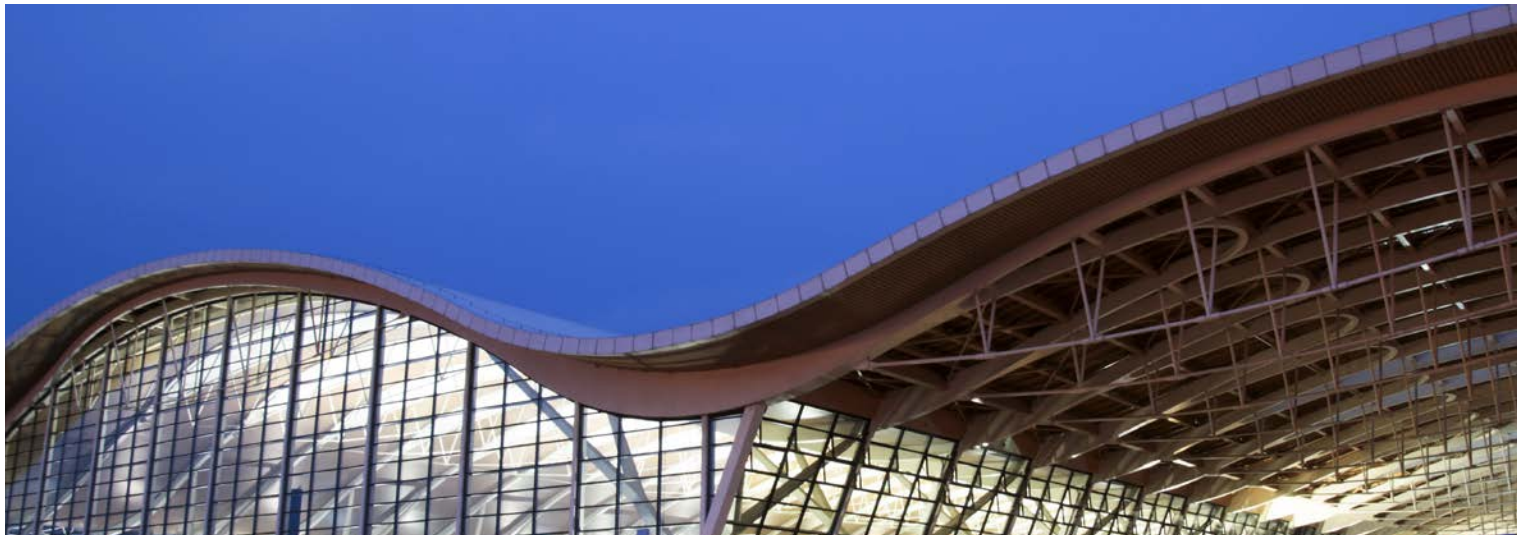




ENGINEERED TO
PREVENT CONDENSATION

ArmaFlex[®] Class 1

Built-in water vapour barrier to
reduce risk of corrosion under insulation

- // Class 1 fire classification according to BS476 Part 7
- // Minimise long-term heat gain and reduce energy cost
- // Closed-cell structure increases resistance to water vapour

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 **armacell[®]**
ArmaFlex[®]

ENGINEERED TO PREVENT CONDENSATION

ArmaFlex Class 1

Built-in water vapour barrier to reduce risk of corrosion under insulation (CUI). Conserves energy and reduces heat loss. Class 1 fire classification according to BS476 Part 7. Certified by leading international fire safety agencies. Fibre-free.

Easy to install



Prevent condensation



Reliable performance



// Closed-cell structure

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

// Good 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.

// Energy efficient

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

// Environmentally safe

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

// Safer indoor air quality

Fibre-free, free of 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 1

Brief description	ArmaFlex Class 1 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	Engineered wall: Increasing insulation wall thickness for tubes ensures that the surface temperature is maintained as the pipe diameter is increased.
Applications	Thermal insulation/protection of pipes, air ducts and vessels (incl. elbows, fittings, flanges etc.) in air conditioning, refrigeration and process equipment to prevent condensation and to save energy. Structure-borne noise reduction in service-water and waste-water installations.
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
Temperature range							
Service temperature	Max. service temperature		+105 °C		+85 °C if sheet or tape is glued to the object with its whole surface.		
	Min. service temperature		-50 °C				
Thermal conductivity							
	θm	-20	+/-0	+20	+40	[°C]	ASTM C518, EN ISO 8497, GB/T 10295,GB/T10296
	λ ≤	0.032	0.034	0.036	0.039	[W/(m·K)]	
Water vapour diffusion resistance							
Water vapour diffusion resistance factor	μ ≥ 10,000						DIN EN 13469, DIN EN 12086, GB/T 17146-1997
Water vapour permeability	≤ 1.96 x 10 ⁻¹¹ g/[m·s·Pa]						
Fire performance & approvals							
Surface spread of flame	Class 1						BS 476 Part 7:1997
Flammability	V-0, FM Approved						UL 94, FM 4924
Practical fire behaviour	Does not generate flaming droplets.						
Others	Product conforms to requirements for building products under the Fire Safety and Shelter Department of Singapore.						
Other technical features							
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.						
Health aspects	Free of fibre and formaldehyde. Low Volatile Organic Compounds, Low Total Aldehyde. GREENGUARD Gold for even lower volatile organic compounds and total chemical emissions.						UL2818-2013
Resilience after compression relief	≥ 70%						GB/T 6669-2001
Water absorption by vacuum	≤ 10%						GB/T 17794
Chemical resistance	Please consult product test list.						
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)

D-series (non-engineered wall)			F-series (non-engineered wall)			H-series (engineered wall)			M-series (engineered wall)			Insulation inner diameter	Cu pipe outer diameter	Fe pipe outer diameter	Nominal diameter (DN)
Item	Average insulation thickness	Carton content	Item	Average insulation thickness	Carton content	Item	Average insulation thickness	Carton content	Item	Average insulation thickness	Carton content				
	[mm]	[m]		[mm]	[m]		[mm]	[m]		[mm]	[m]	[mm]	[inch]	[mm]	
C1-D-015#	6.25	264	C1-F-006	9.25	324	C1-H-006	14	180	C1-M-006	17.75	112	6	1/4		6
			C1-F-010	9.25	264	C1-H-010	14	144	C1-M-010	17.75	100	10	3/8		
			C1-F-012	9.25	220	C1-H-012	14	128	C1-M-012	17.75	90	12	1/2		
			C1-F-015	9.25	180	C1-H-015	14	128	C1-M-015	17.75	80	15	5/8	14	8
			C1-F-020	9.25	144	C1-H-020	14	90	C1-M-020	18.75	72	20	3/4		
			C1-F-022	9.25	128	C1-H-022	12.75	90	C1-M-022	18.75	60	22	7/8	22	15
			C1-F-025	9.25	108	C1-H-025	12.75	82	C1-M-025	19.25	50	25	1	25	
			C1-F-028	9.25	98	C1-H-028	13.25	72	C1-M-028	19.75	50	28	1-1/8	28	20
			C1-F-032	9.25	84	C1-H-032	13.25	64	C1-M-032	19.75	40	32	1-1/4	32	
			C1-F-035	9.25	82	C1-H-035	13.75	58	C1-M-035	20.50	36	35	1-3/8		25
			C1-F-038#	9.25	72	C1-H-038	13.75	54	C1-M-038	21.00	34	38	1-1/2	38	
			C1-F-042	9.25	60	C1-H-042	14.25	48	C1-M-042	21.00	30	42	1-5/8		32
			C1-F-045#	9.25	50	C1-H-045	14.25	40	C1-M-045	21.50	24	45	1-3/4		
			C1-F-048#	9.25	50	C1-H-048#	14.25	40	C1-M-048	22.00	24	48	1-7/8		40
			C1-F-050#	9.25	40	C1-H-050#		32	C1-M-050#		24				
			C1-F-054	9.25	40	C1-H-054	14.25	36	C1-M-054	22.00	24	54	2-1/8		
			C1-F-057#	9.25	40	C1-H-057#	14.75	32	C1-M-057#	22.00	22	57	2-1/4	57	
			C1-F-060	9.25	32	C1-H-060	14.75	28	C1-M-060	22.50	20	60	2-3/8		50
									C1-M-064#		16	64			
			C1-F-067#	9.25	32	C1-H-067	14.75	24	C1-M-067#	22.50	16	67	2-5/8		
									C1-M-076#		14	76	3	76	
									C1-M-080#		14	80	3-1/8		
									C1-M-089	24.50	12	89	3-1/2	89	80
									C1-M-108	25.00	10	108	4-1/4	108	
									C1-M-114#	25.50	10	114	4-1/2	114	100
									C1-M-133#	25.50	6	133	5-1/4		
									C1-M-140#	26.00	6	140			125

*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.

Sheets (rolls)

1.0m width				1.5m width			
Item	Insulation thickness	Carton content	Length	Item	Insulation thickness	Carton content	Length
	[mm]	[sqm]	[m]		[mm]	[sqm]	[m]
C1-40100CS-3#	40	3.0	3.0	C1-06150CS#	6	22.5	15
C1-50100CS-3#	50	3.0	3.0	C1-09150CS#	9	15	10
				C1-13150CS	13	12	8
				C1-16150CS	16	10.5	7
				C1-19150CS#	19	9	6
				C1-20150CS#	20	9	6
				C1-25150CS#	25	6	4
				C1-28150CS#	28	6	4
				C1-30150CS	30	4.5	3
				C1-32150CS#	32	4.5	3

*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.

Tubes (Length: 2.0m)

R-series (engineered wall)			T-series (engineered wall)			U-series (non-engineered wall)			V-series (non-engineered wall)			Insulation inner diameter	Cu pipe outer diameter	Fe pipe outer diameter	Nominal diameter (DN)
Item	Average insulation thickness	Carton content	Item	Average insulation thickness	Carton content	Item	Average insulation thickness	Carton content	Item	Average insulation thickness	Carton content				
	[mm]	[m]		[mm]	[m]		[mm]	[m]		[mm]	[m]		[mm]	[inch]	[mm]
C1-R-010	24.0	60	C1-T-010 [#]		32							10	3/8		6
C1-R-012	24.0	56	C1-T-012		32							12	1/2		
C1-R-015	24.0	48	C1-T-015	32.0	32	C1-U-015	40	22				15	5/8	14	8
C1-R-020	24.0	40	C1-T-020	32.0	24	C1-U-020	40	22	C1-V-020 [#]	50	12	20	3/4		
C1-R-022	24.0	40	C1-T-022	32.0	24	C1-U-022	40	18	C1-V-022	50	12	22	7/8	22	15
C1-R-025	24.0	36	C1-T-025	32.0	24	C1-U-025	40	18	C1-V-025 [#]	50	12	25	1	25	
C1-R-028	24.0	32	C1-T-028	33.5	22	C1-U-028	40	16	C1-V-028	50	12	28	1-1/8	28	20
C1-R-032	26.0	24	C1-T-032	33.5	20	C1-U-032	40	16	C1-V-032 [#]	50	10	32	1-1/4	32	
C1-R-035	26.0	24	C1-T-035	35.0	18	C1-U-035	40	12	C1-V-035	50	10	35	1-3/8		25
C1-R-038	26.0	24	C1-T-038	35.0	16	C1-U-038	40	12	C1-V-038 [#]	50	8	38	1-1/2	38	
C1-R-042	26.0	22	C1-T-042	36.5	16	C1-U-042	40	12	C1-V-042	50	8	42	1-5/8		32
C1-R-045	26.5	20	C1-T-045	36.5	12	C1-U-045 [#]	40	12	C1-V-045 [#]	50	8	45	1-3/4		
C1-R-048	26.5	20	C1-T-048	37.5	12	C1-U-048	40	12	C1-V-048 [#]	50	8	48	1-7/8		40
C1-R-050		20	C1-T-050		12				C1-V-050 [#]	50	8				
C1-R-054	27.5	20	C1-T-054	38.0	10	C1-U-054	40	10	C1-V-054	50	8	54	2-1/8		
C1-R-057 [#]	27.5	16	C1-T-057 [#]	38.5	10				C1-V-057 [#]	50	8	57	2-1/4	57	
C1-R-060	28.0	16	C1-T-060	39.0	10	C1-U-060	40	10	C1-V-060	50	8	60	2-3/8		50
C1-R-064 [#]		14	C1-T-064 [#]		10							64			
C1-R-067 [#]	28.0	14	C1-T-067	39.5	8	C1-U-067	40	8	C1-V-067	50	6	67	2-5/8		
C1-R-076	29.0	12	C1-T-076	39.5	8	C1-U-076 [#]	40	8	C1-V-076	50	4	76	3	76	
C1-R-080 [#]		12	C1-T-080 [#]		8	C1-U-080 [#]	40	8	C1-V-080 [#]	50	4	80	3-1/8		
C1-R-089	29.5	12	C1-T-089	41.5	8	C1-U-089	40	8	C1-V-089	50	4	89	3-1/2	89	80
C1-R-108 [#]	31.0	8	C1-T-108 [#]	42.5	6	C1-U-108 [#]	40	6				108	4-1/4	108	
C1-R-114 [#]	31.5	6	C1-T-114 [#]	43.0	4	C1-U-114	40	4	C1-V-114	50	4	114	4-1/2	114	100
C1-R-133 [#]	31.5	6	C1-T-133 [#]	44.0	4							133	5-1/4		
C1-R-140 [#]	32.0	4	C1-T-140 [#]	44.5	4	C1-U-140 [#]	40	4	C1-V-140 [#]	50	4	140			125
C1-R-168 [#]		4	C1-T-168 [#]		4	C1-U-168 [#]	40	4	C1-V-168 [#]	50	4	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.

Accessories

Item	Carton content	Article description
AS-ATAPEC1T-9M	24 rolls	ArmaFlex Class 1 insulation tape (3mm thickness x 50mm width x 9.14 m)
AS-AD-5201G	4 x 3.78 litre cans	ArmaFlex 520 adhesive
AS-PAINT2.5LW	4 x 2.5 litre cans	ArmaFinish paint
CLEANER/1,0	4 x 1.0 litre cans	ArmaFlex cleaner
CUTTING-SET	1	ArmaFlex cutting set (3 knives and 1 sharpening stone)
GLUEM-BRUSH11MM	5 x 4	Glumaster (11mm diameter) Comes with extra brush points
GLUEM-BRUSH17MM	5 x 4	Glumaster (17mm diameter) Comes with extra brush points
GLUEMASTER B	12	Glumaster adhesive pump



//Cover Photo (Top)

Pudong International Airport, Shanghai, China

Effective against water vapour ingress without any additional water vapour barrier

Located directly on the coast, the Shanghai Pudong International Airport is exposed to very high humidity levels. Hence, the cooling-water lines of the air-conditioners and the hot-water lines in the arrival and departure building, in the 50,000m² freight area and in the airport hotel, as well as the air conduits in the terminal building were insulated with ArmaFlex.

All data and technical information are based on results achieved under the specific conditions defined according to the testing standards referenced. 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. Armacell takes every precaution to ensure the accuracy of the data provided in this document and all statements, technical information and recommendations contained within are believed to be correct at the time of publication. By ordering/receiving product you accept the **Armacell General Terms and Conditions of Sale** applicable in the region. Please request a copy if you have not received these.

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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 27 production plants in 17 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.



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