

# AF/Armaflex® Class 0

THE FLEXIBLE INSULATION SYSTEM TO  
PREVENT CONDENSATION AND ENERGY  
LOSSES



- Reliable condensation control with closed-cell Armaflex structure
- Effective reduction of thermal losses
- Built-in Microban® antimicrobial protection reduces mould and bacteria growth
- Class 0 Fire Performance
- NEW! Improved thermal conductivity value  $\lambda_0 \text{ °C} \leq 0.033 \text{ W/(m} \cdot \text{K)}$
- NEW! Improved water vapour resistance value  $\mu \geq 10,000$
- Made in the UK



## AF/Armaflex Class 0

### TRIPLE SECURITY

AF/Armaflex Class 0 is the professional flexible insulation for reliable condensation control. The combination of a low thermal conductivity value of  $0.033 \text{ W/(m} \cdot \text{K)}$  and extremely high resistance to water vapour transmission ( $\mu \geq 10,000$ ) prevents long-term energy losses, water vapour ingress and reduces the risk of corrosion under insulation.

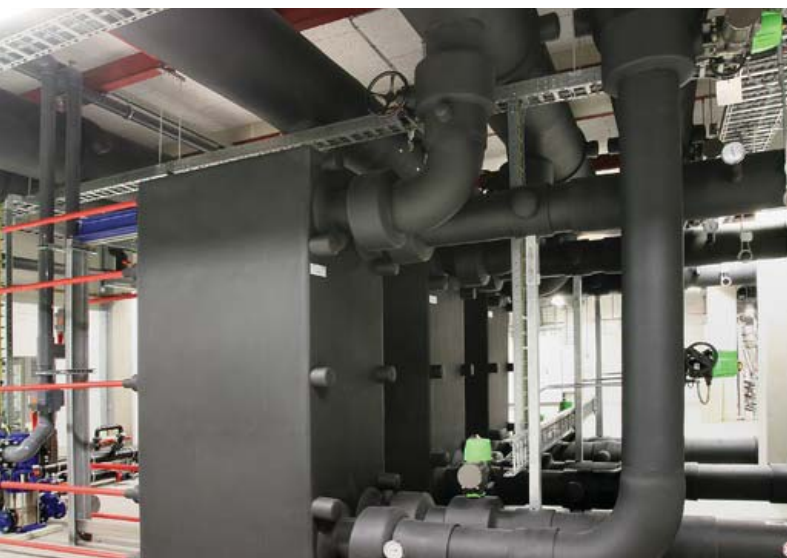


### AF/ARMAFLEX CLASS 0 WITH ACTIVE MICROBAN® ANTIMICROBIAL PROTECTION

Conditioned systems can be problematic for the development of microbes and contamination, with indoor air up to 10 times more polluted than outdoor air. Microbes found in and on HVAC systems include stain and odour causing bacteria and mould and mildew. These microbes subsequently emit spores, cells, fragments and volatile organic compounds (VOC) into indoor air which contributes to sick building syndrome. Mould and mildew can additionally cause degradation of insulation materials.

AF/Armaflex Class 0 is the first flexible insulation material equipped with MICROBAN® technology. When microbes come into contact with the insulation surface, MICROBAN® protection penetrates the cell wall of the microorganism, disabling its ability to function, grow and reproduce. Because the protection is built in during the manufacturing process, it will not wash off or wear away. This gives AF/Armaflex Class 0 products an added level of protection against mould and mildew and is therefore the ideal solution for insulating ventilation or air-conditioning equipment in schools, hospitals, care homes, offices and airports, as well as mechanical systems in the pharmaceutical and food industries.





## TRUSTED FOR 40 YEARS

With a combination of internal and externally monitored technical values we offer consistently high-quality products. This is the result of 40 years experience and continual research and development of the product properties.

AF/Armaflex Class O is manufactured in the UK to meet local fire standards, is compliant with the CE marking legislation requirements for thermal insulation products and is tested to the new Euroclass fire standards.



## COMPLETE SYSTEM

Armacell offers a complete and carefully considered system solution to meet professional insulation requirements: AF/Armaflex Class O standard, self-adhesive and endless tubes, sheet, tape and accessories.



Ready made **specification texts** are available to download and use from the ArmaPlus section of the UK website ([www.armacell.com](http://www.armacell.com)).

**ArmWin** is the technical calculation program from Armacell that allows the correct insulation thickness to be determined for preventing condensation and to minimise energy losses.

**Application training:** Accredited training for insulation contractors is available and upon successful completion, certification is provided for attendees.

## Technical Data - AF/Armaflex Class 0

Brief description	Flexible, closed-cell insulation material with built-in Microban® antimicrobial protection
Material type	Elastomeric foam based on synthetic rubber. Factory made flexible elastomeric foam (FEF) according to EN 14304.
Colour	Black
Material Special Information	Self-adhesive coating: pressure-sensitive adhesive coating on modified acrylate basis with mesh structure. Covered with polyethylene film. Traces of silicon can be found on the protective film used on self-adhesive closures.
Applications	Insulation / protection to control condensation, reduce energy losses and protect against frost on pipes, air ducts, vessels (incl. elbows, fittings, flanges etc.) Suitable for hot and cold water services, chilled water lines, heating systems, air conditioning ductwork and refrigerated pipework.
Special Features	MCCP-free
Safety and Environment	Type III Environmental Product Declaration (EPD): Declaration number "EPD-ARM-20150110-IBB1-DE", Institut Bauen und Umwelt e.V. (IBU)
Assembly	Light weight and flexible. Closed cell structure means no additional vapour barrier is required.
Remarks	Certificate of Constancy of Performance, Güteschutzgemeinschaft Hartschaum e.V. , Celle

Property	Value/Assessment			Test <sup>2</sup>	Special Remarks	
Temperature Range						
Temperature Range	Max. service temperature	+ 110 °C	(+ 85 °C if sheet or tape is glued to the object with its whole surface.)	EU 5621 EU 6228	Tested acc. to EN 14706, EN 14707 and EN 14304	
	Min. service temperature <sup>1</sup>	-50 °C				
Thermal Conductivity						
Thermal Conductivity	$\vartheta_m$	+/-0	°C	EU 5621 EU 6228	Declared acc. to EN ISO 13787 Tested acc. to EN 12667 EN ISO 8497	
	Tubes 6-19 mm	$\lambda \leq 0.033$	W/(m · K)			$[33 + 0,1 \cdot \vartheta_m + 0,0008 \cdot \vartheta_m^2]/1000$
	Tubes 25-32 mm	$\lambda \leq 0.036$	W/(m · K)			$[36 + 0,1 \cdot \vartheta_m + 0,0008 \cdot \vartheta_m^2]/1000$
	Sheets, tape 3-32 mm	$\lambda \leq 0.033$	W/(m · K)			$[33 + 0,1 \cdot \vartheta_m + 0,0008 \cdot \vartheta_m^2]/1000$
Water vapour diffusion resistance						
Water vapour diffusion resistance	Tubes 6-19 mm ; Sheets 6-32 mm	$\mu$	$\geq$	10,000	EU 5621 EU 6228	Tested acc. to EN 12086 EN 13469
	Tubes 25-32 mm	$\mu$	$\geq$	7,000		
Fire performance						
Reaction to fire <sup>2</sup>	tubes		B <sub>L</sub> -s3, d0	EU 5411 EU 5490	Classified acc. to EN 13501-1 Tested acc. to EN 13823 EN ISO 11925-2	
	sheets & tape		B-s3,d0			
	Surface Spread of Flames		Class 1	GB 5151 & GB 5153	Surface Spread of Flame: tested according to BS 476 Part 7:1997	
	Fire Propagation		Total Index Performance (I) ≤ 12 Sub Index (i <sub>1</sub> ) ≤ 6			
	Fire Performance acc. to Building Regulations		Class 0	GB 5150 & GB 5152	Fire Propagation: tested according to BS 476 Part 6:1989	
Other fire class	FM-approved			D 5551	Tested according to UBC26-3, Class No.4924	
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames					
Other technical features						
Dimensions and tolerances	In accordance with EN 14304, table 1			EU 5621 EU 6228	Tested acc. to EN 822, EN 823, EN 13467	
UV resistance	Protection against UV-radiation is necessary. See disclaimer.					
Health aspects	ODP & GWP ratings of zero					
Storage & Shelf life	Self-adhesive tapes, self-adhesive sheets, self-adhesive tubes: 1 year				Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).	
Antimicrobial behaviour	In-built Microban® active antimicrobial protection: No fungal growth observed					

1. For temperatures below -50 °C please contact our Technical Department to request the corresponding technical information.

2. The building materials classification is valid on metal or solid, mineral surfaces.

\*1 Further documents such as test certificates and approvals can be requested using the registration number given.

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Installation instructions are given in our Armaflex installation manual. Not suitable for outside use. Armaflex should be protected within 3 days of installation with Armafinish Paint or Arma-Chek covering. With some refrigerants the discharge temperature may exceed +110 °C, please consult our Technical Department for further information.



# AF/Armaflex Class 0 tubes



Length 2.0 m, Colour Black, Microban®

Pipe max. Outside-Ø [mm]	Inner Ø min/ max mm (tube)	6,0 mm insulation thickness		9,0 mm insulation thickness	
		Code	m/carton	Code	m/carton
6	7.0 - 9.0	AF-CO-06X006	544	AF-CO-09X006	352
10	11.0 - 13.0	AF-CO-06X010	400	AF-CO-09X010	280
12	13.0 - 15.0	AF-CO-06X012	336	AF-CO-09X012	240
15	16.0 - 18.0	AF-CO-06X015	266	AF-CO-09X015	192
20	21.0 - 23.0	-	-	AF-CO-09X020	156
22	23.0 - 25.0	-	-	AF-CO-09X022	140
28	29.0 - 31.5	-	-	AF-CO-09X028	98
35	36.0 - 38.5	-	-	AF-CO-09X035	84
42	43.0 - 46.0	-	-	AF-CO-09X042	60
48	49.0 - 51.5	-	-	AF-CO-09X048	56
54	55.0 - 58.0	-	-	AF-CO-09X054	54
60	61.0 - 64.0	-	-	AF-CO-09X060	42

Pipe max. Outside-Ø [mm]	Inner Ø min/ max mm (tube)	13,0 mm insulation thickness		19,0 mm insulation thickness	
		Code	m/carton	Code	m/carton
6	7.0 - 9.0	AF-CO-13X006	226	-	-
10	11.0 - 13.0	AF-CO-13X010	188	AF-CO-19X010	104
12	13.0 - 15.0	AF-CO-13X012	162	AF-CO-19X012	92
15	16.0 - 18.0	AF-CO-13X015	136	AF-CO-19X015	78
20	21.0 - 23.0	AF-CO-13X020	112	AF-CO-19X020	70
22	23.0 - 25.0	AF-CO-13X022	104	AF-CO-19X022	64
28	29.0 - 31.5	AF-CO-13X028	78	AF-CO-19X028	50
35	36.0 - 38.5	AF-CO-13X035	60	AF-CO-19X035	40
42	43.0 - 46.0	AF-CO-13X042	56	AF-CO-19X042	32
48	49.0 - 51.5	AF-CO-13X048	40	AF-CO-19X048	30
54	55.0 - 58.0	AF-CO-13X054	42	AF-CO-19X054	24
60	61.0 - 64.0	AF-CO-13X060	36	AF-CO-19X060	24
67	68.0 - 71.0	AF-CO-13X067	34	AF-CO-19X067	20
76	77.0 - 80.0	AF-CO-13X076	28	AF-CO-19X076	18
80	81.0 - 84.0	AF-CO-13X080	28	AF-CO-19X080	16
89	90.0 - 93.0	AF-CO-13X089	22	AF-CO-19X089	16
93	94.0 - 97.0	AF-CO-13X093 •	20	AF-CO-19X093 •	16
108	110.0 - 114.0	AF-CO-13X108 •	18	AF-CO-19X108 •	12
114	116.0 - 120.0	AF-CO-13X114 •	18	AF-CO-19X114 •	12

Pipe max. Outside-Ø [mm]	Inner Ø min/ max mm (tube)	25,0 mm insulation thickness		32,0 mm insulation thickness	
		Code	m/carton	Code	m/carton
12	13.0 - 15.0	AF-CO-25X012	50	-	-
15	16.0 - 18.0	AF-CO-25X015	48	AF-CO-32X015	32
20	21.0 - 23.0	AF-CO-25X020	40	-	-
22	23.0 - 25.0	AF-CO-25X022	40	AF-CO-32X022	32
28	29.0 - 31.5	AF-CO-25X028	32	AF-CO-32X028	24
35	36.0 - 38.5	AF-CO-25X035	24	AF-CO-32X035	18
42	43.0 - 46.0	AF-CO-25X042	24	AF-CO-32X042	16
48	49.0 - 51.5	AF-CO-25X048	22	AF-CO-32X048	12
54	55.0 - 58.0	AF-CO-25X054	18	AF-CO-32X054	12
60	61.0 - 64.0	AF-CO-25X060	18	AF-CO-32X060	12
67	68.0 - 71.0	AF-CO-25X067	16	AF-CO-32X067	12
76	77.0 - 80.0	AF-CO-25X076	14	AF-CO-32X076	10
80	81.0 - 84.0	AF-CO-25X080	12	-	-
89	90.0 - 93.0	AF-CO-25X089	12	AF-CO-32X089	8
93	94.0 - 97.0	AF-CO-25X093 •	12	-	-
108	110.0 - 114.0	AF-CO-25X108 •	8	-	-
114	116.0 - 120.0	AF-CO-25X114 •	8	AF-CO-32X114 •	6

Length tolerance for tubes:

± 1,5 %

Thickness tolerance

≤ 8 mm: ±1,0 mm  
9 - 18 mm: ±1,5 mm  
19 - 31 mm: ±2,5 mm  
> 31 mm: ±3,0 mm

Remark

All AF/Armaflex Class O tubes available as SLIT items. Add 0.12 p/m net after discount has been applied.  
For ordering add -SLT to above codes (e.g. AF-CO-19X010-SLT)

• Not a stock item. Delivery on request.

## AF/Armaflex Class 0 tubes DBSCG



Pipe max. Outside-Ø [mm]	Domestic Building Services Compliance Guide Range insulation thickness			
	Max. Permissible Heat loss [W/m]	Thickness [mm]	Code	m/carton
8	7.06	13.0	AF-CO-13X010	188
10	7.23	13.0	AF-CO-13X010	188
12	7.35	19.0	AF-CO-19X012	92
15	7.89	19.0	AF-CO-19X015	78
22	9.12	25.0	AF-CO-25X022	40
28	10.07	25.0	AF-CO-25X028	32
35	11.08	25.0	AF-CO-25X035	24
42	12.19	25.0	AF-CO-25X042	24
54	14.12	32.0	AF-CO-32X054	12

## AF/Armaflex Class 0 self-adhesive tubes (Self Seal)



Length 2.0 m, Colour Black, Microban®

Pipe max. Outside-Ø [mm]	Inner Ø min/ max mm (tube)	9,0 mm		13,0 mm	
		Code	m/carton	Code	m/carton
15	16.0 - 18.0	AF-CO-09X015-A	192	AF-CO-13X015-A	136
20	21.0 - 23.0	AF-CO-09X020-A •	156	AF-CO-13X020-A •	112
22	23.0 - 25.0	AF-CO-09X022-A	140	AF-CO-13X022-A	104
28	29.0 - 31.5	AF-CO-09X028-A	98	AF-CO-13X028-A	78
35	36.0 - 38.5	AF-CO-09X035-A	84	AF-CO-13X035-A	60
42	43.0 - 46.0	AF-CO-09X042-A	60	AF-CO-13X042-A	56
48	49.0 - 51.5	AF-CO-09X048-A •	56	AF-CO-13X048-A	40
54	55.0 - 58.0	AF-CO-09X054-A	54	AF-CO-13X054-A	42
60	61.0 - 64.0	AF-CO-09X060-A •	42	AF-CO-13X060-A	36
67	68.0 - 71.0	-	-	AF-CO-13X067-A •	34
76	77.0 - 80.0	-	-	AF-CO-13X076-A	28
89	90.0 - 93.0	-	-	AF-CO-13X089-A	22

Pipe max. Outside-Ø [mm]	Inner Ø min/ max mm (tube)	19,0 mm		25,0 mm	
		Code	m/carton	Code	m/carton
15	16.0 - 18.0	AF-CO-19X015-A	78	AF-CO-25X015-A	48
20	21.0 - 23.0	AF-CO-19X020-A •	70	AF-CO-25X020-A •	40
22	23.0 - 25.0	AF-CO-19X022-A	64	AF-CO-25X022-A	40
28	29.0 - 31.5	AF-CO-19X028-A	50	AF-CO-25X028-A	32
35	36.0 - 38.5	AF-CO-19X035-A	40	AF-CO-25X035-A	24
42	43.0 - 46.0	AF-CO-19X042-A	32	AF-CO-25X042-A	24
48	49.0 - 51.5	AF-CO-19X048-A	30	AF-CO-25X048-A	22
54	55.0 - 58.0	AF-CO-19X054-A	24	AF-CO-25X054-A	18
60	61.0 - 64.0	AF-CO-19X060-A	24	AF-CO-25X060-A	18
67	68.0 - 71.0	AF-CO-19X067-A •	20	AF-CO-25X067-A •	16
76	77.0 - 80.0	AF-CO-19X076-A	18	AF-CO-25X076-A	14
89	90.0 - 93.0	AF-CO-19X089-A	16	AF-CO-25X089-A	12

Length tolerance for tubes:

± 1,5 %

Thickness tolerance

≤ 8 mm: ±1,0 mm  
 9 - 18 mm: ±1,5 mm  
 19 - 31 mm: ±2,5 mm  
 > 31 mm: ±3,0 mm

• Not a stock item. Delivery on request.

## AF/Armaflex Class 0 tubes endless (coils)



Colour Black, Microban®, Coil length 15 m, supplied in polyethylene bag

Pipe max. Outside-Ø [mm]	Inner Ø min/ max mm (tube)	6,0 mm insulation thickness		9,0 mm insulation thickness	
		Code	m/carton	Code	m/carton
6	7.0 - 9.0	-	-	AF-CO-09X006/E-15	180
10	11.0 - 13.0	AF-CO-06X010/E-15	210	AF-CO-09X010/E-15	150
12	13.0 - 15.0	AF-CO-06X012/E-15	180	AF-CO-09X012/E-15	135
15	16.0 - 18.0	AF-CO-06X015/E-15	135	AF-CO-09X015/E-15	135
20	21.0 - 23.0	-	-	AF-CO-09X020/E-15	105
22	23.0 - 25.0	-	-	AF-CO-09X022/E-15	90
28	29.0 - 31.5	-	-	AF-CO-09X028/E-15	75

Pipe max. Outside-Ø [mm]	Inner Ø min/ max mm (tube)	13,0 mm insulation thickness			
		Code	m/carton		
6	7.0 - 9.0	AF-CO-13X006/E-15	135	-	-
10	11.0 - 13.0	AF-CO-13X010/E-15	105	-	-
12	13.0 - 15.0	AF-CO-13X012/E-15	90	-	-
15	16.0 - 18.0	AF-CO-13X015/E-15	90	-	-
20	21.0 - 23.0	AF-CO-13X020/E-15	90	-	-
22	23.0 - 25.0	AF-CO-13X022/E-15	75	-	-
28	29.0 - 31.5	AF-CO-13X028/E-15	60	-	-

Length tolerance for tubes:	± 1,5 %		
Thickness tolerance	≤ 8 mm:	±1,0 mm	
	9 -18 mm:	±1,5 mm	

## AF/Armaflex Class 0 tubes endless (coils)



Colour Black, Air Conditioning coils supplied in a specially designed carton for easy dispense

Pipe max. Outside-Ø [mm]	6,0 mm insulation thickness		9,0 mm insulation thickness	
	Code	m/carton	Code	m/carton
6	-	-	AF-CO-09X006/E	70
10	AF-CO-06X010/E	75	AF-CO-09X010/E	50
12	-	-	AF-CO-09X012/E	45
15	AF-CO-06X015/E	55	AF-CO-09X015-E	40
20	-	-	AF-CO-09X020/E	34
22	-	-	AF-CO-09X022/E	30
28	-	-	AF-CO-09X028/E	26

Pipe max. Outside-Ø [mm]	13,0 mm insulation thickness			
	Code	m/carton		
6	AF-CO-13X006/E	45	-	-
10	AF-CO-13X010/E	35	-	-
12	AF-CO-13X012/E	32	-	-
15	AF-CO-13X015/E	32	-	-
20	AF-CO-13X020/E	28	-	-
22	AF-CO-13X022/E	26	-	-
28	AF-CO-13X028/E	20	-	-

Length tolerance for tubes:	± 1,5 %		
Thickness tolerance	≤ 6 mm:	±1,0 mm	
	9 -18 mm:	±1,5 mm	

## AF/Armaflex Class 0 sheets



Length 2.0 m, Width 0.5 m, Colour Black, Microban®

Code	Thickness [mm]	m <sup>2</sup> /carton
AF-CO-10MM	10.0	13
AF-CO-13MM	13.0	9
AF-CO-19MM	19.0	7
AF-CO-25MM	25.0	5
AF-CO-32MM	32.0	4

Length tolerance for sheets

±1,5 %

Thickness tolerance for sheets

≤ 6 mm: ±1,0 mm

7 - 19 mm: ±1,5 mm

> 19 mm: ±2,0 mm

## AF/Armaflex Class 0 self-adhesive sheets



Length 2.0 m, Width 0.5 m, Colour Black, Microban®

Code	Thickness [mm]	m <sup>2</sup> /carton
AF-CO-10MM/A •	10.0	13
AF-CO-13MM/A •	13.0	9
AF-CO-19MM/A •	19.0	7
AF-CO-25MM/A •	25.0	5
AF-CO-32MM/A •	32.0	4

Length tolerance for sheets

±1,5 %

Thickness tolerance for sheets

≤ 6 mm: ±1,0 mm

7 - 19 mm: ±1,5 mm

> 19 mm: ±2,0 mm

• Not a stock item. Delivery on request.

## AF/Armaflex Class 0 continuous sheets (rolls)



Width 1.0 m, Colour Black

1,0 m width			
Code	Thickness [mm]	Roll length [m]	m <sup>2</sup> /carton
AF-03MM/E •	3.0	30	30
AF-CO-06MM/E	6.0	15	15
AF-CO-10MM/E	10.0	10	10
AF-CO-13MM/E	13.0	8	8
AF-CO-19MM/E	19.0	6	6
AF-CO-25MM/E	25.0	4	4
AF-CO-32MM/E	32.0	3	3
AF-50MM/E •	50.0	5	5

Length tolerance for sheets

± 5 % - 1.5%

Thickness tolerance for sheets

≤ 6 mm: ±1,0 mm

7 - 19 mm: ±1,5 mm

> 19 mm: ±2,0 mm

• Not a stock item. Delivery on request.



## AF/Armaflex Class 0 continuous sheets self-adhesive (rolls)



Width 1.0 m, Microban®

1,0 m width			
Code	Thickness [mm]	Roll length [m]	m <sup>2</sup> /carton
AF-03MM/EA •	3.0	30	30
AF-CO-06MM/EA •	6.0	15	15
AF-CO-10MM/EA •	10.0	10	10
AF-CO-13MM/EA •	13.0	8	8
AF-CO-19MM/EA •	19.0	6	6
AF-CO-25MM/EA •	25.0	4	4
AF-CO-32MM/EA •	32.0	3	3
AF-50MM/EA	50.0	5	5

Length tolerance for sheets

± 5 % - 1.5%

Thickness tolerance for sheets

≤ 6 mm: ±1,0 mm

7 -19 mm: ±1,5 mm

> 19 mm: ±2,0 mm

• Not a stock item. Delivery on request.

## AF/Armaflex Class 0 self-adhesive tapes



Length 15.0 m, Width 50.0 mm, Thickness 3.0 mm, Colour Black, Microban®

Code	Width [mm]	Length [m]	Thickness [mm]	Rolls/carton
AF-TAPE-MC	50.0	15	3	12

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