



INSTALL IT. TRUST IT.

# ArmaFlex ACE Plus

The upgraded flexible insulation solution  
for improved fire safety

- // Reliable condensation control
- // Effective reduction of thermal losses
- // Optimal range for easy application on most common pipes & duct sizes
- // Increased system security when installed with ArmaFix and ArmaFlex Adhesives
- // Euroclass B(L)-s2,d0 for the entire tube range
- // Euroclass B-s3,d0 for the entire sheet range



 **armacell®**  
ArmaFlex®

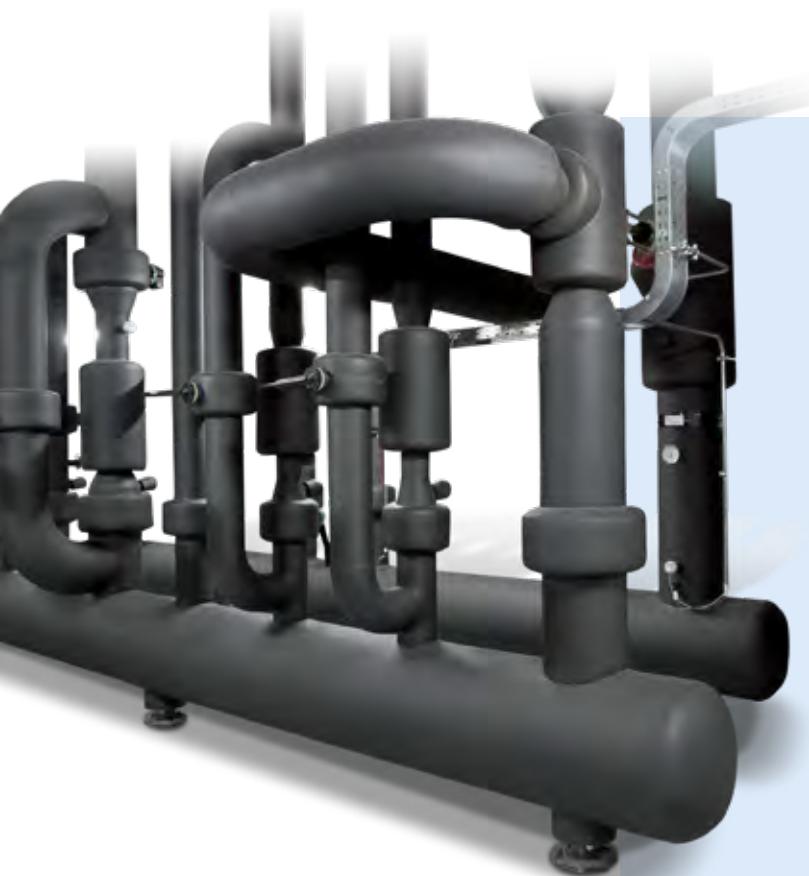
INSTALL IT. TRUST IT.

# ArmaFlex ACE Plus

Armacell's ArmaFlex ACE Plus is an insulation material developed on the basis of closed-cell elastomeric foam. It acts as an excellent barrier against condensation due to its high coefficient of resistance to water vapour diffusion. Also, it effectively reduces energy losses from installations and fittings because of its very low thermal conductivity.

Increased fire classification was a top priority during product development which our team of experts successfully met. The material does not participate in the spread of fire. It is also non-drip and self-extinguishing. All this gives ArmaFlex ACE Plus a fire reaction class of B<sub>L</sub>-s2,d0 (for tubes) and B-s3,d0 (rolls and tape) according to European standard EN 13501-1.

Thanks to this versatility, this innovative product can be used on air-conditioning systems, refrigeration equipment or ventilation ducts. What's more, the material's flexibility makes it possible to cut easily and conform to preferred shapes.



Our new ArmaFlex ACE Plus insulation range includes tubes (Lap-Seal and Top-Seal) and rolls (standard and self-adhesive). Also, you can use alongside our accessories including self-adhesive tape and ArmaFlex dedicated adhesives.



# Technical features

The following technical considerations should be taken into account when specifying thermal insulation products for HVAC-R, process and industrial pipe and ductwork systems.

## // Energy saving

**Optimal pipe insulation of mechanical equipment, including space heating, domestic hot water or cooling systems - is one of the single most effective measures for improving energy efficiency**, prolonging the lifespan of equipment, and reducing associated greenhouse gas emissions.

## // Thermal conductivity and condensation control

Thermal conductivity ( $\lambda$  factor), stated in  $\text{W}/(\text{m}\cdot\text{K})$ , is the **property of a material's ability to conduct heat**, measured across a  $1\text{m}^3$  block. For example, a material with a high thermal conductivity such as copper has a value of 386 compared to a low thermal conductivity material such as ArmaFlex ACE Plus at 0.035 at 0 °C (max. thickness 25mm). Where pipework and services operate at below-ambient temperature water vapour condenses on the surface. If insulation becomes wet it loses thermal performance, leading to colder surface temperatures, condensation and corrosion issues. **Closed-cell ArmaFlex products provide an integral water vapour diffusion barrier** with a  $\mu$ -value of  $\geq 10,000$  (max. thickness 25mm).

## // CE marking

CE marking became a mandatory requirement for thermal insulation construction products governed by a European harmonised standard (hEN) in July 2013. **The harmonised standards determine the required characteristics and obligatory properties, including fire behaviour (Euroclasses), dimensions and tolerances, thermal conductivity, dimensional stability and durability characteristics.** Once a product has been tested to meet the required properties, a designation code is printed on the product label to display the specific technical properties required by the hEN. The producer must constantly keep the performance of its products at the declared level and show proof with valid testing certificates e.g. B<sub>L</sub>-s2,d0

Euroclass	Contribution to fire
A1	Non Combustible
A2	Limited Combustible No Flashover
B	No Flashover
C	Flashover after 10 minutes
D	Flashover before 10 minutes
E	Flashover before 2 minutes
F	No Performance Determined

## // The European reaction to fire classification

Fire safety of construction products and building elements in the EU is determined by Euroclasses according to the EN 13501-1 standard. The uniform classification system is based on the performance of products under different fire conditions: the attack of a small flame, exposure to a fully developed fire and some intermediate level. **The main properties determining the Euroclass for a specific product discloses if and how fast a product contributes to the fire.**



## // Local regulations for fire protection

The decisions regarding fire reaction classifications of the building elements used in various parts of a building are made at the local level (by country government bodies). The rules for required Euroclass reaction to the fire of products installed in different places within the building are also published locally.

## TECHNICAL DATA - ARMAFLEX ACE PLUS

Brief description	Highly-flexible, closed-cell insulation material with high water vapour diffusion resistance and low thermal conductivity.
Material type	Elastomeric foam based on synthetic rubber. Factory-made flexible elastomeric foam (FEF), according to EN 14304.
Product colour range	Black
Applications	Insulation/protection of pipes, air ducts, vessels (including elbows, fittings, flanges, etc.) of air-conditioning, refrigeration and process equipment to prevent condensation and save energy as well as insulation of pipes in sanitary and heating applications.
Installation	Certified and compatible adhesive for a long-term performing system is ArmaFlex 520. Please refer to the ArmaFlex application manual for advice. For further information please contact our Customer Service Centre.
Remarks	Declaration of Performance is available in accordance with Article 7(3) of Regulation (EU) No 305/2011 on our homepage: <a href="http://www.armacell.com/Dop">www.armacell.com/Dop</a>

Property	Value / Assessment	Standard / Test method
<b>Temperature range</b>		
Service temperature	Min. °C	Max. °C
	-50	110
	Remarks	+85 °C if sheet or tape is glued to the object with its whole surface +85 °C for tapes
<b>Thermal conductivity</b>		
Declared thermal conductivity	θm	0°C
	λd < [W/(m·K)]	0,035
	Range	Tubes, < 25 mm, sheets and tapes
	Formula	[35 + 0,1 · θm + 0,0008 · θm²]/1000
Declared thermal conductivity	θm	0°C
	λd < [W/(m·K)]	0,036
	Range	Tubes > 25 mm
<b>Fire Performance and Approvals</b>		
Reaction to fire	Tubes: B(L)-s2, d0 Sheets and Tapes: B-s3,d0	EN 13501-1, EN 13823, EN ISO 11925-2
<b>Fire performance</b>		
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames	
<b>Physical attributes</b>		
Dimensions and tolerances	In accordance with EN 14304, table 1	EN 822, EN 823, EN 13467
<b>Weather and UV resistance</b>		
UV resistance <sup>2</sup>	Protection against UV-radiation is necessary. See TB 142	
<b>Health and environment</b>		
Volatile organic compounds (VOC) content	Fulfils all VOC requirements (French, Italian, Belgian, German AgBB, Blauer Engel and Eurofins Indoor Air Comfort GOLD).	ISO 16000 Parts 3, 6 & 9
Antimicrobial behaviour	antimicrobial insulation, resistance against mould and bacteria in accordance with ISO 846	
Green building assessment	Meets the sustainable construction requirements for LEED v4.1, BREEAM international and DGNB.	
Additional features	SCCP, MCCP-free	
<b>Other technical features</b>		
Shelf life	Self-adhesive tapes, self-adhesive sheets: 1 year	

Property	Value / Assessment	Standard / Test method
Storage	Can be stored in dry,clean rooms at normal relative humidity (50% to 70%) and ambient temperature [0 °C – 35 °C].	

<sup>1</sup>For temperatures below -50 °C please contact our Customer Service Center to request for the corresponding technical information.

<sup>2</sup>If ArmaFlex is applied under UV-radiation, the material must be protected within 3 days with paint or a covering.

**Tube – standard. Black. Packed in cartons, length: 2 m**

6 mm				9 mm				13 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]
6	ACE/ P-06X006	76122075374 20	496 m	6	ACE/ P-09X006	76122075366 69	352 m	6	ACE/ P-13X006	76122075376 04	200 m
10	ACE/ P-06X010	76122073924 87	380 m	8	ACE/ P-09X008	76122075374 82	300 m	10	ACE/ P-13X010	76122073929 51	172 m
12	ACE/ P-06X012	76122073924 94	330 m	10	ACE/ P-09X010	76122073927 15	266 m	12	ACE/ P-13X012	76122073929 68	162 m
15	ACE/ P-06X015	76122073925 00	280 m	12	ACE/ P-09X012	76122073927 22	234 m	15	ACE/ P-13X015	76122073929 75	122 m
18	ACE/ P-06X018	76122075371 61	210 m	15	ACE/ P-09X015	76122073927 39	200 m	18	ACE/ P-13X018	76122073929 82	104 m
22	ACE/ P-06X022	76122073925 31	170 m	18	ACE/ P-09X018	76122073927 46	166 m	20	ACE/ P-13X020	76122073929 99	104 m
25	ACE/ P-06X025	76122075371 85	116 m	20	ACE/ P-09X020	76122073927 53	140 m	22	ACE/ P-13X022	76122073930 02	100 m
28	ACE/ P-06X028	76122075366 45	112 m	22	ACE/ P-09X022	76122073927 60	140 m	25	ACE/ P-13X025	76122073930 19	88 m
35	ACE/ P-06X035	76122075366 52	92 m	25	ACE/ P-09X025	76122073927 77	108 m	28	ACE/ P-13X028	76122073930 26	82 m
-	-	-	-	28	ACE/ P-09X028	76122073927 84	98 m	30	ACE/ P-13X030	76122075358 39	72 m
-	-	-	-	30	ACE/ P-09X030	76122075366 90	92 m	32	ACE/ P-13X032	76122073930 33	64 m
-	-	-	-	32	ACE/ P-09X032	76122073927 91	80 m	35	ACE/ P-13X035	76122073930 40	60 m
-	-	-	-	35	ACE/ P-09X035	76122073928 07	76 m	40	ACE/ P-13X040	76122075377 03	50 m
-	-	-	-	40	ACE/ P-09X040	76122073928 14	66 m	42	ACE/ P-13X042	76122073919 23	50 m
-	-	-	-	42	ACE/ P-09X042	76122073928 21	64 m	48	ACE/ P-13X048	76122073919 09	42 m
-	-	-	-	48	ACE/ P-09X048	76122073928 38	54 m	50	ACE/ P-13X050	76122075377 10	38 m
-	-	-	-	50	ACE/ P-09X050	76122073928 45	46 m	54	ACE/ P-13X054	76122073919 47	38 m
-	-	-	-	54	ACE/ P-09X054	76122073928 52	52 m	60	ACE/ P-13X060	76122073919 54	32 m
-	-	-	-	60	ACE/ P-09X060	76122073928 69	48 m	64	ACE/ P-13X064	76122073919 61	30 m
-	-	-	-	64	ACE/ P-09X064	76122073928 76	44 m	70	ACE/ P-13X070	76122075377 27	28 m
-	-	-	-	70	ACE/ P-09X070	76122073928 83	32 m	76	ACE/ P-13X076	76122073919 85	28 m
-	-	-	-	76	ACE/ P-09X076	76122073928 90	32 m	80	ACE/ P-13X080	76122073919 92	20 m
-	-	-	-	89	ACE/ P-09X089	76122073929 13	28 m	89	ACE/ P-13X089	76122073920 05	20 m
-	-	-	-	102	ACE/ P-09X102	76122075375 74	26 m	102	ACE/ P-13X102	76122073920 12	20 m
-	-	-	-	108	ACE/ P-09X108	76122073929 37	26 m	108	ACE/ P-13X108	76122073920 29	20 m
-	-	-	-	110	ACE/ P-09X110	76122075357 54	24 m	114	ACE/ P-13X114	76122073920 36	20 m
-	-	-	-	114	ACE/ P-09X114	76122073929 44	24 m	125	ACE/ P-13X125	76122075377 41	18 m

## Tube – standard. Black. Packed in cartons, length: 2 m

6 mm				9 mm				13 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]
-	-	-	-	125	ACE/ P-09X125	76122075375 81	14 m	133	ACE/ P-13X133	76122073920 50	16 m
-	-	-	-	140	ACE/ P-09X140	76122075357 61	14 m	140	ACE/ P-13X140	76122073920 67	12 m
-	-	-	-	160	ACE/ P-09X160	76122075375 98	10 m	160	ACE/ P-13X160	76122073920 74	12 m
-	-	-	-	-	-	-	-	168	ACE/ P-13X168	76122075369 04	12 m

## Other information

Thickness tolerance	6 mm: ±1.0 mm 9, 13 mm: ±1.5 mm 19, 25 mm: ±2.5 mm 32, 40 mm: ±3.0 mm
Length tolerance	± 1.5%

## Tube – standard. Black. Packed in cartons, length: 2 m

19 mm				25 mm				32 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]
6	ACE/ P-19X006	76122075358 84	100 m	10	ACE/ P-25X010	76122075360 34	60 m	15	ACE/ P-32X015	76122075361 57	32 m
10	ACE/ P-19X010	76122075359 07	92 m	12	ACE/ P-25X012	76122075368 05	54 m	18	ACE/ P-32X018	76122075364 16	32 m
12	ACE/ P-19X012	76122075359 14	84 m	15	ACE/ P-25X015	76122075370 55	48 m	20	ACE/ P-32X020	76122075361 88	24 m
15	ACE/ P-19X015	76122073920 81	72 m	18	ACE/ P-25X018	76122075370 62	40 m	22	ACE/ P-32X022	76122075364 30	24 m
18	ACE/ P-19X018	76122073920 98	60 m	20	ACE/ P-25X020	76122073926 30	38 m	25	ACE/ P-32X025	76122075364 47	24 m
20	ACE/ P-19X020	76122073921 04	58 m	22	ACE/ P-25X022	76122073926 47	40 m	28	ACE/ P-32X028	76122073907 59	24 m
22	ACE/ P-19X022	76122073921 11	56 m	25	ACE/ P-25X025	76122073922 89	34 m	32	ACE/ P-32X032	76122075362 18	18 m
25	ACE/ P-19X025	76122073921 28	50 m	28	ACE/ P-25X028	76122073922 96	36 m	35	ACE/ P-32X035	76122073907 66	18 m
28	ACE/ P-19X028	76122073921 35	48 m	30	ACE/ P-25X030	76122075368 12	30 m	40	ACE/ P-32X040	76122075364 85	18 m
32	ACE/ P-19X032	76122073921 42	36 m	32	ACE/ P-25X032	76122075358 91	28 m	42	ACE/ P-32X042	76122073910 84	18 m
35	ACE/ P-19X035	76122075369 59	36 m	35	ACE/ P-25X035	76122073923 19	24 m	48	ACE/ P-32X048	76122073910 77	18 m
40	ACE/ P-19X040	76122073921 66	32 m	42	ACE/ P-25X042	76122073923 33	24 m	50	ACE/ P-32X050	76122075362 70	12 m
42	ACE/ P-19X042	76122073921 73	32 m	48	ACE/ P-25X048	76122073923 40	20 m	54	ACE/ P-32X054	76122073910 91	12 m
48	ACE/ P-19X048	76122073921 80	28 m	54	ACE/ P-25X054	76122073923 64	18 m	60	ACE/ P-32X060	76122073925 48	10 m
50	ACE/ P-19X050	76122073921 97	24 m	60	ACE/ P-25X060	76122073923 71	18 m	64	ACE/ P-32X064	76122073912 37	10 m
54	ACE/ P-19X054	76122073922 03	24 m	64	ACE/ P-25X064	76122073923 88	16 m	70	ACE/ P-32X070	76122075370 86	10 m
60	ACE/ P-19X060	76122073922 10	24 m	76	ACE/ P-25X076	76122075360 96	12 m	76	ACE/ P-32X076	76122073925 55	10 m

**Tube – standard. Black. Packed in cartons, length: 2 m**

19 mm				25 mm				32 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]
64	ACE/P-19X064	7612207392227	20 m	89	ACE/P-25X089	7612207392425	12 m	80	ACE/P-32X080	7612207537116	10 m
70	ACE/P-19X070	7612207392234	18 m	102	ACE/P-25X102	7612207536119	8 m	89	ACE/P-32X089	7612207392562	10 m
76	ACE/P-19X076	7612207392241	18 m	108	ACE/P-25X108	7612207392449	8 m	102	ACE/P-32X102	7612207536867	6 m
80	ACE/P-19X080	7612207392258	16 m	114	ACE/P-25X114	7612207392456	10 m	108	ACE/P-32X108	7612207535723	6 m
89	ACE/P-19X089	7612207392265	16 m	140	ACE/P-25X140	7612207390841	4 m	114	ACE/P-32X114	7612207390735	8 m
102	ACE/P-19X102	7612207536010	16 m	-	-	-	-	125	ACE/P-32X125	7612207536874	6 m
108	ACE/P-19X108	7612207392579	16 m	-	-	-	-	133	ACE/P-32X133	7612207536522	6 m
110	ACE/P-19X110	7612207537031	14 m	-	-	-	-	140	ACE/P-32X140	7612207390742	6 m
114	ACE/P-19X114	7612207392586	14 m	-	-	-	-	160	ACE/P-32X160	7612207391244	4 m
125	ACE/P-19X125	7612207536799	10 m	-	-	-	-	-	-	-	-
133	ACE/P-19X133	7612207392609	10 m	-	-	-	-	-	-	-	-
140	ACE/P-19X140	7612207392616	10 m	-	-	-	-	-	-	-	-
160	ACE/P-19X160	7612207392623	10 m	-	-	-	-	-	-	-	-
168	ACE/P-19X168	7612207537048	8 m	-	-	-	-	-	-	-	-

**Other information**

Thickness tolerance	6 mm: ±1.0 mm 9, 13 mm: ±1.5 mm 19, 25 mm: ±2.5 mm 32, 40 mm: ±3.0 mm
Length tolerance	± 1.5%

**Tube – standard. Black. Packed in cartons, length: 2 m**

40 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]
28	ACE/P-40X028	7612207537321	18 m
35	ACE/P-40X035	7612207537338	16 m
42	ACE/P-40X042	7612207391251	12 m
48	ACE/P-40X048	7612207391442	12 m
54	ACE/P-40X054	7612207390773	10 m
60	ACE/P-40X060	7612207391220	10 m
64	ACE/P-40X064	7612207391404	10 m
76	ACE/P-40X076	7612207391411	8 m
89	ACE/P-40X089	7612207397956	6 m
102	ACE/P-40X102	7612207537383	4 m
108	ACE/P-40X108	7612207393637	4 m

**Tube – standard. Black. Packed in cartons, length: 2 m****40 mm**

Pipe Ø [mm]	Item	EAN	Content [metric]
114	ACE/P-40X114	7612207391428	6 m
140	ACE/P-40X140	7612207391107	4 m
160	ACE/P-40X160	7612207536577	4 m
168	ACE/P-40X168	7612207391268	4 m

**Other information**

<b>Thickness tolerance</b>	6 mm: ±1.0 mm 9, 13 mm: ±1.5 mm 19, 25 mm: ±2.5 mm 32, 40 mm: ±3.0 mm
<b>Length tolerance</b>	± 1.5%

**Coil. Black**

6 mm				9 mm				13 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]
6	ACE/P-06X006/E	7612207537437	95 m	6	ACE/P-09X006/E	7612207537475	70 m	6	ACE/P-13X006/E	7612207537611	45 m
8	ACE/P-06X008/E	7612207537444	85 m	8	ACE/P-09X008/E	7612207537208	60 m	10	ACE/P-13X010/E	7612207537628	35 m
10	ACE/P-06X010/E	7612207537154	75 m	10	ACE/P-09X010/E	7612207537215	50 m	12	ACE/P-13X012/E	7612207535778	32 m
12	ACE/P-06X012/E	7612207536621	65 m	12	ACE/P-09X012/E	7612207536676	45 m	15	ACE/P-13X015/E	7612207536713	28 m
15	ACE/P-06X015/E	7612207537451	55 m	15	ACE/P-09X015/E	7612207536683	40 m	18	ACE/P-13X018/E	7612207537659	27 m
18	ACE/P-06X018/E	7612207537178	45 m	18	ACE/P-09X018/E	7612207537505	38 m	22	ACE/P-13X022/E	7612207535808	26 m
22	ACE/P-06X022/E	7612207536638	40 m	22	ACE/P-09X022/E	7612207537512	30 m	28	ACE/P-13X028/E	7612207535822	20 m
28	ACE/P-06X028/E	7612207537468	30 m	28	ACE/P-09X028/E	7612207537536	26 m	-	-	-	-

**Other information**

<b>Thickness tolerance</b>	6 mm: ±1.0mm 9, 13 mm: ±1.5mm
<b>Length tolerance</b>	± 1.5%

**Roll - standard. Black. Packed in cartons, width: 1 m**

Item	Insulation thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
ACE/P-06-99-E	6	1.000	15	7612207395471	15 m <sup>2</sup>
ACE/P-09-99-E	9	1.000	10	7612207395402	10 m <sup>2</sup>
ACE/P-13-99-E	13	1.000	8	7612207395532	8 m <sup>2</sup>
ACE/P-19-99-E	19	1.000	6	7612207395396	6 m <sup>2</sup>
ACE/P-25-99-E	25	1.000	4	7612207395495	4 m <sup>2</sup>
ACE/P-32-99-E	32	1.000	3	7612207395464	3 m <sup>2</sup>
ACE/P-40-99-E	40	1.000	7	7612207395501	7 m <sup>2</sup>

**Other information**

<b>Thickness tolerance</b>	6 mm: ±1.0mm 7 - 19mm: ±1.5mm >19mm: ±2.0mm
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**Roll - standard. Black. Packed in cartons, width: 1 m**

Item	Insulation thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
Length tolerance		±1.5%			
Width tolerance		±2.0%			

**Roll - standard self-adhesive. Black. Packed in cartons, width: 1 m**

Item	Insulation thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
ACE/P-06-99-EA	6	1.000	15	7612207395518	15 m <sup>2</sup>
ACE/P-09-99-EA	9	1.000	10	7612207395525	10 m <sup>2</sup>
ACE/P-13-99-EA	13	1.000	8	7612207395549	8 m <sup>2</sup>
ACE/P-19-99-EA	19	1.000	6	7612207395426	6 m <sup>2</sup>
ACE/P-25-99-EA	25	1.000	4	7612207395433	4 m <sup>2</sup>
ACE/P-32-99-EA	32	1.000	3	7612207395488	3 m <sup>2</sup>
ACE/P-40-99-EA	40	1.000	7	7612207395440	7 m <sup>2</sup>

**Other information**

Thickness tolerance	6 mm: ±1.0mm 7-19 mm: ±1.5mm >19 mm: ±2.0mm
Length tolerance	±1.5%
Width tolerance	±2.0%

**Tape – insulation. Black**

Item	Description	Thickness [mm]	Width [mm]	Length [m]	Content [quantity]
ACE/P-TAPE	ArmaFlex ACE Plus tape	3	50	15	12 roll

**Adhesives and Cleaners**

Item	Description	Content [quantity]
ADH-RS850/0,5	ArmaFlex RS850 adhesive. Available in 0.5 litre cans.	6 tin
ADH520/0,25E	0.25 litre tins of ArmaFlex 520 adhesive with built-in brush, packed in a carton.	24 tin
ADH520/0,5E	0.5 litre tins of ArmaFlex 520 adhesive packed in a carton.	12 tin
ADH520/1,0E	1.0 litre tins of ArmaFlex 520 adhesive packed in a carton.	12 tin
ADH520/2,5E	2.5 litre tins of ArmaFlex 520 adhesive packed in a carton.	8 tin
CLEANER/1,0	Special cleaner for use with ArmaFlex adhesives	4 tin