



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> anti-microbial product protection, unique to Armacell
- // Effectively reduces thermal and energy loss

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



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

# 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 anti-microbial protection for even better indoor air quality.

Energy efficient



Easy to install



Better air quality



## // Highly flexible

ArmaFlex is a highly flexible foam, making it ideal for irregular shapes and for installations in tight spaces. In addition, ArmaFlex is easy to cut and shape, making it easy to use for any application.

## // Closed cell protection

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

## // In-built water vapour barrier

Closed-cell ArmaFlex material has a high built-in resistance to water vapour ingress, and the insulation itself effectively acts as a full-thickness vapour barrier. There is no need for an external foil barrier.

## // Seamless joints

ArmaFlex is joined and fitted with fast drying ArmaFlex contact adhesive. This provides a continuous and seamless finish. There is no need for pins or joining tapes, and there are no gaps that allow entry of water vapour.

## // Dust & fibre free

Dust and fibrous materials can create an additional health hazard, often combining with mould and bacteria to aggravate respiratory conditions. ArmaFlex is entirely dust and fibre free, making it particularly suitable for use in public buildings, hospitals and offices.

## // Safer indoor air quality

Fibre-free, free of formaldehyde and GREENGUARD certified for low emissions of volatile organic compounds.

## // Formaldehyde free

Formaldehyde is classified as a probable human carcinogen and maximum recommended exposure limits are set by health and safety authorities in many countries. ArmaFlex does not contain or outgas formaldehyde and will not contribute to overall formaldehyde levels.

## // Excellent acoustic performance

ArmaFlex offers impressive airborne noise absorption at problem frequencies and excellent decoupling and isolation performance on pipes and ducts in contact with other structural service elements.



## 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 anti-microbial protection to provide additional assurance against mould and bacteria growth.
Applications	Thermal insulation/protection of pipes, air ducts and vessels (incl. 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.
Safety and environment	Type III Environmental Product Declaration (EPD): Declaration number 4786944121.101.1, UL Environment.
Assembly	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												
<b>Temperature range</b>														
Service temperature	Max. service temperature	+105 °C												
	Min. service temperature	-50 °C												
<b>Thermal conductivity</b>														
	<table border="1"> <thead> <tr> <th>θm</th> <th>-20</th> <th>+/-0</th> <th>+20</th> <th>+40</th> <th>[°C]</th> </tr> </thead> <tbody> <tr> <td>λ ≤</td> <td>0.032</td> <td>0.034</td> <td>0.036</td> <td>0.039</td> <td>[W/(m·K)]</td> </tr> </tbody> </table>	θm	-20	+/-0	+20	+40	[°C]	λ ≤	0.032	0.034	0.036	0.039	[W/(m·K)]	ASTM C518, EN ISO 8497, GB/T 10295,GB/T10296
θm	-20	+/-0	+20	+40	[°C]									
λ ≤	0.032	0.034	0.036	0.039	[W/(m·K)]									
<b>Water vapour diffusion resistance</b>														
Water vapour diffusion resistance factor	μ ≥ 10,000	DIN EN 13469, DIN EN 12086, GB/T 17146-1997												
Water vapour permeability	$\leq 1.96 \times 10^{-11} \text{g}/(\text{m}\cdot\text{s}\cdot\text{Pa})$ $\leq 0.13 \text{ μgm}/(\text{N}\cdot\text{h})$	BS4370 Part 2 1973												
Water Absorption	0.9% by volume average (28 days) 1.5% by volume maximum (28 days)													
<b>Fire performance &amp; approvals</b>														
Surface spread of flame	Class 1	BS 476 Part 7:1997												
Fire performance according to building regulations	Class 0	BS 476 Part 6:1989												
Burning behaviour of building materials and products	Class B1	GB 8624 -2012												
Flammability	V-0, FM Approved	UL 94, FM 4924												
Practical fire behaviour	Does not generate flaming droplets.													
Others	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.													
<b>Other technical features</b>														
Ageing Resistance, 150h	Slight shrink, Crack Free, Pinhole Free, No Deformation	GB/T 16259												
Sound absorption coefficient	up to 0.55 at 1000 Hz	ISO 354:2003, GB/20247-2006 Also suitable for use in the prevention of sound passage.												
Resilience after compression relief	≥ 70%	GB/T 6669-2001												
Water absorption by vacuum	≤ 10%	GB/T 17794												
Chemical resistance	Excellent resistance to ozone, oil and chemicals (consult product test list).													
UV resistance	For UV protection, ArmaFinish Paint or Arma-Chek® covering system is required. For outside use, ArmaFlex should be protected within 3 days of installation.													
Anti-microbial behaviour	Built-in Microban anti-microbial product protection in sheets: No fungal growth is observed.													
Health aspects	Free of fibre, dust and formaldehyde. Low volatile organic compounds (VOC), Low Total Aldehyde. GREENGUARD Gold for even lower VOC and total chemical emissions.	UL2818-2013												
Environmental aspect	Zero ODP and GWP. Singapore Green Building Product Certified: "Excellent" rating.													
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. For outside use, ArmaFlex should be protected with Armafinish Paint or Arma-Chek® covering within 3 days of installation.

**Tubes (Length: 2.0m)**

6mm		9mm		13mm		19mm		Insulation inner diameter	Cu pipe outer diameter	Fe pipe outer diameter	Nominal diameter (DN)
Item	Carton content	Item	Carton content	Item	Carton content	Item	Carton content				
	[m]		[m]		[m]		[m]	[mm]	[inch]	[mm]	
		COB-09X006	312	COB-13X006	180	COB-19X006	96	6	1/4		
COB-06X010	308	COB-09X010	264	COB-13X010	144	COB-19X010	84	10	3/8		6
COB-06X012	286	COB-09X012	220	COB-13X012	128	COB-19X012	84	12	1/2		
COB-06X015	264	COB-09X015	180	COB-13X015	112	COB-19X015	70	15	5/8	14	8
COB-06X020	220	COB-09X020	144	COB-13X020	90	COB-19X020	60	20	3/4		
COB-06X022	180	COB-09X022	128	COB-13X022	90	COB-19X022	60	22	7/8	22	15
COB-06X025	144	COB-09X025	108	COB-13X025	80	COB-19X025	50	25	1	25	
COB-06X028	144	COB-09X028	98	COB-13X028	72	COB-19X028	50	28	1-1/8	28	20
		COB-09X032	84	COB-13X032	64	COB-19X032	40	32	1-1/4	32	
		COB-09X035	82	COB-13X035	58	COB-19X035	40	35	1-3/8		25
		COB-09X038	72	COB-13X038	54	COB-19X038	36	38	1-1/2	38	
		COB-09X042	64	COB-13X042	48	COB-19X042	36	42	1-5/8		32
		COB-09X048	56	COB-13X048#	42	COB-19X048	30	48	1-7/8		40
		COB-09X054	54	COB-13X054	42	COB-19X054	30	54	2-1/8		
		COB-09X057#	54	COB-13X057#	36	COB-19X057	28	57	2-1/4	57	
		COB-09X060	54	COB-13X060	36	COB-19X060	24	60	2-3/8		50
				COB-13X067	30	COB-19X067	22	67	2-5/8		
				COB-13X076	32	COB-19X076	16	76	3	76	70
				COB-13X089	24	COB-19X089	12	89	3-1/2	89	80
				COB-13X108#	16	COB-19X108#	10	108	4-1/4	108	
				COB-13X114#	16	COB-19X114#	10	114	4-1/2		100

\*Made to order. Minimum order quantities and different lead times may apply. \*Please contact our customer service department for purchase of this item. Self-adhesive option available upon request. Please confirm with our customer service representative when place an order.

**Tubes (Length: 2.0m)**

25mm		32mm		40mm		50mm		Insulation inner diameter	Cu pipe outer diameter	Fe pipe outer diameter	Nominal diameter (DN)
Item	Carton content	Item	Carton content	Item	Carton content	Item	Carton content				
	[m]		[m]		[m]		[m]	[mm]	[inch]	[mm]	
COB-25X006	60							6	1/4		
COB-25X010	54	COB-32X010	36	COB-40X010	24	COB-50X010	12	10	3/8		6
COB-25X012	48	COB-32X012	32	COB-40X012	24	COB-50X012	12	12	1/2		
COB-25X015	40	COB-32X015	32	COB-40X015	22	COB-50X015	12	15	5/8	14	8
COB-25X020	36	COB-32X020	24	COB-40X020	18	COB-50X020	12	20	3/4		
COB-25X022	36	COB-32X022	24	COB-40X022	18	COB-50X022	12	22	7/8	22	15
COB-25X025	32	COB-32X025	22	COB-40X025	18	COB-50X025#	12	25	1	25	
COB-25X028	32	COB-32X028	22	COB-40X028	16	COB-50X028	12	28	1-1/8	28	20
COB-25X032	32	COB-32X032	20	COB-40X032#	16	COB-50X032	10	32	1-1/4	32	
COB-25X035	30	COB-32X035	18	COB-40X035	12	COB-50X035	10	35	1-3/8		25
COB-25X038	24	COB-32X038	16	COB-40X038	12	COB-50X038#	8	38	1-1/2	38	
COB-25X042	24	COB-32X042	16	COB-40X042	12	COB-50X042	8	42	1-5/8		32
COB-25X045	24	COB-32X045#	12					45	1-3/4	45	
COB-25X048	20	COB-32X048	12	COB-40X048	12	COB-50X048	8	48	1-7/8		40
COB-25X054	20	COB-32X054	12	COB-40X054	10	COB-50X054	8	54	2-1/8		
COB-25X057	16	COB-32X057	12	COB-40X057#	10			57	2-1/4	57	
COB-25X060	20	COB-32X060	12	COB-40X060	10	COB-50X060	8	60	2-3/8		50
COB-25X067	14	COB-32X067	10	COB-40X067	8	COB-50X067	6	67	2-5/8		
COB-25X076	16	COB-32X076	10	COB-40X076	8	COB-50X076	4	76	3	76	70
COB-25X089	12	COB-32X089	8	COB-40X089	8	COB-50X089	4	89	3-1/2	89	80
COB-25X108#	8	COB-32X108#	6	COB-40X108#	6	COB-50X108#	4	108	4-1/4	108	
COB-25X114#	6	COB-32X114#	6	COB-40X114#	4	COB-50X114#	4	114	4-1/2		100
COB-25X168#	3	COB-32X168#	2	COB-40X168#	2	COB-50X168#	2	169		6	168.3

\*Made to order. Minimum order quantities and different lead times may apply. Self-adhesive option available upon request. Please confirm with our customer service representative when place an order.

## Tailor made solutions

Armacell offers tailor-made solutions for large pipes and for pipes requiring a high thickness of insulation. These solutions make installation fast and easy. For pipes with diameters over 200mm, Armacell can provide precut sheets that match the pipe circumference. Multiple sizes can be supplied where multi-layering of sheets is required. For pipes requiring insulation of 60mm to 100mm thickness, Armacell can provide pre-fabricated pipe sections (to fit pipes up to 168mm diameter). These consist of sheets pre-bonded onto ArmaFlex® tubes. They can even be pre-painted with Armafinish® 99 paint if required.

## A complete range of installation accessories



### Insulation tape

Self-adhesive ArmaFlex Class 0 tape for insulating difficult shapes and areas that are not easily accessible. May be applied in multiple layers to build required thickness.



### ArmaFix pipe supports

Professional pipe supports to avoid thermal bridging on cold pipework. Constructed from ArmaFlex Class 0 to provide foam-to-foam bonding that creates a complete vapour seal.



### ArmaFlex 520 Adhesive/ArmaFlex 520 BLV Adhesive

High strength adhesives for joining ArmaFlex and creating a vapour-tight seal. They are low viscosity for ease of application and quick drying to speed installation. ArmaFlex 520 BLV Adhesive is low VOC adhesive. It developed to meet South Coast AQMD in USA and HK EPD-VOC Regulation.



### Arma-Chek Silver

Arma-Chek Silver provides an efficient and economical means to protect sheet and tubes insulation. Arma-Chek Silver coated with special UV protection and polymer backing. Arma-Chek Silver has high puncture and tear resistance. It contains flame retardant and can be used as an exterior facing on hot or cold insulation systems.

### Sheets (rolls)

#### 1.22m width

Item	Insulation thickness	Carton content	Length
	[mm]		
COB-25122/E	25	4.88	4
COB-40122/E	40	3.66	3
COB-50122/E	50	3.05	2.5

#### 1.50m width

Item	Insulation thickness	Carton content	Length
	[mm]		
COB-06150/E*	6	22.5	15
COB-09150/E	9	15.0	10
COB-13150/E	13	12.0	8
COB-19150/E	19	9.0	6
COB-25150/E	25	6.0	4
COB-30150/E-6	30	9.0	6
COB-32150/E-6	32	9.0	6
COB-35150/E	35	4.5	3

\*Made to order. Minimum order quantities and different lead times may apply. Self-adhesive option available upon request. Please confirm with our customer service representative when place an order.

### ArmaFinish 99 paint



Water-based coating based on an advanced terpolymer resin system. This easy to apply paint will protect ArmaFlex from UV and weather for insulation on outdoor locations.

### 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)
AS-AD-5201E	4 x 3.78 litre cans	ArmaFlex 520 adhesive
AS-PAINT2.5LW	4 x 2.5 litre cans	ArmaFinish paint
CUTTING-SET	1	ArmaFlex cutting set (3 knives and 1 sharpening stone)

Please confirm with our customer service representative when place an order.



//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)

Shanghai Tower,China

Shanghai tower is the tallest building in Shanghai with a total height of 632 meters. In order to ensure safer indoor air quality and save energy, ArmaFlex Class 0 was used in Shanghai tower ,which got LEED platinum certification and Green building certification for its high efficiency and low energy consumption.

All data and technical information are based on results achieved under the specific conditions defined according to the testing standards referenced. Despite taking every precaution to ensure that said data and technical information are up to date, Armacell does not make any representation or warranty, express or implied, as to the accuracy, content or completeness of said data and technical information. Armacell also does not assume any liability towards any person resulting from the use of said data or technical information. Armacell reserves the right to revoke, modify or amend this document at any moment. It is the customer's responsibility to verify if the product is suitable for the intended application. The responsibility for professional and correct installation and compliance with relevant building regulations lies with the customer. This document does not constitute nor is part of a legal offer to sell or to contract.

At Armacell, your trust means everything to us, so we want to let you know your rights and make it easier for you to understand what information we collect and why we collect it. If you would like to find out about our processing of your data, please visit our Data Protection Policy.

© Armacell, 2020. ® and ™ are trademarks of the Armacell Group and is registered in the European Union, United States of America, and other countries. MICROBAN® is a registered trademark of Microban Products Company. 00008 | ArmaFlex Class 0 | ArmaFlex | TDS | 12292020 | HK | EN

# 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 3,135 employees and 24 production plants in 16 countries, the company operates two main businesses, Advanced Insulation and Engineered Foams. Armacell focuses on insulation materials for technical equipment, high-performance foams for hightech and lightweight applications and next generation aerogel blanket technology.



For more information, please visit:  
[www.armacell.com.hk](http://www.armacell.com.hk)

**Armacell Asia LIMITED.,**  
**Add:**Room 1501-08,Millennium City  
5,418 Kwun Tong Road,  
Kwun Tong,Kowloon,Hong Kong  
**Tel:**+852 2574 8376  
**Fax:**+852 2574 8394  
[info-hongkong@armacell.com](mailto:info-hongkong@armacell.com)

