# armacell

AF/ARMAFLEX

THE FIRST CHOICE FOR PROFESSIONAL INSTALLATIONS



- · Increases equipment life cycle
- · High flexibility and ease of installation
- Reliable condensation control and prevention of corrosion under insulation (CUI)
- 10-year System Warranty possible\*









#### **AF/Armaflex**









#### \*10-YEAR SYSTEM WARRANTY

The Armaflex System Warranty is a partner scheme in which trained and certified insulation companies receive a warranty of up to ten years instead of the two-year warranty period.

This concept, which is unique in the market, gives the certified companies a direct competitive advantage when submitting tenders. What's more, specifiers, trade partners and clients benefit from the seal of quality, too. Fore more information, please visit: https://arma.link/systemwarranty

#### **TRUSTED SINCE 50 YEARS**

With a combination of internal and externally monitored technical values we offer consistently high-quality products. This is the result of 50 years expierence and continual research and further development of the product properties which determine the quality. Since AF/Armaflex is distributed throughout Europe, it does not just comply with national standards and controls but we are also thinking ahead, preparing for the future European product and testing standards.

The combination of high  $\mu$ -value, low  $\lambda$ -value and the engineered wall thickness of AF/Armaflex not only ensures reliable protection against condensation, but also meets the most stringent energy-saving regulations, contributing to an optimal energy efficiency of the installation.

#### **COMPLETE SYSTEM**

Armacell offers a complete carefully considered and coordinated system solution for any professional insulation challenge: AF/Armaflex standard, self-adhesive and endless tubes and sheets, tape and accessories. Armafix AF pipe supports to avoid thermal bridging, Armaflex Protect fire barrier as well as AF/Armaflex with Arma-Chek flexible covering systems. The wide range of specially developed accessories such as the new generation of adhesives and the Armaflex Toolbox for applying Armaflex insulation materials make installation even easier.

At www.armacell.com you will find in the Refrigeration & Air-Conditioning section under AF/Armaflex readymade **specification texts** to download and use.

**ArmWin** is the technical calculation program of Armacell. This allows you to determine i.a. the correct insulation thickness to prevent condensation and to minimize energy losses.

**Application trainings:** We train insulation contractor and offer valuable assistance for your daily work. A successful participation in a training, we certify with one in the Industry recognized certificate.

All services around our products you will find at **www. armacell.com** 

#### **AF/Armaflex**

#### TRIPLE SECURITY

AF/Armaflex is the professional flexible insulation for reliable continuous condensation control. The optimal combination of a very low thermal conductivity and extremely high resistance to water vapour transmission prevents long-term energy losses and water vapour ingress and reduces the risk of corrosion under insulation.



### AF/ARMAFLEX ACTIVE MICROBAN® ANTIMICROBIAL PROTECTION

An EPA (Environmental Protection Agency, US) survey indicates that conditioned areas are frequently breeding havens for microbes and contamination. Indoor air can be up to 10 times more polluted than outdoor air. Microbial pollution is a key element of indoor air pollution. Microbes, which can be found in and on HVAC systems, include stain and odor causing bacteria, mould and mildew. These microbes subsequently emit spores, cells, fragments and volatile organic compounds (VOC) into indoor air, thus possibly contributing to the well-known sick building syndrome. Mould and mildew additionally initiate the biological or chemical degradation of materials. AF/Armaflex is the first flexible insulation material equipped with MICROBAN® technology. When microbes come in 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 products an added level of protection against mould and mildew and is therefore the ideal long-term solution for insulating ventilation or air-conditioning equipment in public buildings such as schools, hospitals, elderly homes, offices and airports, as well as the mechanical systems in the pharmaceutical or food industries.





#### AF/ArmaFlex fitting covers

The dust- and fibre-free AF/ArmaFlex is not only very pleasant to work with, it's also time- and cost-efficient. Installation is now even simpler and faster with the new prefabricated AF/ArmaFlex fitting covers. Whereas in the past installers often had to fabricate elbows and T-pieces from ArmaFlex tubes and sheets under time pressure and difficult conditions on the building site, they can now turn to prefabricated products. The fitting covers are not only much faster and easier to install, they also optimise material consumption by minimising waste.



#### THE ADVANTAGES ARE CLEAR:

- Significant time savings (no prefabrication by hand, fewer tack-drying periods)
- Higher performance with the same installation time
- Reduction in the amount of adhesive used on the building site
- Greater reliability (less risk of application errors on the seams)
- Cost savings (billable services)

The fitting covers are perfectly coordinated with both the AF/ArmaFlex and Arma-Chek Silver range. Further time and cost-savings can be achieved with the factory-covered Arma-Chek Silver products.

#### SIGNIFICANT TIME SAVINGS

As a case study carried out by Armacell shows, previously unused time-saving potential can be tapped by installing AF/ArmaFlex fitting covers. The study is based on a typical tender for low-temperature insulation work. It includes the insulation of a total of 1,241 m of pipework and 1,223 fittings, including 946 elbows and T-pieces. If AF/ArmaFlex fitting covers are used in this project, the assembly time can be reduced by up to 70 % compared to the traditional installation process. In this case that corresponds to a 40-hour working week.





## TREND TOWARDS INCREASED USE OF PRE-FABRICATED COMPONENTS

Today, employees are more in demand than ever in the construction industry and the insulation sector is particularly hard hit by the shortage of skilled workers. This trend will become even more pronounced in the future as the number of apprentices in the skilled trades continues to decrease. Therefore, industrially prefabricated components are becoming more and more attractive. Using ArmaFlex fitting covers allows skilled personnel to concentrate on more complex tasks – without compromising the quality and reliability of the application.



## AF/Armaflex in the Hilton Schiphol Hotel

If the hotel industry awarded stars for the insulation concept, the new Hilton Amsterdam Airport Schiphol Hotel would certainly have deserved a fifth star. The impressive building complex relies on the tried-and-tested combination of AF/Armaflex and Armafix AF and the insulation work was carried out under the Armaflex System Warranty.



#### **CHALLENGE**

When planning the hotel great importance was attached to the sustainability of the building. Energy consumption is 10 % lower than the Energy Performance Coefficient (EPC) legally required in the Netherlands. Consultant engineers Deerns achieved this feat by combining a wide range of energy-saving measures.

#### **SOLUTION**

All in all, Unica Installatietechniek installed 31 km of pipework in the building complex, around half of which is dedicated to cooling the building. These pipes have feed temperatures of 10 °C and return temperatures of 18 °C. To protect the chilledwater pipes against condensation and energy losses, consultant engineers Deerns specified AF/Armaflex insulation material.

On the pipes and on other components in the plant rooms employees of the insulation contractor Riweltie BV installed tubes and sheets in insulation thicknesses of 16 and 19 mm. The outdoor air intake ducts were insulated with some 4,000 m2 of AF/Armaflex sheet material in an insulation thickness of 25 mm.

#### Hans de Klein Technical Commercial Director at Riweltie BV insulation contractors

"We realized this project with the Armaflex System Warranty. When we use AF/Armaflex in combination with the Armafix AF pipe support we now receive a project-related warranty of 10 years. A great idea from Armacell."

#### Technical Data - AF/Armaflex

Brief description Highly-flexible, closed-cell insulation material with high water vapour diffusion resistance, low thermal conductivity and 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 foil. Traces of silicon can be found on the protection paper/foil used to protect self-adhesive closures.

Applications Insulation / protection for pipes, air ducts, vessels (incl. elbows, fittings, flanges etc.) of air-conditioning / refrigeration and process equipment to prevent condensation and save energy. Structure-borne noise reduction in service-water and waste-water installations.

Special Features Increasing insulation wall thicknesses 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 "EPD-ARM-20150060-IBB1-DE", Institut Bauen und Umwelt e.V. (IBU)

Remarks Declaration of Performance is available in accordance with Article 7(3) of Regulation (EU) No 305/2011 on our homepage: www.armacell.com/DoP"

Property	Value/Assessment			Test*1	Special Remark
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 5661	Tested acc. to EN 14706, EN 14707 and EN 14304
	min. service temperature <sup>1</sup>	-50 °C			EN 14004
Thermal Conductivity					
Thermal Conductivity	θm  +/-0 °C  Tubes $ λ ≤ 0,033 $ (AF-1 to AF-4)	W/(m · K)	$\lambda = [33 + 0.1 \cdot \vartheta_{m} + 0.0008 \cdot \vartheta_{m}^{2}]/1000$	EU 5661	Declared acc. to EN ISO 13787 Tested acc. to EN 12667 EN ISO 8497
	Tubes $\lambda \leq 0.036$ (AF-5 to AF-6)	W/(m·K)	$[36 + 0,1 \cdot \vartheta_{m} + 0,0008 \cdot \vartheta_{m}^{2}]/1000$		
	Sheets, $\lambda \leq 0.033$ strips, tape (AF-03MM to AF-32MM)	W/(m·K)	$[33 + 0,1$ $\vartheta_{m} + 0,0008 \cdot \vartheta_{m}^{2}]/1000$		
	Sheets λ ≤ 0,036 (AF-50MM	W/(m·K)	$[36 + 0,1 \cdot \vartheta_{m} + 0,0008 \cdot \vartheta_{m}^{2}]/1000$		
Water vapour diffusio	n resistance				
Water vapour diffusion resistance	Sheets (AF-03MM to µ AF-32MM) and Tubes (AF-1 to AF-4)	2	10.000	EU 5661	Tested acc. to EN 12086 and EN 13469
	Sheets (AF-50MM) and µ Tubes (AF-5 to AF-6)	≥	7.000		
Fire performance					
Reaction to fire	tubes	B <sub>L</sub> -s3, d0	0	EU 5661	Classified acc. to EN 13501-1 Tested acc. to
	sheets tape	B-s3,d0 B-s3,d0			EN 13823 EN ISO 11925-2
Other Fire Class	UL - approved	V-0, 5 VI	V-0, 5 VB (sheets); V-0, 5 VA (tubes)  4924-Pipe and Duct Insulation		UL: Tested according to UL94, IEC 60695 and Can/ CSA-C.22.2 No0.17., UL 746C
	FM - approved	4924-Pip			FM: Tested according to UBC26-3 Ship Building:
	Ship Buildling	low-flam	mable - 2010 FTP-Code	5474	Classified acc. to MED 96/98/EC MODULE D
Practical Fire Behaviour	Self-extinguishing, does not drip, o	does not spread flames			
Fire resistance of structural element  Other technical feature		EI 30 -	El 90	EU 5661 EU 5584	Classified acc. to EN 13501-2 Tested acc. to EN 1366-3
Dimensions and		lo 1		EU 5661	Tested acc. to
tolerances	In accordance with EN 14304, tab	IC I		EU 3001	EN 822, EN 823, EN 13467

#### Technical Data - AF/Armaflex

UV resistance <sup>2</sup>	Protection against UV-radiation is necessary.	TB 142	
Storage & Shelf life	Self-adhesive tapes, self-adhesive sheets, self-adhesive tubes, stripes: 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	D 5931	Tested acc. to EN ISO 846 (VDI 6022)

- 1. For temperatures below -50 °C please contact our Customer Service Center to request for the corresponding technical information.
- $2. \ \ \text{If Armaflex is applied under UV-radiation the material must be protected within 3 days with a covering.}$
- \*1 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. Installation instructions are available in our Armaflex installation manual. Please consult our Customer Service Center before insulating stainless steels. For some refrigerants the discharge temperature may exceed +110 °C, please consult our Customer Service Center for further information.

### AF/Armaflex tubes



Length 2,0 m, Color black								
Pipe max. Outside-	Inner Ø min/		AF-1	40.0		AF-2 insulation thickness 9.5 mm - 16,0 mm		
Ø [mm]	max mm		nickness 7,0 mr	,			,	
		Insulation thickness [mm]	Code	m/carton	Insulation thickness [mm]	Code	m/carton	
6	7,0 - 8,5	7,0	AF-1-006	360	9,5	AF-2-006	288	
8	9,0 - 10,5	7,0	AF-1-008 •	310	10,0	AF-2-008	240	
10	11,0 - 12,5	7,5	AF-1-010	300	11,0	AF-2-010	170	
12	13,0 - 14,5	7,5	AF-1-012	234	11,0	AF-2-012	168	
15	16,0 - 17,5	8,0	AF-1-015	192	11,5	AF-2-015	130	
18	19,0 - 20,5	8,0	AF-1-018	140	11,5	AF-2-018	120	
22	23,0 - 24,5	8,5	AF-1-022	132	12,0	AF-2-022	100	
25	26,0 - 27,5	8,5	AF-1-025	108	12,5	AF-2-025	88	
28	29,0 - 30,5	8,5	AF-1-028	100	12,5	AF-2-028	84	
30	31,0 - 33,0	9,0	AF-1-030 ●	96	12,5	AF-2-030 •	72	
32	33,0 - 35,0	9,0	AF-1-032	84	13,0	AF-2-032	64	
35	36,0 - 38,0	9,0	AF-1-035	76	13,0	AF-2-035	62	
38	39,0 - 41,0	9,0	AF-1-038 •	70	-	-	-	
40	41,0 - 42,5	-	-	-	13,5	AF-2-040	44	
42	43,5 - 45,5	9,0	AF-1-042	60	13,5	AF-2-042	48	
45	46,0 - 47,5	9,0	AF-1-045 ●	56	-	-	-	
48	49,5 - 51,5	9,0	AF-1-048	50	13,5	AF-2-048	44	
50	51,0 - 52,5	-	-	-	13,5	AF-2-050	32	
54	55,0 - 57,0	9,0	AF-1-054	48	13,5	AF-2-054	36	
57	58,0 - 60,0	9,0	AF-1-057 ●	40	14,0	AF-2-057 •	34	
60	61,5 - 63,5	9,0	AF-1-060	36	14,0	AF-2-060	32	
64	65,0 - 67,5	9,5	AF-1-064	32	14,0	AF-2-064	30	
70	71,0 - 73,5	9,5	AF-1-070	32	14,0	AF-2-070	28	
76	77,0 - 79,5	9,5	AF-1-076	28	14,0	AF-2-076	28	
80	81,0 - 84,0	9,5	AF-1-080	24	14,5	AF-2-080	24	
89	90,5 - 93,0	9,5	AF-1-089	22	14,5	AF-2-089	22	
102	105,0 - 108,0	9,5	AF-1-102	16	14,5	AF-2-102	18	
108	109,5 - 113,0	9,5	AF-1-108	16	14,5	AF-2-108	18	
110	112,0 - 116,0	9,5	AF-1-110	16	15,0	AF-2-110 •	16	
114	116,0 - 120,0	9,5	AF-1-114	16	15,0	AF-2-114	16	
125	127,0 - 131,0	9,5	AF-1-125	12	15,0	AF-2-125	12	
133	135,0 - 139,0	-	-	-	15,5	AF-2-133	12	
140	142,0 - 146,0	10,0	AF-1-140	12	15,5	AF-2-140	8	
160	162,0 - 166,0	10,0	AF-1-160	8	16,0	AF-2-160	8	

### AF/Armaflex tubes



Length 2,0 m, Color black							
Pipe max. Outside-	Inner Ø min/		AF-3			AF-4	
Ø [mm]	max mm		ickness 12,5 m	m - 19,0 mm		nickness 15,5 m	m - 25,0 mm
		Insulation thickness [mm]	Code	m/carton	Insulation thickness [mm]	Code	m/carton
6	7,0 - 8,5	-	-	-	15,5	AF-4-006	120
10	11,0 - 12,5	12,5	AF-3-010	156	15,5	AF-4-010	110
12	13,0 - 14,5	13,0	AF-3-012	144	16,0	AF-4-012	100
15	16,0 - 17,5	14,0	AF-3-015	108	17,0	AF-4-015	88
18	19,0 - 20,5	14,0	AF-3-018	96	17,5	AF-4-018	70
22	23,0 - 24,5	14,5	AF-3-022	84	18,0	AF-4-022	60
25	26,0 - 27,5	-	-	-	18,5	AF-4-025	56
28	29,0 - 30,5	15,5	AF-3-028	64	19,0	AF-4-028	48
30	31,0 - 33,0	-	-	-	19,0	AF-4-030 •	40
32	33,0 - 35,0	-	-	-	19,5	AF-4-032	40
35	36,0 - 38,0	16,0	AF-3-035	46	19,5	AF-4-035	36
40	41,0 - 42,5	-	-	-	20,5	AF-4-040	32
42	43,5 - 45,5	16,5	AF-3-042	40	20,5	AF-4-042	32
45	46,0 - 47,5	-	-	-	20,5	AF-4-045 •	28
48	49,5 - 51,5	16,5	AF-3-048	32	21,0	AF-4-048	24
50	51,0 - 52,5	-	-	-	21,0	AF-4-050 •	24
54	55,0 - 57,0	17,0	AF-3-054	28	21,0	AF-4-054	24
57	58,0 - 60,0	-	-	-	21,5	AF-4-057 •	20
60	61,5 - 63,5	17,0	AF-3-060	24	21,5	AF-4-060	20
64	65,0 - 67,5	17,0	AF-3-064	20	21,5	AF-4-064	18
70	71,0 - 73,5	17,5	AF-3-070	18	22,0	AF-4-070	16
76	77,0 - 79,5	17,5	AF-3-076	16	22,0	AF-4-076	16
80	81,0 - 84,0	-	-	-	22,5	AF-4-080	16
89	90,5 - 93,0	18,0	AF-3-089	16	22,5	AF-4-089	12
102	105,0 - 108,0	-	-	-	23,0	AF-4-102	10
108	109,5 - 113,0	18,0	AF-3-108	12	23,0	AF-4-108	10
110	112,0 - 116,0	18,0	AF-3-110	12	23,0	AF-4-110	10
114	116,0 - 120,0	18,5	AF-3-114	12	23,5	AF-4-114	10
125	127,0 - 131,0	18,5	AF-3-125 •	12	23,5	AF-4-125 •	8
133	135,0 - 139,0	18,5	AF-3-133	8	24,0	AF-4-133	6
140	142,0 - 146,0	19,0	AF-3-140	8	24,5	AF-4-140	6
160	162,0 - 166,0	19,0	AF-3-160	6	25,0	AF-4-160	6
168	170,0 - 174,0	-	-	-	25,0	AF-4-168	4

#### AF/Armaflex tubes



Length 2,0 m, Color black

Pipe max. Outside- Ø [mm]	Inner Ø min/ max mm	insulation th	AF-5 nickness 25,0 mr	m - 32,0 mm	insulation the	AF-6 insulation thickness 32,0 mm - 45,0 mm		
		Insulation thickness [mm]	Code	m/carton	Insulation thickness [mm]	Code	m/carton	
10	11,0 - 12,5	-	-	-	32,0	AF-6-010	40	
12	13,0 - 14,5	-	-	-	32,0	AF-6-012	36	
15	16,0 - 17,5	-	-	-	32,0	AF-6-015	32	
18	19,0 - 20,5	25,0	AF-5-018	42	32,0	AF-6-018	32	
20	20,0 - 0,0	25,0	AF-5-020 •	44	-	-	-	
22	23,0 - 24,5	25,0	AF-5-022	36	33,5	AF-6-022	28	
25	25,0 - 0,0	25,0	AF-5-025 ●	40	-	-	-	
28	29,0 - 30,5	25,0	AF-5-028	36	35,0	AF-6-028	24	
30	31,0 - 33,0	26,0	AF-5-030 •	32	-	-	-	
32	32,0 - 0,0	26,0	AF-5-032 •	24	-	-	-	
35	36,0 - 38,0	27,0	AF-5-035	24	35,0	AF-6-035	18	
42	43,5 - 45,5	27,0	AF-5-042	22	36,5	AF-6-042	16	
48	49,5 - 51,5	27,5	AF-5-048	16	37,5	AF-6-048	12	
54	55,0 - 57,0	28,5	AF-5-054	16	38,0	AF-6-054	12	
57	58,0 - 60,0	-	-	-	38,5	AF-6-057 ●	12	
60	61,5 - 63,5	29,0	AF-5-060	12	39,0	AF-6-060	10	
64	65,0 - 67,5	29,0	AF-5-064 ●	12	39,5	AF-6-064	10	
70	71,0 - 73,5	29,5	AF-5-070 ●	12	40,0	AF-6-070	8	
76	77,0 - 79,5	30,0	AF-5-076	10	40,5	AF-6-076	8	
89	90,5 - 93,0	30,5	AF-5-089	8	41,5	AF-6-089	6	
102	105,0 - 108,0	-	-	-	42,5	AF-6-102 •	6	
108	109,5 - 113,0	31,0	AF-5-108	6	42,5	AF-6-108	4	
114	116,0 - 120,0	31,5	AF-5-114	6	43,0	AF-6-114	4	
125	127,0 - 131,0	31,5	AF-5-125	6	44,0	AF-6-125	4	
133	134,0 - 139,0	-	-	-	44,0	AF-6-133 •	4	
140	142,0 - 146,0	32,0	AF-5-140	6	44,5	AF-6-140 •	4	
160	162,0 - 166,0	-	-	-	45,0	AF-6-160 •	4	
168	170,0 - 174,0	32,0	AF-5-168	4	45,0	AF-6-168 •	4	

Length tolerance for tubes ± 1,5 %

Thickness tolerance AF-1, AF-2: ± 1,0 mm

AF-3, AF-4: ± 1,5 mm AF-5: ± 2,5 mm AF-6: ± 3,0 mm

• Item not in stock. Delivery on request. [MTO]

#### AF/Armaflex tubes self-adhesive



Length 2.0 m. Color black, tangential cut

Pipe max. Outside-Ø [mm]	Inner Ø min/ max mm	insulation	AF-1 insulation thickness 8,0 mm - 9,5 mm		insulation	AF-2 insulation thickness 11,5 mm - 14,5 mm		
		Insulation thickness [mm]	Code	m/carton	Insulation thickness [mm]	Code	m/carton	
12	12,0 - 14,5	7,5	AF-1-012-A ○	234	11,0	AF-2-012-A o	168	
15	16,0 - 17,5	8,0	AF-1-015-A ○	192	11,5	AF-2-015-A o	130	
18	19,0 - 20,5	8,0	AF-1-018-A	140	11,5	AF-2-018-A	120	
22	23,0 - 24,5	8,5	AF-1-022-A	132	12,0	AF-2-022-A	100	
28	29,0 - 30,5	8,5	AF-1-028-A	100	12,5	AF-2-028-A	84	
30	31,0 - 33,0	9,0	AF-1-030-A	96	12,5	AF-2-030-A •	72	
35	36,0 - 38,0	9,0	AF-1-035-A	76	13,0	AF-2-035-A	62	
42	43,5 - 45,5	9,0	AF-1-042-A	60	13,5	AF-2-042-A	48	
48	49,5 - 51,5	9,0	AF-1-048-A	50	13,5	AF-2-048-A	44	
54	55,0 - 57,0	9,0	AF-1-054-A	48	13,5	AF-2-054-A	36	
60	61,5 - 63,5	9,0	AF-1-060-A	36	14,0	AF-2-060-A	32	
64	65,0 - 67,5	-	-	-	14,0	AF-2-064-A	30	
70	71,0 - 73,5	-	-	-	14,0	AF-2-070-A	28	
76	77,0 - 79,5	9,5	AF-1-076-A	28	14,0	AF-2-076-A	28	
89	90,5 - 93,5	9,5	AF-1-089-A ●	22	14,5	AF-2-089-A	22	

#### AF/Armaflex tubes self-adhesive



Length 2,0 m, Color black, tangential cut

Pipe max. Outside-Ø [mm]	Inner Ø min/ max mm	AF-3 insulation thickness 13,5 mm - 17,5 mm		AF-4 insulation thickness 17,0 mm - 22,5 mm			
		Insulation thickness [mm]	Code	m/carton	Insulation thickness [mm]	Code	m/carton
15	16,0 - 17,5	13,5	AF-3-015-A	108	17,0	AF-4-015-A	88
18	19,0 - 20,5	14,0	AF-3-018-A	96	17,5	AF-4-018-A	70
22	23,0 - 24,5	14,5	AF-3-022-A	84	18,0	AF-4-022-A	60
28	29,0 - 30,5	15,5	AF-3-028-A	64	19,0	AF-4-028-A	48
35	36,0 - 38,0	16,0	AF-3-035-A	46	19,5	AF-4-035-A	36
42	43,5 - 45,5	16,5	AF-3-042-A	40	20,5	AF-4-042-A	32
48	49,5 - 51,5	16,5	AF-3-048-A	32	21,0	AF-4-048-A	24
54	55,0 - 57,0	17,0	AF-3-054-A	28	21,0	AF-4-054-A	24
60	61,5 - 63,5	17,5	AF-3-060-A	24	21,5	AF-4-060-A	20
64	65,0 - 67,5	-	-	-	21,5	AF-4-064-A ●	18
70	70,0 - 73,5	-	-	-	22,0	AF-4-070-A	16
76	77,0 - 79,5	17,5	AF-3-076-A	16	22,0	AF-4-076-A	16
89	90,5 - 93,5	17,5	AF-3-089-A	16	22,5	AF-4-089-A	12

**Length tolerance for tubes**  $\pm$  1,5 %

 $\circ$  In the case of this item the self-adhesive seam is achieved width a radial cut surface.

• Item not in stock. Delivery on request. [MTO]

#### AF/Armaflex tubes endless



Pipe max. Outside- Ø [mm]	Inner Ø min/ max mm	AF-1 insulation thickness 7,0 mm - 8,5 mm		AF-2 insulation thickness 9,5 mm - 12,5 mm			
		Insulation thickness [mm]	Code	m/carton	Insulation thickness [mm]	Code	m/carton
6	7,0 - 8,5	7,0	AF-1-006/E	90	9,5	AF-2-006/E	60
8	9,0 - 10,5	7,0	AF-1-008/E	80	10,0	AF-2-008/E	55
10	11,0 - 12,5	7,5	AF-1-010/E	60	11,0	AF-2-010/E	35
12	13,0 - 14,5	7,5	AF-1-012/E	50	11,0	AF-2-012/E	32
15	16,0 - 17,5	8,0	AF-1-015/E	40	11,5	AF-2-015/E	32
18	19,0 - 20,5	8,0	AF-1-018/E	35	11,5	AF-2-018/E	30
22	23,0 - 24,5	8,5	AF-1-022/E	30	12,0	AF-2-022/E	26
28	29,0 - 30,5	8,5	AF-1-028/E	28	12,5	AF-2-028/E	20

Length tolerance for tubes  $\pm$  1,5 %

Thickness tolerance ≤ 6 mm:  $\pm 1,0$  mm 7 - 19 mm:  $\pm 1,5$  mm > 19 mm:  $\pm 2,0$  mm

#### **AF/Armaflex sheets**



Length 2,0 m, Width 0,5 m, Color black

Code	Insulation thickness [mm]	m²/carton
AF-10MM	10,0	13
AF-13MM	13,0	9
AF-16MM	16,0	8
AF-19MM	19,0	7
AF-25MM	25,0	5
AF-32MM	32,0	4
AF-50MM	50,0	3

Length tolerance for sheets  $$\pm1,5~\%$ 

Thickness tolerance for sheets 6 mm:  $\pm 1,0$  mm 7 -19 mm:  $\pm 1,5$  mm >19 mm:  $\pm 2,0$  mm

Remark One 1m² sheet can be replaced by two 0,5 m² sheets.

#### AF/Armaflex sheets self-adhesive



Length 2,0 m, Width 0,5 m, Color black

Code	Insulation thickness [mm]	m²/carton
AF-10MM/A	10,0	13
AF-13MM/A	13,0	9
AF-19MM/A	19,0	7
AF-25MM/A	25,0	5
AF-32MM/A	32,0	4
AF-50MM/A	50,0	3

Length tolerance for sheets

Thickness tolerance for sheets

±1,5 %

7 -19 mm: ±1,0 mm 7 -19 mm: ±1,5 mm >19 mm: ±2.0 ---

Remark One 1m² sheet can be replaced by two 0,5 m² sheets.

#### AF/Armaflex sheets endless



Width 1,0 m, Color black

Code	Insulation thickness [mm]	Roll length [m]	m²/carton
AF-03MM/E	3,0	30	30
AF-06MM/E	6,0	15	15
AF-10MM/E	10,0	10	10
AF-13MM/E	13,0	8	8
AF-16MM/E	16,0	7	7
AF-19MM/E	19,0	6	6
AF-25MM/E	25,0	4	4
AF-32MM/E	32,0	3	3
AF-50MM/E	50,0	5	5

Length tolerance for sheets

± 1,5 %

Thickness tolerance for sheets

3 mm: +1,5 mm 6 mm: ±1,0 mm 7 -19 mm: ±1,5 mm

Remark

> 19 mm: ±2,0 mm One 1m² sheet can be replaced by two 0,5 m² sheets.

#### AF/Armaflex sheets endless self-adhesive



Width 1,0 m, Color black

Code	Insulation thickness [mm]	Roll length [m]	m²/carton
AF-03MM/EA	3,0	30	30
AF-06MM/EA	6,0	15	15
AF-10MM/EA	10,0	10	10
AF-13MM/EA	13,0	8	8
AF-16MM/EA	16,0	7	7
AF-19MM/EA	19,0	6	6
AF-25MM/EA	25,0	4	4
AF-32MM/EA	32,0	3	3
AF-50MM/EA	50,0	5	5

Length tolerance for sheets

Thickness tolerance for sheets

± 1,5 % 3 mm: +1,5 mm 6 mm: ±1,0 mm 7 -19 mm: ±1,5 mm

> 19 mm: ±2,0 mm Remark One 1m² sheet can be replaced by two 0,5 m² sheets.

#### AF/Armaflex stripes self-adhesive



Color black

Code	Width [mm]	Length [m]	Thickness [mm]	Rolls/carton
AF-10MM/E-S100	100,0	10	10	10
AF-10MM/E-S50	50,0	10	10	20
AF-13MM/E-S100	100,0	8	13	10
AF-13MM/E-S50 ●	50,0	8	13	20
AF-19MM/E-S100	100,0	6	19	10
AF-19MM/E-S50	50,0	6	19	20
AF-19MM/E-S75 ●	75,0	6	19	13

Thickness tolerance for sheets

10 -19 mm: ±1,5 mm

• Item not in stock. Delivery on request. [MTO]

#### AF/Armaflex elbows pre-fabricated



Color black, Elastomeric pre-fabricated elbows

Color black, El	Color black, Elastomeric pre-rabricated elbows								
Pipe max. Outside-Ø	AF-2 insulation thickness			AF-4 insulation thickness					
[mm]	Code	Thickness [mm]	Article description	Pieces/carton	Code	Thickness [mm]	Article description	Pieces/carton	
15	AF-2-015-C90 •	11,5	3 segment	3	AF-4-015-C90 •	17	3 segment	3	
18	AF-2-018-C90 •	11,5	3 segment	3	AF-4-018-C90 •	17,5	3 segment	3	
22	AF-2-022-C90 •	12	3 segment	3	AF-4-022-C90 •	18	3 segment	3	
28	AF-2-028-C90 •	12,5	3 segment	3	AF-4-028-C90 •	19	3 segment	3	
35	AF-2-035-C90 •	13,0	3 segment	3	AF-4-035-C90 •	19,5	3 segment	3	
42	AF-2-042-C90 •	13,5	3 segment	3	AF-4-042-C90 •	20,5	4 segment	3	
48	AF-2-048-C90 •	13,5	3 segment	3	AF-4-048-C90 •	21	4 segment	3	
54	AF-2-054-C90 •	13,5	3 segment	3	AF-4-054-C90 •	21	4 segment	3	
60	AF-2-060-C90 •	14	3 segment	3	AF-4-060-C90 •	21,5	4 segment	3	
64	AF-2-064-C90 •	14	4 segment	3	AF-4-064-C90 •	21,5	4 segment	3	
76	AF-2-076-C90 •	14	4 segment	3	AF-4-076-C90 •	22	4 segment	3	
89	AF-2-089-C90 •	14,5	4 segment	3	AF-4-089-C90 •	22,5	4 segment	3	
114	AF-2-114-C90 •	15	4 segment	3	AF-4-114-C90 •	23,5	4 segment	3	
140	-	-	-	-	AF-4-140-C90 •	24,5	4 segment	3	
168	-	-	-	-	AF-4-168-C90 •	25	4 segment	3	

Pipe max. Outside-Ø		AF-4 insulation th			AF-6 insulation thickness			
[mm]	Code	Thickness [mm]	Article description	Pieces/carton	Code	Thickness [mm]	Article description	Pieces/carton
18	AF-5-018-C90 •	25	3 segment	3	AF-6-018-C90 •	32	3 segment	3
22	AF-5-022-C90 •	25	3 segment	3	AF-6-022-C90 •	33,5	3 segment	3
28	AF-5-028-C90 •	25	4 segment	3	AF-6-028-C90 •	35	4 segment	3
35	AF-5-035-C90 •	27	4 segment	3	AF-6-035-C90 •	35	4 segment	3
42	AF-5-042-C90 •	27	4 segment	3	AF-6-042-C90 •	36,5	4 segment	3
48	AF-5-048-C90 •	27,5	4 segment	3	AF-6-048-C90 •	37,5	4 segment	3
54	AF-5-054-C90 •	28,5	4 segment	3	AF-6-054-C90 •	38	4 segment	3
60	AF-5-060-C90 •	29	4 segment	3	AF-6-060-C90 •	39	4 segment	3
64	AF-5-064-C90 •	29	4 segment	3	AF-6-064-C90 •	39,5	4 segment	3
76	AF-5-076-C90 •	30	4 segment	3	AF-6-076-C90 •	40,5	4 segment	3
89	AF-5-089-C90 •	30,5	4 segment	3	AF-6-089-C90 •	41,5	4 segment	3
102	-	-	-	-	AF-6-102-C90 •	42,5	4 segment	3
114	AF-5-114-C90 •	31,5	4 segment	3	AF-6-114-C90 •	43	4 segment	3
168	-	-	-	-	AF-6-168-C90 •	45	4 segment	3

Thickness tolerance

AF-1, AF-2: ± 1,0 mm AF-3, AF-4: ± 1,5 mm AF-5: ± 2,5 mm AF-6: ± 3,0 mm

Remark

Other items can be produced make to order.

• Item not in stock. Delivery on request. [MTO]

#### AF/Armaflex t-pieces pre-fabricated



Color black, Elastomeric pre-fabricated T-pieces

Pipe max. Outside-Ø [mm]	AF-2 insulation thickness				AF-4 insulation thickness			
[iiiiii]	Code	Thickness [mm]	Article description	Pieces/carton	Code	Thickness [mm]	Article description	Pieces/carton
15	AF-2-015-T90 ◆	11,5	2 segment	3	AF-4-015-T90 ●	17	2 segment	3
18	AF-2-018-T90 •	11,5	2 segment	3	AF-4-018-T90 ●	17,5	2 segment	3
22	AF-2-022-T90 •	12	2 segment	3	AF-4-022-T90 •	18	2 segment	3
28	AF-2-028-T90 •	12,5	2 segment	3	AF-4-028-T90 •	19	2 segment	3
35	AF-2-035-T90 •	13	2 segment	3	AF-4-035-T90 ●	19,5	2 segment	3
42	AF-2-042-T90 ●	13,5	2 segment	3	AF-4-042-T90 ●	20	2 segment	3
48	AF-2-048-T90 •	13,5	2 segment	3	AF-4-048-T90 •	21	2 segment	3
54	AF-2-054-T90 •	13,5	2 segment	3	AF-4-054-T90 ●	21	2 segment	3
60	AF-2-060-T90 •	14	2 segment	3	AF-4-060-T90 •	21,5	2 segment	3
64	AF-2-064-T90 ●	14	2 segment	3	AF-4-064-T90 ●	21,5	2 segment	3
76	AF-2-076-T90 ◆	14	2 segment	3	AF-4-076-T90 ◆	22	2 segment	3
89	AF-2-089-T90 ●	14,5	2 segment	3	AF-4-089-T90 ●	22,5	2 segment	3

Pipe max. Outside-Ø		AF-5 insulation thickness			AF-6 insulation thickness			
[mm]	Code	Thickness [mm]	Article description	Pieces/carton	Code	Thickness [mm]	Article description	Pieces/carton
18	AF-5-018-T90 ◆	25	2 segment	3	AF-6-018-T90 •	32	2 segment	3
22	AF-5-022-T90 ◆	25	2 segment	3	AF-6-022-T90 ●	33,5	2 segment	3
28	AF-5-028-T90 •	25	2 segment	3	AF-6-028-T90 •	35	2 segment	3
35	AF-5-035-T90 •	27	2 segment	3	AF-6-035-T90 •	35	2 segment	3
42	AF-5-042-T90 ◆	27	2 segment	3	AF-6-042-T90 •	36,5	2 segment	3
48	AF-5-048-T90 •	27,5	2 segment	3	AF-6-048-T90 •	37,5	2 segment	3
54	AF-5-054-T90 ◆	28,5	2 segment	3	AF-6-054-T90 •	38	2 segment	
60	AF-5-060-T90 ◆	29	2 segment	3	AF-6-060-T90 •	39	2 segment	3
64	AF-5-064-T90 ◆	29	2 segment	3	AF-6-064-T90 •	39,5	2 segment	3
76	AF-5-076-T90 ◆	30	2 segment	3	AF-6-076-T90 ●	40,5	2 segment	3
89	AF-5-089-T90 •	30,5	2 segment	3	AF-6-089-T90 •	41,5	2 segment	3

Thickness tolerance AF-1, AF-2: ± 1,0 mm

AF-1, AF-2: ± 1,0 mm AF-3, AF-4: ± 1,5 mm AF-5: ± 2,5 mm AF-6: ± 3,0 mm

Remark Other items can be produced make to order.

• Item not in stock. Delivery on request. [MTO]

#### AF/Armaflex tapes self-adhesive



Color black

Code	Width [mm]	Length [m]	Thickness [mm]	Rolls/carton	
AF-TAPE-MC	50,0	15	3	12	
AF-TAPE-MC/6	50,0	15	3	6	