

افيكو AFICO

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

AFICO Acoustical Ceiling Panels

Technical Data Sheet
Product Code: **ACP**



DESCRIPTION

AFICO Acoustical Ceiling Panels are composed of fine, stable and uniformly textured inorganic glass fibers bonded together by a non-water soluble and fire-retardant thermosetting and fire resistant resin. They are free from coarse fibers and shot due to their mineral composition.



FACING

AFICO Acoustical Ceiling Panels are faced with abuse-resistant washable PVC film facing. Standard available facing:

- Random Fissured
- Shasta
- Woven Mat
- Vinta

Check for availability of other panel finishes patterns.



BACK-FACING

AFICO Acoustical Ceiling Panels are also available with an additional White Non-Woven Fiberglass Tissue (WGT) back facing.



APPLICATION

AFICO Acoustical Ceiling Panels are intended for use in commercial, institutional, and residential construction as an acoustical and thermal ceiling panel for suspended ceiling systems. This decorative ceiling panel will specifically meet the designer's need for acoustic control and has a good aesthetic appearance and high thermal performance, especially in open plan offices, board rooms, schools, stores, showrooms and shopping centers.



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 ACP	Density		Thickness	
	kg/m³	lb/ft³	mm	inch
480	48	3.0	25	1
			38	1 ½
			50	2
560*	56	3.5	15*	¾
			20	¾
			25	1
			38	1 ½
			50	2
640	64	4.0	15	¾
			20	¾
			25	1
			38	1 ½
			50	2
800	80	5.0	15	¾
			20	¾
			25	1
			38	1 ½
			50	2

Product Type ACP	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	0.030	0.21	0.031	0.21	0.033	0.23	0.037	0.26	0.040	0.28	0.045
560	0.030	0.21	0.031	0.21	0.033	0.23	0.036	0.25	0.039	0.27	0.043	0.30
640	0.030	0.21	0.031	0.21	0.032	0.22	0.036	0.25	0.039	0.27	0.043	0.30
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



* Standard Products and Sizes

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Performance & Physical Characteristics

Standard Nominal Panel Sizes

Metric (mm)	Actual (mm)	Imperial Equivalent	Actual (inch)
610 x 1220*	604 x 1214	24" x 48" (in) 2' x 4' (ft)	23 3/4" x 47 3/4"
600 x 1200*	594 x 1194		
610 x 610	604 x 604	24" x 24" (in) 2' x 2' (ft)	23 3/4" x 23 3/4"
600 x 600	594 x 594		

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)

Mineral boards, chemically inert. 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.

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

Base fiber is non-combustible when tested to ASTM E84 and BS-476 Part 4 and 7.

Flame Spread	Smoke Developed	Fuel Contributed
25	50	0

Light Reference (ASTM C 523)

WHITE: LR1 = 0.75 or greater

Sound Transmission Coefficient (ASTM E 90-84)

STC: 50 or greater

Noise Reduction Coefficient (ASTM C 423)

NRC: 0.75 or greater

Specification Compliance

AFICO Acoustical Ceiling Panels comply with the property requirement of the following specifications:

- U.S. Federal Specification SS-S-118 B, Type IV
- UL 723, Class 25
- DCL ASTM - C 533 - C 547 - C 612 - C 665
- CE-EN 13162

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.)

$$R = \frac{T}{K} \quad \text{where "T" = thickness} \\ \text{and "K" or "λ" = thermal conductivity}$$

Density		Thickness		Thermal Resistance "R"	
kg/m ³	lb/ft ³	mm	inch	m ² .°C/W	hr.ft ² .°F/Btu
56	3.5	15	3/8	0.45	2.72
56	3.5	20	3/4	0.61	3.80
56	3.5	25	1	0.76	4.35

Panel	Sizes	Backloading with Afico Fiberglass Blanket Maximum Backloading (R-Value)	
mm	inch		
610 x 610 600 x 600	24 x 24	R=6.70m ² .°C/W	38hr.ft ² .°F/Btu
610 x 1220 600 x 1200	24 x 48	R=3.35m ² .°C/W	19hr.ft ² .°F/Btu

No Sagging or Warping

AFICO Acoustical Ceiling Panels will not sag or warp in high humidity conditions that prevail in the Middle East. By using **AFICO Ceiling Panels** your ceiling systems will look better over time and replacement of panels due to sagging and warping can be eliminated.

Easy to Install for a Professional Looking Job

AFICO Acoustical Ceiling Panels are cut easily with a simple utility knife, allowing for a tight fit around borders, cut-outs, obstructions, and columns. No saws or sectioning are required.



Performance & Physical Characteristics

Sound Absorption Coefficients 1/3 Octave Band Center Frequencies, Hz								
Thickness		125	250	500	1000	2000	4000	STC
mm	inch							
15	5/8	.66	.76	.60	.80	.89	.80	.75
20	7/8	.68	.81	.68	.78	.85	.80	.80
25	1	.77	.82	.70	.86	.90	.75	.85
38	1 1/2	.64	.88	1.02	.91	.84	.62	.90
50	2	.78	.92	.79	1.00	1.03	1.10	.95

Sound Transmission Loss in dB Octave Band Center Frequencies, Hz								
Thickness		125	250	500	1000	2000	4000	STC
mm	inch							
15	5/8	30	42	51	59	62	51	50
20	7/8	33	44	52	60	63	53	52
25	1	35	46	53	59	63	55	54
38	1 1/2	38	47	55	58	63	57	56
50	2	44	55	63	67	71	71	64

Reduced Noise Levels for a Better Environment

AFICO Acoustical Ceiling Panels have excellent sound absorption characteristics. This is especially important for areas such as open offices, schools, stores and shopping centers, where high noise levels are a problem that can best be solved with a highly sound absorbent ceiling material.

A Better Ceiling for the Short and Long Term

The abuse-resistant surface of **Arabian Fiberglass Acoustical Ceiling Panels** will not chip or fade, even when dropped. This means reduced cost for contractors and owners, due to less damage during installation and normal maintenance.

The **AFICO Ceiling Panels** can be wiped clean with soap and water, so normal surface dust can be removed as needed.

Reduced Energy Costs through Proper Design

AFICO Acoustical Ceiling Panels have a built-in thermal resistance (R-Value) of $R=0.46\text{m}^2\cdot\text{C}/\text{W}$, for the standard

56 kg/m³ density and 15mm thick type. **AFICO Ceiling Panels** can also be back loaded with **Arabian Fiberglass Blanket Insulation** to provide an additional R-value of up to $6.70\text{m}^2\cdot\text{C}/\text{W}$ (See Maximum Back loading).

AFICO Ceiling Panels allow ultimate flexibility when designing for energy efficiency for a new building or retrofit project.

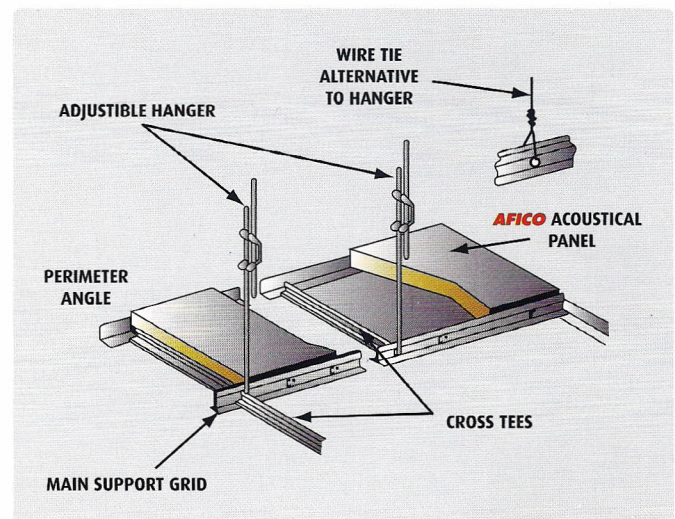
Installation

AFICO Acoustical Ceiling Panels are produced only with square edges and are designed for lay-in installation in a mechanical suspended, exposed, standard "T" grid system. The ceiling panel must be supported on all edges. Hold-down clips are sometimes required.

AFICO Acoustical Ceiling Panels are cut easily with a utility knife, allowing for a tight fit around pipes, lighting fixtures and borders.

AFICO Acoustical Ceiling Panels may be back loaded with **AFICO Fiberglass Blanket Insulation** to provide additional thermal resistance (R-value).

Panel Size (mm)	Maximum Back loading
610 x 610	300mm
600 x 600	300mm
610 x 1220	150mm
600 x 1200	150mm



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MAINTENANCE

No maintenance is required. **AFICO Acoustical Ceiling Panels** 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 Fibreglass 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 Fibreglass 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:



H.O. & Factory: P.O. Box 1289, Dammam 31431, Saudi Arabia
Tel: +966 3 847 2901 / 847 1519
Fax: +966 3 847 3605
E-mail: wajdei@afico.com.sa

Riyadh Office: P.O. Box 50281, Riyadh 11523, Saudi Arabia
Tel: +966 1 472 5555 ext. 283
Fax: +966 1 291 0162
E-mail: kathunaiyan@afico.com.sa

Jeddah Office: P.O. Box 2140, Jeddah 21451, Saudi Arabia
Tel: +966 2 670 0020 ext. 133
Fax: +966 2 287 2283
E-mail:

Gulf Regional Office: P.O. Box 44493, Deira, Dubai, U.A.E.
Tel: +971 4 294 1211
Fax: +971 4 294 1168
E-mail: aficogcc@emirates.net.ae

Export Office: P.O. Box 90-284, Jdeidet El Metn Beirut - Lebanon
Tel: +961 1 900962
Fax: +961 1 900963
E-mail: AFICO@cyberia.net.lb



info@afico.com.sa



www.afico.com.sa

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