



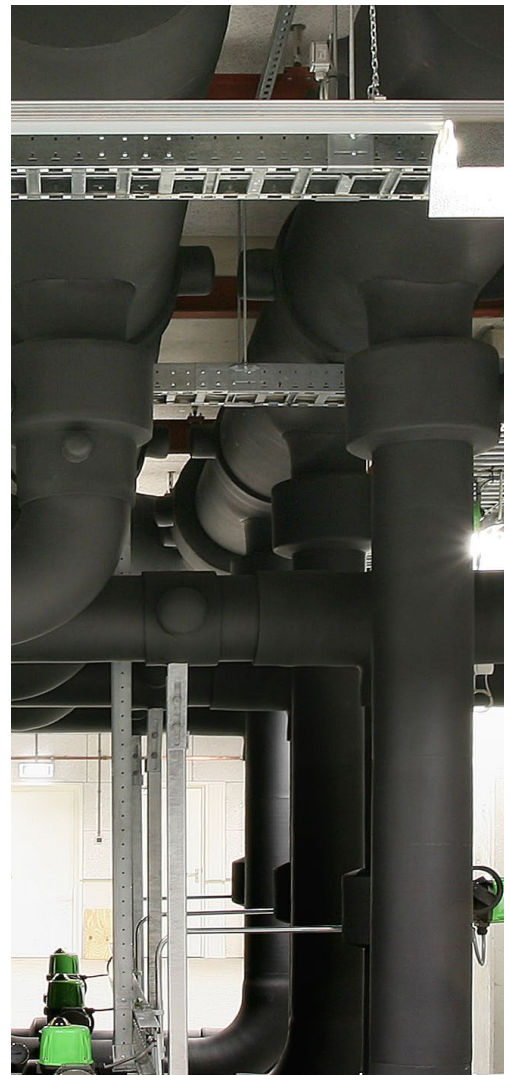
FOR SAFETY, EFFICIENCY &  
BETTER INDOOR AIR QUALITY

# ArmaFlex<sup>®</sup> Class 0

The trusted insulation system  
for HVAC applications

- // Class 0 fire classification according to BS476 Parts 6 and 7
- // Reduces mould and bacteria growth with Microban<sup>®</sup> antimicrobial product protection, unique to Armacell
- // Effectively reduces thermal and energy loss

[www.armacell.com.sg](http://www.armacell.com.sg)



 **armacell<sup>®</sup>**  
ArmaFlex<sup>®</sup>

FOR SAFETY, EFFICIENCY &  
BETTER INDOOR AIR QUALITY

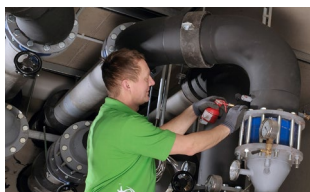
# ArmaFlex Class 0

Your trusted insulation system for HVAC applications. Conserves energy and reduces heat loss. Class 0 fire classification according to BS476 Parts 6 and 7. Certified by leading international fire safety agencies. Fibre-free. Infused with Microban antimicrobial protection for even better indoor air quality.

Energy efficient



Easy to install



Better air quality



## // Excellent fire performance

FM Approved for entire range of insulation thickness. Certified to conform to safety, reliability and performance standards of various local fire safety bodies.

## // Closed-cell structure

Minimises moisture permeation to ensure long-term protection against corrosion under insulation. Removes the need for an additional water vapour barrier.

## // Energy efficient

Low thermal conductivity minimises energy losses to give long term energy savings.

## // Microban protection

When microbes come into contact with the insulation surface, Microban penetrates the cell wall of the micro-organism, disabling its ability to function, grow and reproduce.

## // Environmentally safe

Zero Ozone Depletion Potential and Global Warming Potential; rated "Excellent" by Singapore Green Building Council.

## // Safer indoor air quality

Free of fibre and formaldehyde, and GREENGUARD® Gold certified for low emissions of volatile organic compounds.

## // Easy-to-install

Highly flexible elastomeric foam that can be installed quickly on irregular shapes and installations in tight spaces.

## TECHNICAL DATA - ARMAFLEX CLASS 0

Brief description	ArmaFlex Class 0 is a flexible insulation material that reliably protects against water vapour ingress due to its closed-cell structure. No additional water vapour barrier is required.
Material type	Elastomeric foam based on synthetic rubber.
Colour	Black.
Special features	ArmaFlex sheets is infused with Microban antimicrobial protection to provide additional assurance against mould and bacteria growth.
Applications	Thermal insulation/protection of pipes, air ducts and vessels (including elbows, fittings, flanges etc.) in hot and cold water services, chilled water lines, heating systems, air conditioning ductwork and refrigerated pipework, installed in commercial, industrial, residential and public buildings to control condensation, protect against frost and reduce energy loss.
Installation	Please refer to the ArmaFlex installation manual for advice. ArmaFlex can be used together with ArmaFlex 520 adhesive and ArmaFix® pipehangers for a complete insulation system.

Property	Value/Assessment						Standard/Test method
Temperature range							
Service temperature	Range	Minimum [°C]		Maximum [°C]			
	Full range	-50		+105			
	Remarks	+85 °C if sheet or tape is glued to the object with its whole surface.					
Thermal conductivity							
Declared thermal conductivity	θ <sub>m</sub>	-20 °C	+/-0 °C	+20 °C	+40 °C		GB/T 10295, GB/T 10296, ASTM C518, EN ISO 8497
	λ <sub>g</sub> ≤ [W/(m·K)]	0.032	0.034	0.036	0.039		
Resistance to water vapour							
Water vapour diffusion resistance factor	μ ≥ 10,000						GB/T 17146-1997, DIN EN 13469, DIN EN 12086
Water vapour permeability	≤ 1.96 x 10 <sup>-11</sup> g/(m·s·Pa)						
Resistance to water							
Water absorption by vacuum	≤ 10%						GB/T 17794
Water absorption by volume	≤ 0.2%						ASTM C209, ASTM C1763
Fire performance							
Surface spread of flame	Class 1						BS 476 Part 7
Fire propagation for products	Class 0						BS 476 Part 6
Burning behaviour of building materials and products	Class B1						GB 8624
Flammability of plastic materials	V-0 rating						UL 94
FM Approved	Yes						FM 4924
Practical fire behaviour	Does not generate flaming droplets.						
Surface flammability	Marine application: Low flame spread material						IMO 2010 FTP Code
Other fire class	Registered by the Fire Services Department of Hong Kong for the entire range of thickness. Product conforms to the requirements for building products under the Fire Safety and Shelter Department, Singapore.						
Mechanical properties							
Resilience after compression relief	≥ 70%						GB/T 6669
Weather and UV resistance							
UV resistance	For UV protection, ArmaFinish Paint or Arma-Chek® covering system is required. For outside use, ArmaFlex should be protected within three days of installation.						
Health and environment							
Antimicrobial behaviour	Built-in Microban antimicrobial product protection in sheets.						
Environmental aspect	Zero ODP and GWP. Complies with Restriction of Hazardous Substances Directive (RoHS).						
Environmental Product Declaration (EPD)	Type III EPD: Declaration number 4789125188.101.1, UL Environment.						
Fungal growth	No fungal growth is observed.						ASTM G21
Health aspects	Free of fibre and formaldehyde. Low volatile organic compounds (VOC) and total aldehyde. GREENGUARD Gold for even lower VOC and total chemical emissions.						UL2818
Green building assessment	Singapore Green Building Product Certified: “Excellent” rating.						
Other technical features							
Chemical resistance	Excellent resistance to ozone, oil and chemicals (consult product test list).						
Storage	Material shall be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C to 35 °C).						
Shelf (storage life)	Self-adhesive sheets, tubes and tapes: 1 year.						

All data and technical information are based on results achieved under typical application conditions. Recipients of this information should, in their own interest and responsibility, clarify with our Technical department in due time whether or not the data and information apply to the intended application area.



Tube - standard (2.0m length)

Insulation inner diameter [mm]	Cu pipe outer diameter [inch]	Fe pipe outer diameter [mm]	Nominal diameter [DN]	6mm		9mm		13mm		19mm	
				Item	Carton content [m]	Item	Carton content [m]	Item	Carton content [m]	Item	Carton content [m]
6	1/4					COB-09X006	312	COB-13X006	180	COB-19X006	96
10	3/8		6			COB-09X010	264	COB-13X010	144	COB-19X010	84
12	1/2					COB-09X012	220	COB-13X012	128	COB-19X012	84
15	5/8	14	8			COB-09X015	180	COB-13X015	112	COB-19X015	70
20	3/4					COB-09X020	144	COB-13X020	90	COB-19X020	60
22	7/8	22	15			COB-09X022	128	COB-13X022	90	COB-19X022	60
25	1	25		COB-06X025#	144	COB-09X025	108	COB-13X025	80	COB-19X025	50
28	1-1/8	28	20			COB-09X028	98	COB-13X028	72	COB-19X028	50
32	1-1/4	32				COB-09X032#	84	COB-13X032	64	COB-19X032	40
35	1-3/8		25			COB-09X035	82	COB-13X035	58	COB-19X035	40
38	1-1/2	38				COB-09X038#	72	COB-13X038#	54	COB-19X038#	36
42	1-5/8		32			COB-09X042	64	COB-13X042	48	COB-19X042	36
45	1-3/4									COB-19X045#	30
48	1-7/8		40			COB-09X048#	56	COB-13X048	42	COB-19X048	30
54	2-1/8					COB-09X054#	54	COB-13X054	42	COB-19X054	30
57	2-1/4	57						COB-13X057#	36	COB-19X057#	28
60	2-3/8		50			COB-09X060	54	COB-13X060	36	COB-19X060	24
67	2-5/8							COB-13X067#	36	COB-19X067#	22
76	3	76						COB-13X076	32	COB-19X076	16
89	3-1/2	89	80					COB-13X089	24	COB-19X089	12
108	4-1/4	108						COB-13X108#	16	COB-19X108#	10
114	4-1/2	114	100					COB-13X114	16	COB-19X114#	10
140			125								
168			150								

\*Made to order. Minimum order quantities and different lead times may apply.  
Self-adhesive option available upon request. Minimum order quantities and different lead times may apply.

Sheet - continuous roll

Insulation thickness [mm]	1.22m width			1.50m width		
	Item	Length [m]	Carton content [sqm]	Item	Length [m]	Carton content [sqm]
9				COB-09150/E	10	15.0
13	COB-13122/E	8	9.76	COB-13150/E	8	12.0
16				COB-16150/E#	7	10.5
19	COB-19122/E	6	7.32	COB-19150/E	6	9.0
25	COB-25122/E	4	4.88	COB-25150/E	4	6.0
30				COB-30150/E	3	4.5
32				COB-32150/E	3	4.5
40	COB-40122/E	3	3.66			
50	COB-50122/E	2.5	3.05			

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Tube - standard (2.0m length)

Insulation inner diameter [mm]	Cu pipe outer diameter [inch]	Fe pipe outer diameter [mm]	Nominal diameter [DN]	25mm		32mm		40mm		50mm			
				Item	Carton content [m]	Item	Carton content [m]	Item	Carton content [m]	Item	Carton content [m]		
6	1/4	14	6	COB-25X006	60	COB-32X006#	40	COB-40X010	24	COB-50X020#	12		
10	3/8			COB-25X010	54	COB-32X010	36						
12	1/2			COB-25X012	48	COB-32X012	32						
15	5/8			COB-25X015	40	COB-32X015	32	COB-40X015	22				
20	3/4	22	15	COB-25X020	36	COB-32X020	24	COB-40X020	18	COB-50X022#	12		
22	7/8			COB-25X022	36	COB-32X022	24	COB-40X022	18				
25	1	25	20	COB-25X025	32	COB-32X025	22	COB-40X025#	18	COB-50X028	12		
28	1-1/8	28		COB-25X028	32	COB-32X028	22	COB-40X028	16				
32	1-1/4	32		COB-25X032	32	COB-32X032	20						
35	1-3/8	38	25	COB-25X035	30	COB-32X035	18	COB-40X035	12	COB-50X035	10		
38	1-1/2			COB-25X038#	24	COB-32X038#	16	COB-40X038#	12	COB-50X042	8		
42	1-5/8			COB-25X042	24	COB-32X042	16	COB-40X042	12				
45	1-3/4			57	40			COB-32X045#	12	COB-40X048	12	COB-50X048	8
48	1-7/8	COB-25X048	20			COB-32X048	12	COB-40X054#	10			COB-50X054#	8
54	2-1/8	76	50			COB-25X054	20	COB-32X054	12				
57	2-1/4					COB-25X057#	16	COB-32X057#	12				
60	2-3/8			COB-25X060	20	COB-32X060	12	COB-40X060	10	COB-50X060	8		
67	2-5/8			COB-25X067	14	COB-32X067	10	COB-40X067#	8	COB-50X067#	6		
76	3	89	80	COB-25X076	16	COB-32X076	10	COB-40X076	8	COB-50X076	4		
89	3-1/2			COB-25X089	12	COB-32X089	8	COB-40X089	8	COB-50X089	4		
108	4-1/4			COB-25X108	8	COB-32X108#	6	COB-40X108#	6	COB-50X108#	4		
114	4-1/2			COB-25X114	6	COB-32X114#	6	COB-40X114	4	COB-50X114	4		
140		114	125	COB-25X140#	6			COB-40X140#	4	COB-50X140	4		
168			150	COB-25X168#	6			COB-40X168#	4	COB-50X168	4		

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ArmaFlex Class 0 Accessories

Item	Carton content	Article description
AS-ATAPECOB-9M	24 rolls	ArmaFlex Class 0 insulation tape (3mm thickness x 50mm width x 9.14 m)

Accessories

Item	Carton content	Article description
AS-AD5201E	4 x 3.78 litre cans	ArmaFlex 520 adhesive
CLEANER/1,0	4 x 1.0 litre cans	Solvent-free cleaner for use with ArmaFlex adhesive
CUTTING-SET	1	ArmaFlex cutting set (3 knives and 1 sharpening stone)



//Cover Photo (Top)

Belfast City Hall, Northern Ireland

Reduce insulation thickness with thermal efficiency and acoustic attenuation in one product

The Belfast City Hall underwent a comprehensive overhaul to improve the thermal and acoustic insulation of its air-conditioning system. Due to the challenges of limited space as well as the need to suppress noise generated by the air-handling units, ArmaFlex Class 0 was used as an internal lining of the ductwork walls. With the benefit of thermal and acoustic insulation in one product, the total installed cost of insulation is effectively reduced.

//Cover Photo (Right)

South Beach, Singapore

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## ABOUT ARMACELL

As the inventors of flexible foam for equipment insulation and a leading provider of engineered foams, Armacell develops innovative and safe thermal, acoustic and mechanical solutions that create sustainable value for its customers. Armacell's products significantly contribute to global energy efficiency making a difference around the world every day. With 3,000 employees and 23 production plants in 15 countries, the company operates two main businesses, Advanced Insulation and Engineered Foams. Armacell focuses on insulation materials for technical equipment, high-performance foams for high-tech and lightweight applications and next generation aerogel blanket technology.



For more information, please visit:  
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