the lower scale.
2. Move up vertically until that line intersects the expected maximum ambient air temperature.
3. Select the thickness indicated by the intersection point



The above chart is based on indoor conditions so far as wind and other factors are concerned.



Performance & Physical Characteristics

Compressive Strength

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

Puncture Resistance (ASTM D 781)

FRK 25 Units
 ASJ 50 Units

Sound Absorption Coefficients

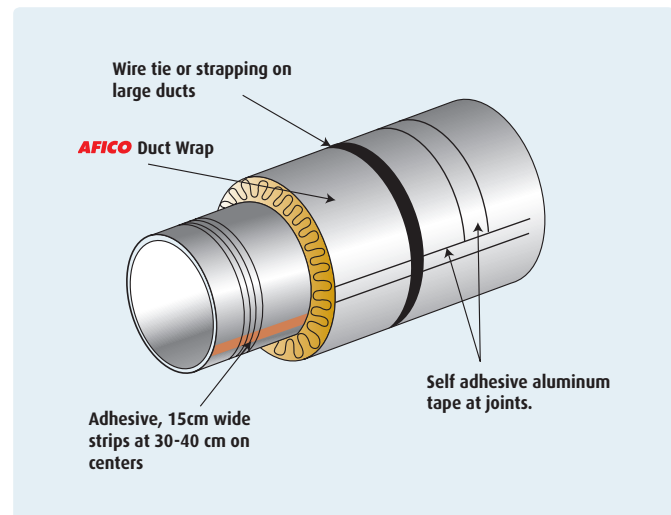
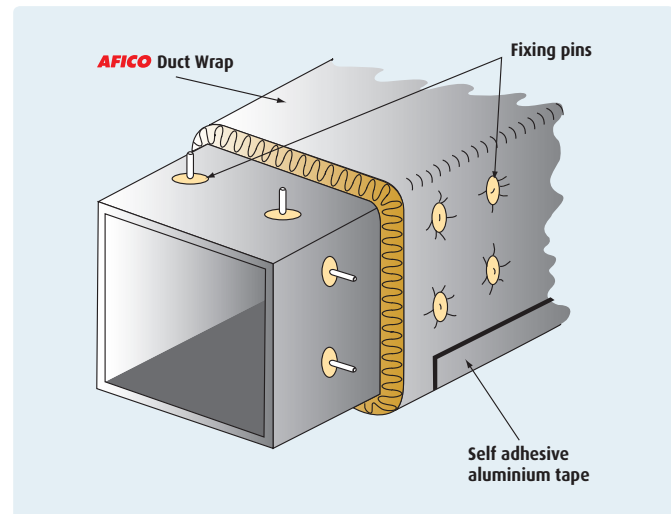
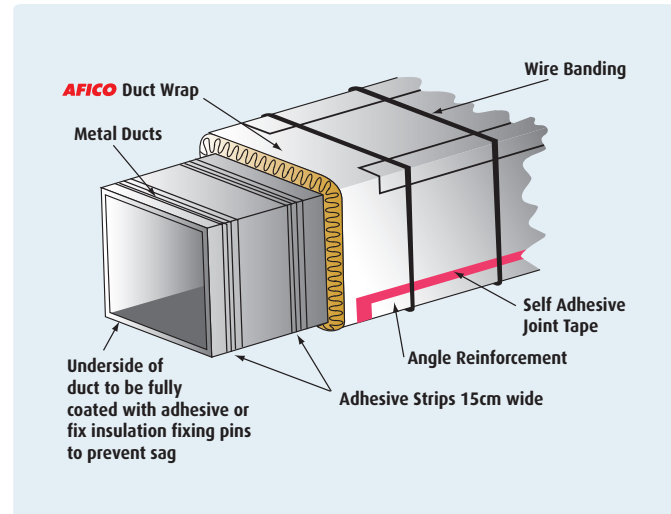
Insulation	Sound Absorption Coefficient at Frequencies (Hz)						
	125	250	500	1000	2000	4000	NRC
Flexible							
25mm (1in)	0.38	0.34	0.68	0.82	0.87	0.96	0.70
50mm (2in)	0.44	0.66	1.07	1.06	0.99	1.06	0.95
Semi-Rigid							
25mm (1in)	0.33	0.28	0.62	0.88	0.96	1.04	0.70
50mm (2in)	0.38	0.68	1.10	1.07	1.05	1.05	0.95

Mounting F405: Insulation placed against 24 gauge metal over a 16 inch air space. This mounting configuration is typical of a sheet metal enclosure with insulation on one side.

Installation Recommendation

AFICO Faced Duct Wrap Insulation products are available in rolls. The desired application length can be easily measured and cut from the full roll. AFICO Faced Duct Wrap can be impaled on pins and adhered with recommended adhesive. When using aluminium alloys pins, pin spacing along a duct should be no greater than 300mm on centers. Fasteners should be located no less than 75mm from each edge or corner. Apply vapor-seal pressure-sensitive aluminium joint sealing tape to joints and protrusions. 75mm wide tape should be used.

Note: Outdoor applications require additional weather protection.



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MAINTENANCE

No maintenance is required. **AFICO Faced Duct Wrap 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, odourless, 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** fibreglass 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 OC has no control over installation design, installation workmanship, accessory materials, or conditions of application, **AFICO** and/or OC 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 **AFICO** materials and methods of fixing are the decision of the specifier, consultant or contractor. For further information or advice on specification of **AFICO** products, contact your local sales office.

AVAILABILITY

Manufactured by **Arabian Fiberglass Insulation Company, Ltd.** (AFICO), member of **Zamil Industrial**, with headquarters and production facilities located in Dammam, Saudi Arabia, under license from and utilizing the manufacturing specifications and technology of **Owens-Corning Corporation** (OC), 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 **AFICO** as well as through a vast and reliable network of local distributors.

Special products are manufactured on request.

AFICO PRODUCTS

PRODUCTS CODE

Acoustical Ceiling Panels	ACP
Blanket Insulation	BKT
HD Series Blanket Insulation	HDB
Board Insulation	BD
Roof Insulation	RI
Roof Deck Board Insulation	RD
Cavity Wall Insulation	CWI
Pre-engineered Metal Building Insulation	MBI
Faced Duct Wrap	FDW
Duct Liner	DL
Duct Liner Board	DLB
Mechanical Board Insulation	MBD
Heavy Density Pipe Insulation	PI
Pipe Wrap Insulation	PWI
Thermal Insulating Wool	TIW
Quiet Liner	AQL
Woven Facing	AWF
Prefabricated Duct Board	PDB

For more information call the insulation professionals:



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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