

**Armaflex®**  
Class 1

RELIABLE, FLEXIBLE INSULATION  
TRUSTED TO PREVENT CONDENSATION



- Closed-cell structure increases resistance to water vapor
- Reduce long-term heat gain and reduce energy loss
- Engineered wall thickness operates with the same line temperature in the same environment.
- Thermal conductivity  $\lambda_0 \text{ } ^\circ\text{C} \leq 0.034 \text{ W}/(\text{m} \cdot \text{K})$
- Water vapor resistance  $\mu \geq 10,000$
- Flexible and fibre-free for easy installation



## Technical Data - Armaflex® Class 1

Brief Description	Flexible, closed-cell insulation material with high resistance to water vapor, low thermal conductivity and optimized condensation control.
Material Type	Elastomeric foam based on synthetic rubber.
Colour	Black
Applications	Insulation for pipes, air ducts, 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.
Special Features	Engineered wall: Increasing insulation wall thickness for tubes ensures that the surface temperature is maintained as the pipe diameter is increased.
Safety and Environment	Type III Environmental Product Declaration (EPD): Declaration number 4786944121.101.1, UL Environment
Assembly	Light-weight and flexible. No additional vapor barrier is required due to reliable closed-cell structure.

Property	Value/Assessment					Test <sup>1</sup>	
<b>Temperature Range</b>							
Temperature Range	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					
<b>Thermal Conductivity</b>							
Thermal Conductivity	$\vartheta_m$	- 20	+/-0	+ 20	+ 40	[°C]	ASTM C518 EN ISO 8497 GB/T17146 GB/T10296
	$\lambda$	≤ 0.032	0.034	0.036	0.039	W/(m · K)	
<b>Water Vapor Diffusion Resistance</b>							
Water Vapor Diffusion Resistance Factor		$\mu$	≥		10,000		DIN EN 13469 DIN EN 12086 GB/T17146-1997
	Water Vapor Permeability	≤ 1.96 x 10 <sup>-11</sup> g/(m·s·Pa)					
<b>Fire Performance</b>							
Reaction to Fire	Surface Spread of Flames			Class 1			BS 476 Part 7:1997
Other Fire Class	Flammability			V-0			UL 94
Practical Fire Behaviour	Does not generate flaming droplets.						
Other	Product conforms to requirements for building products under the Fire Safety and Shelter Department of Singapore.						
<b>Other Technical Features</b>							
UV Resistance	For UV protection, Armafinish Paint 99 or Arma-Chek® Silver 350 covering system is required.						
Health Aspects	Dust- and fibre-free						
Resilience after Compression Relief	≥ 70%						GB/T6669-2001
Water Absorption by Vacuum	≤ 10%						GB/T17794
Chemical Resistance	Consult product test list						
Environmental Aspect	Zero Ozone Depleting Potential (ODP) and Global Warming Potential (GWP) Singapore Green Building Council Product Certified: Good rating						

<sup>1</sup> Further documents such as test certificates, approvals and the like can be requested using the registration number given.

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 us 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.

# Armaflex® Class 1 tubes



Length 2.0 m, Color black

Pipe max. Outside-Ø [mm]	Inner Ø min/ max mm	6.0 mm insulation thickness		9.0 mm insulation thickness	
		Code	m/carton	Code	m/carton
6	6.5 - 8.5	C1-D-006	612	C1-F-006	324
10	10.0 - 12.0	C1-D-010	440	C1-F-010	264
12	13.0 - 15.0	C1-D-012	352	C1-F-012	220
15	14.5 - 16.5	C1-D-015	264	C1-F-015	180
20	19.5 - 21.5	C1-D-020	220	C1-F-020	144
22	22.0 - 24.5	C1-D-022	180	C1-F-022	128
25	25.5 - 27.5	C1-D-025	144	C1-F-025	108
28	29.0 - 32.0	C1-D-028	144	C1-F-028	98
32	33.0 - 36.0	-	-	C1-F-032	84
35	36.0 - 39.0	-	-	C1-F-035	82
38	39.0 - 42.0	-	-	C1-F-038	72
42	43.0 - 46.0	-	-	C1-F-042	60
45	46.0 - 49.0	-	-	C1-F-045	50
48	49.0 - 52.0	-	-	C1-F-048	50
54	55.0 - 58.0	-	-	C1-F-054	40
57	58.0 - 61.0	-	-	C1-F-057	40
60	61.0 - 64.0	-	-	C1-F-060	32

Pipe max. Outside-Ø [mm]	Inner Ø min/ max mm	13.0 mm insulation thickness		19.0 mm insulation thickness	
		Code	m/carton	Code	m/carton
6	6.5 - 8.5	C1-H-006	180	C1-M-006	112
10	10.0 - 12.0	C1-H-010	144	C1-M-010	100
12	13.0 - 15.0	C1-H-012	128	C1-M-012	90
15	16.0 - 18.0	C1-H-015	112	C1-M-015	80
20	19.5 - 21.5	C1-H-020	90	C1-M-020	72
22	22.0 - 24.5	C1-H-022	90	C1-M-022	60
25	26.0 - 29.0	C1-H-025	82	C1-M-025	50
28	29.0 - 32.0	C1-H-028	72	C1-M-028	40
32	33.0 - 36.0	C1-H-032	64	C1-M-032	40
35	36.0 - 39.0	C1-H-035	58	C1-M-035	36
38	39.0 - 42.0	C1-H-038	54	C1-M-038	34
42	43.0 - 46.0	C1-H-042	48	C1-M-042	28
45	46.0 - 49.0	C1-H-045	40	C1-M-045	24
48	49.0 - 52.0	C1-H-048	40	C1-M-048	24
54	55.0 - 58.0	C1-H-054	36	C1-M-054	24
57	58.0 - 61.0	C1-H-057	32	C1-M-057	22
60	61.0 - 64.0	C1-H-060	28	C1-M-060	20
67	68.0 - 71.0	C1-H-067	24	C1-M-067	16
76	77.0 - 80.0	C1-H-076	22	C1-M-076	14
89	90.0 - 93.0	C1-H-089	18	C1-M-089	12
108	109.0 - 112.0	C1-H-108*	16	C1-M-108*	10
114	115.0 - 120.0	-	-	C1-M-114*	10
133	134.0 - 139.0	-	-	C1-M-133*	6
140	141.0 - 146.0	-	-	C1-M-140*	6

## Armaflex® Class 1 tubes



Length 2.0 m, Color black

Pipe max. Outside-Ø [mm]	Inner Ø min/ max mm	25.0 mm insulation thickness		32.0 mm insulation thickness	
		Code	m/carton	Code	m/carton
10	10.0 - 12.5	C1-R-010	60	-	-
12	13.0 - 15.5	C1-R-012	56	-	-
15	16.0 - 18.0	C1-R-015	48	C1-T-015	32
20	19.5 - 21.5	C1-R-020	40	C1-T-020	24
22	22.0 - 24.5	C1-R-022	40	C1-T-022	24
25	26.0 - 29.0	C1-R-025	36	C1-T-025	24
28	29.0 - 32.0	C1-R-028	32	C1-T-028	22
32	33.0 - 36.0	C1-R-032	24	C1-T-032	20
35	36.0 - 39.0	C1-R-035	24	C1-T-035	18
38	39.0 - 42.0	C1-R-038	24	C1-T-038	16
42	43.0 - 46.0	C1-R-042	22	C1-T-042	16
45	46.0 - 49.0	C1-R-045	20	C1-T-045	12
48	49.0 - 52.0	C1-R-048	20	C1-T-048	12
54	55.0 - 58.0	C1-R-054	20	C1-T-054	10
57	58.0 - 61.0	C1-R-057	16	C1-T-057	10
60	61.0 - 64.0	C1-R-060	16	C1-T-060	10
67	68.0 - 71.0	C1-R-067	14	C1-T-067	8
76	77.0 - 80.0	C1-R-076	12	C1-T-076	8
89	90.0 - 93.0	C1-R-089	12	C1-T-089	8
108	109.0 - 112.0	C1-R-108*	8	C1-T-108*	6
114	115.0 - 120.0	C1-R-114*	6	C1-T-114*	4
133	134.0 - 139.0	C1-R-133*	6	C1-T-133*	4
140	141.0 - 146.0	C1-R-140*	4	C1-T-140*	4

Pipe max. Outside-Ø [mm]	Inner Ø min/ max mm	40.0 mm insulation thickness		50.0 mm insulation thickness	
		Code	m/carton	Code	m/carton
15	16.0 - 18.5	C1-U-015	22	C1-V-015	14
20	19.5 - 22.0	C1-U-020	22	C1-V-020	12
22	22.0 - 24.5	C1-U-022	18	C1-V-022	12
25	26.0 - 29.0	C1-U-025	18	C1-V-025	12
28	29.0 - 32.0	C1-U-028	16	C1-V-028	12
32	33.0 - 36.0	C1-U-032	16	C1-V-032	10
35	36.0 - 39.0	C1-U-035	12	C1-V-035	10
38	39.0 - 42.0	C1-U-038	12	C1-V-038	8
42	43.0 - 46.0	C1-U-042	12	C1-V-042	8
45	46.0 - 49.0	C1-U-045	12	C1-V-045	8
48	49.0 - 52.0	C1-U-048	12	C1-V-048	8
54	55.0 - 58.0	C1-U-054	10	C1-V-054	8
57	58.0 - 61.0	C1-U-057	10	C1-V-057	8
60	61.0 - 64.0	C1-U-060	10	C1-V-060	8
67	68.0 - 71.0	C1-U-067	8	C1-V-067	6
76	77.0 - 80.0	C1-U-076	8	C1-V-076	4
89	90.0 - 93.0	C1-U-089	8	C1-V-089	4

### Remark

\*Recommend replacing with sheet insulation.  
Engineered wall: The thickness of the insulation material will be increased for every increase in pipe size.

## Armaflex® Class 1 sheets



Width 1.0 m, Length 3.0 m, Color black

Code	Insulation thickness [mm]	m <sup>2</sup> /carton
C1 40100CS	40.0	3
C1 50100CS	50.0	3

## Armaflex® Class 1 sheets endless



Width 1.5 m, Color black

Code	Insulation thickness [mm]	Roll length [m]	m <sup>2</sup> /carton
<b>C1 06150CS</b>	6.0	15	22.5
<b>C1 09150CS</b>	9.0	10	15
<b>C1 13150CS</b>	13.0	8	12
<b>C1 16150CS</b>	16.0	7	10.5
<b>C1 19150CS</b>	19.0	6	9
<b>C1 25150CS</b>	25.0	4	6
<b>C1 32150CS</b>	32.0	3	4.5

## Armaflex® Class 1 tapes self-adhesive



Code	Article description	Width [mm]	Length [m]	Thickness [mm]	Rolls/carton
<b>AS-ATAPEC1T-9M</b>	Armaflex® Class 1 self-adhesive tape, black (9.14m x 50mm x 3mm)	50.0	9.14	3	24

## Armaflex® Class 1 accessories



Code	Article description	Pieces/carton
<b>ADH820-700 ML-SE</b>	Armaflex® 820 adhesive, 0.7 litre cans	12
<b>AS-AD-5201G</b>	Armaflex® 520 adhesive, 3.78 litre cans	4
<b>AS-PAINT2.5LW</b>	Armafinish paint 99, white, 2.5 litre cans	4
<b>CLEANER/1,0</b>	Special cleaner for use with Armaflex® Adhesive 520 and Armaflex® Adhesive HT625.	4
<b>CUTTING-SET</b>	Armaflex® knife-set (3 knives + 1 sharpening stone)	1
<b>GLUEM-BRUSH11MM</b>	Gluemaster extra brush points with cap (11mm diameter)	5x4
<b>GLUEM-BRUSH17MM</b>	Gluemaster extra brush points with cap (17mm diameter)	5x4
<b>GLUEMASTER B</b>	Armaflex® Gluemaster (adhesive pump)	12

