

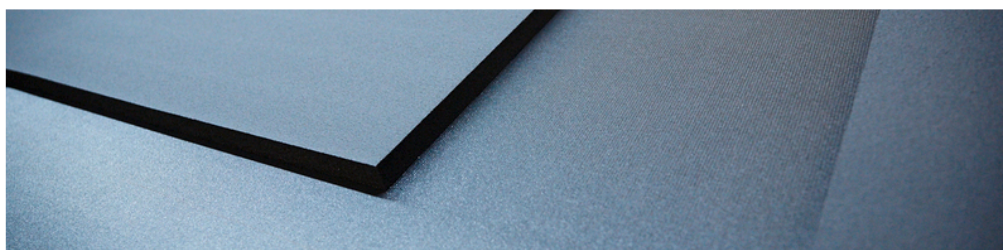
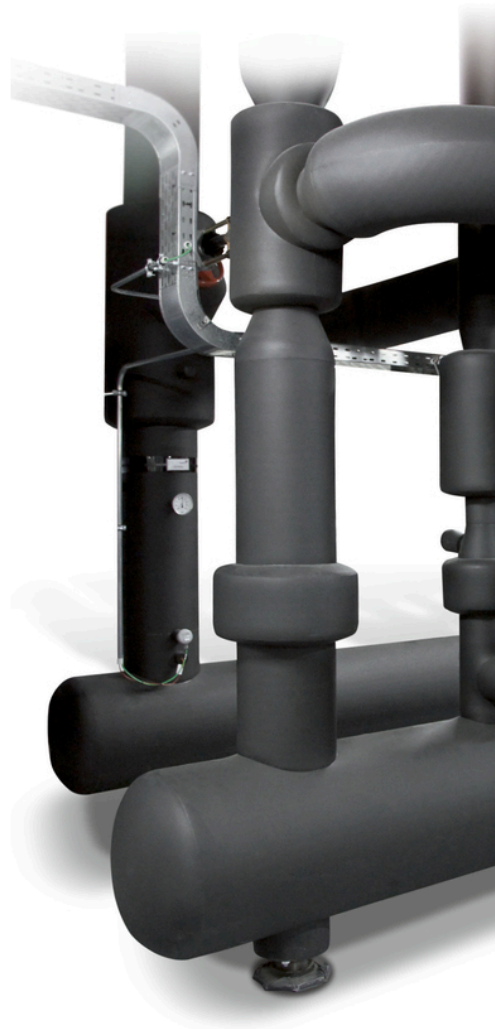


INSTALL IT. TRUST IT.

# ArmaFlex ACE Plus

The flexible insulation based on  
ArmaFlex technology

- // 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/B(L)-s3,d0 for the entire range



 **armacell**<sup>®</sup>  
ArmaFlex<sup>®</sup>

INSTALL IT. TRUST IT.

---

# ArmaFlex ACE Plus

## Technical Considerations

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

The rate of heat flow from a pipe is largely governed by the differential to the ambient temperature, and heat losses can be considerable. The insulation of mechanical services is one of the single most effective measures for improving energy efficiency and prolonging the lifespan of equipment. Optimal pipe insulation of space heating, domestic hot water or cooling systems is still a remaining potential for further reduction of energy use and of the associated greenhouse gas emissions.



### // Thermal Conductivity and Condensation Control

Thermal conductivity ( $\lambda$  factor), stated in  $W/(m \cdot K)$ , is the property of a material's ability to conduct heat, measured across a  $1m^3$  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  $0^\circ C$ . 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  $>10,000$ .

### // CE Marking

CE marking became a mandatory requirement for thermal insulation construction products governed by a European harmonized standard (hEN) in July 2013. The harmonized standards determine the required characteristics and obligatory properties, including fire behaviour (Euroclasses), dimensions and

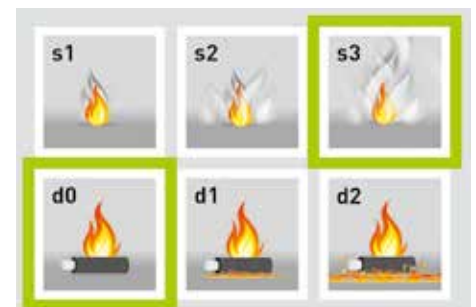
tolerances, thermal conductivity, dimensional stability and durability characteristics. Once a product has been tested to meet the required properties a designation code is printed on the product label to display the specific technical properties required by the hEN. The producer has to constantly keep the performance of its products at the declared level and prove with valid testing certificates e.g. B-s3,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 Euro Classes 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 Euro class for a

specific product discloses if and how fast a product contributes to the fire.



### // Local regulations for fire protection

The decisions regarding fire resistance 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	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.
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 <sup>1</sup>	Max. °C
	-50	110
	Remarks	+85 °C if sheet or tape is glued to the object with its whole surface
<b>Thermal conductivity</b>		
Declared thermal conductivity	Øm	0 °C
	$\lambda d \leq [W/(m \cdot K)]$	0.035
	Range	Tubes, sheets and tapes
	Formula	$[35 + 0,1 \cdot \varnothing m + 0,0008 \cdot \varnothing m^2]/1000$
<b>Fire Performance and Approvals</b>		
Reaction to fire	Tubes: B(L)-s3, d0 Sheets: B-s3,d0 Tape: 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	Fulfills 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	
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	Primary content [metric]	Pipe Ø [mm]	Item	EAN	Primary content [metric]	Pipe Ø [mm]	Item	EAN	Primary content [metric]
6	ACE/ P-06X006	76122073924 63	568 m	6	ACE/ P-09X006	76122073926 92	362 m	10	ACE/ P-13X010	76122073929 51	172 m
10	ACE/ P-06X010	76122073924 87	380 m	10	ACE/ P-09X010	76122073927 15	266 m	12	ACE/ P-13X012	76122073929 68	162 m
12	ACE/ P-06X012	76122073924 94	330 m	12	ACE/ P-09X012	76122073927 22	234 m	15	ACE/ P-13X015	76122073929 75	122 m
15	ACE/ P-06X015	76122073925 00	280 m	15	ACE/ P-09X015	76122073927 39	200 m	18	ACE/ P-13X018	76122073929 82	104 m
18	ACE/ P-06X018	76122073925 17	228 m	18	ACE/ P-09X018	76122073927 46	166 m	22	ACE/ P-13X022	76122073930 02	100 m
22	ACE/ P-06X022	76122073925 31	170 m	22	ACE/ P-09X022	76122073927 60	140 m	28	ACE/ P-13X028	76122073930 26	82 m
28	ACE/ P-06X028	76122073926 61	128 m	28	ACE/ P-09X028	76122073927 84	98 m	35	ACE/ P-13X035	76122073930 40	60 m
35	ACE/ P-06X035	76122073926 85	110 m	35	ACE/ P-09X035	76122073928 07	76 m	42	ACE/ P-13X042	76122073919 23	50 m
	§§ ACE/ P-06X008	76122073924 70		42	ACE/ P-09X042	76122073928 21	64 m	48	ACE/ P-13X048	76122073919 09	42 m
	ACE/ P-06X025	76122073926 54		48	ACE/ P-09X048	76122073928 38	54 m	54	ACE/ P-13X054	76122073919 47	38 m
	ACE/ P-06X032	76122073926 78		54	ACE/ P-09X054	76122073928 52	52 m	60	ACE/ P-13X060	76122073919 54	32 m
	ACE/ P-06X020	76122073925 24		60	ACE/ P-09X060	76122073928 69	48 m	64	ACE/ P-13X064	76122073919 61	30 m
-	-	-	-	64	ACE/ P-09X064	76122073928 76	44 m	76	ACE/ P-13X076	76122073919 85	28 m
-	-	-	-	76	ACE/ P-09X076	76122073928 90	32 m	89	ACE/ P-13X089	76122073920 05	20 m
-	-	-	-	89	ACE/ P-09X089	76122073929 13	28 m	108	ACE/ P-13X108	76122073920 29	20 m
-	-	-	-	108	ACE/ P-09X108	76122073929 37	26 m	114	ACE/ P-13X114	76122073920 36	20 m
-	-	-	-	114	ACE/ P-09X114	76122073929 44	24 m	133	ACE/ P-13X133	76122073920 50	16 m
-	-	-	-		ACE/ P-09X032	76122073927 91		140	ACE/ P-13X140	76122073920 67	12 m
-	-	-	-		ACE/ P-09X070	76122073928 83		160	ACE/ P-13X160	76122073920 74	12 m
-	-	-	-		ACE/ P-09X020	76122073927 53			ACE/ P-13X080	76122073919 92	
-	-	-	-		ACE/ P-09X040	76122073928 14			ACE/ P-13X032	76122073930 33	
-	-	-	-		ACE/ P-09X080	76122073929 06			ACE/ P-13X020	76122073929 99	
-	-	-	-		ACE/ P-09X025	76122073927 77			ACE/ P-13X025	76122073930 19	
-	-	-	-	-	-	-	-		ACE/ P-13X050	76122073919 30	

Other information

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

Length tolerance ± 1.5%



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

19 mm				25 mm				32 mm			
Pipe Ø [mm]	Item	EAN	Primary content [metric]	Pipe Ø [mm]	Item	EAN	Primary content [metric]	Pipe Ø [mm]	Item	EAN	Primary content [metric]
15	ACE/ P-19X015	76122073920 81	72 m	22	ACE/ P-25X022	76122073926 47	40 m	28	ACE/ P-32X028	76122073907 59	24 m
18	ACE/ P-19X018	76122073920 98	60 m	28	ACE/ P-25X028	76122073922 96	36 m	35	ACE/ P-32X035	76122073907 66	18 m
22	ACE/ P-19X022	76122073921 11	56 m	35	ACE/ P-25X035	76122073923 19	24 m	42	ACE/ P-32X042	76122073910 84	18 m
28	ACE/ P-19X028	76122073921 35	48 m	42	ACE/ P-25X042	76122073923 33	24 m	48	ACE/ P-32X048	76122073910 77	18 m
35	ACE/ P-19X035	76122073921 59	38 m	48	ACE/ P-25X048	76122073923 40	20 m	54	ACE/ P-32X054	76122073910 91	12 m
42	ACE/ P-19X042	76122073921 73	32 m	54	ACE/ P-25X054	76122073923 64	18 m	60	ACE/ P-32X060	76122073925 48	10 m
48	ACE/ P-19X048	76122073921 80	28 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	76	ACE/ P-32X076	76122073925 55	10 m
60	ACE/ P-19X060	76122073922 10	24 m	76	ACE/ P-25X076	76122073924 01	16 m	89	ACE/ P-32X089	76122073925 62	10 m
64	ACE/ P-19X064	76122073922 27	20 m	89	ACE/ P-25X089	76122073924 25	12 m	114	ACE/ P-32X114	76122073907 35	8 m
76	ACE/ P-19X076	76122073922 41	18 m	114	ACE/ P-25X114	76122073924 56	10 m	140	ACE/ P-32X140	76122073907 42	6 m
89	ACE/ P-19X089	76122073922 65	16 m	140	ACE/ P-25X140	76122073908 41	4 m	160	ACE/ P-32X160	76122073912 44	4 m
108	ACE/ P-19X108	76122073925 79	16 m		ACE/ P-25X050	76122073923 57		-	-	-	-
114	ACE/ P-19X114	76122073925 86	14 m		ACE/ P-25X070	76122073923 95		-	-	-	-
133	ACE/ P-19X133	76122073926 09	10 m		ACE/ P-25X108	76122073924 49		-	-	-	-
140	ACE/ P-19X140	76122073926 16	10 m		ACE/ P-25X080	76122073924 18		-	-	-	-
160	ACE/ P-19X160	76122073926 23	10 m		ACE/ P-25X032	76122073923 02		-	-	-	-
	ACE/ P-19X102	76122073922 72			ACE/ P-25X020	76122073926 30		-	-	-	-
	ACE/ P-19X050	76122073921 97			ACE/ P-25X025	76122073922 89		-	-	-	-
	ACE/ P-19X070	76122073922 34			ACE/ P-25X102	76122073924 32		-	-	-	-
	ACE/ P-19X080	76122073922 58			ACE/ P-25X040	76122073923 26		-	-	-	-
	§§ ACE/ P-19X125	76122073925 93		-	-	-	-	-	-	-	-

Other information

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

Length tolerance ± 1.5%

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

40 mm				25 mm		
Pipe Ø [mm]	Item	EAN	Primary content [metric]	Pipe Ø [mm]	Item	EAN
42	ACE/P-40X042	7612207391251	12 m		ACE/P-50X076	7612207416824
48	ACE/P-40X048	7612207391442	12 m		ACE/P-50X140	7612207416749
54	ACE/P-40X054	7612207390773	10 m		ACE/P-50X125	7612207416732
60	ACE/P-40X060	7612207391220	10 m		ACE/P-50X108	7612207416725
64	ACE/P-40X064	7612207391404	10 m		ACE/P-50X022	7612207415063
76	ACE/P-40X076	7612207391411	8 m		ACE/P-50X114	7612207414325
89	ACE/P-40X089	7612207397956	6 m		ACE/P-50X168	7612207416718
108	ACE/P-40X108	7612207393637	4 m		ACE/P-50X080	7612207416756
114	ACE/P-40X114	7612207391428	6 m		ACE/P-50X089	7612207416763
140	ACE/P-40X140	7612207391107	4 m		ACE/P-50X048	7612207416831
168	ACE/P-40X168	7612207391268	4 m		ACE/P-50X042	7612207416855
-	-	-	-		ACE/P-50X060	7612207416794
-	-	-	-		ACE/P-50X070	7612207416817
-	-	-	-		ACE/P-50X133	7612207415056
-	-	-	-		ACE/P-50X054	7612207416787
-	-	-	-		ACE/P-50X050	7612207416848
-	-	-	-		ACE/P-50X102	7612207416770
-	-	-	-		ACE/P-50X064	7612207416800

Other information

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

Length tolerance ± 1.5%

Coil. Black

6 mm				9 mm				13 mm		
Pipe Ø [mm]	Item	EAN	Primary content [metric]	Pipe Ø [mm]	Item	EAN	Primary content [metric]	Pipe Ø [mm]	Item	EAN
10	ACE/P-06X010/E	7612207393774	46 m	10	ACE/P-09X010/E	7612207393750	34 m		ACE/P-13X018/E	7612207393866
12	ACE/P-06X012/E	7612207393781	40 m	12	ACE/P-09X012/E	7612207393828	31 m		ACE/P-13X015/E	7612207393811
	ACE/P-06X015/E	7612207393804		15	ACE/P-09X015/E	7612207393798	27 m		ACE/P-13X022/E	7612207393767
-	-	-	-	18	ACE/P-09X018/E	7612207393842	23 m	-	-	-
-	-	-	-	22	ACE/P-09X022/E	7612207393859	19 m	-	-	-

Other information

Thickness tolerance  
 6 mm: ±1.0mm  
 9 mm: ±1.0mm

Length tolerance ±1.5%

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

Item	Insulation thickness [mm]	Length [m]	EAN	Primary content [metric]
ACE/P-06-99-EP	6	30	7612207394566	30 m <sup>2</sup>
ACE/P-09-99-EP	9	22	7612207394504	22 m <sup>2</sup>
ACE/P-13-99-EP	13	18	7612207394573	18 m <sup>2</sup>
ACE/P-19-99-EP	19	14	7612207394535	14 m <sup>2</sup>
ACE/P-25-99-EP	25	9	7612207394528	9 m <sup>2</sup>
ACE/P-32-99-EP	32	7	7612207394542	7 m <sup>2</sup>
ACE/P-40-99-EP	40	6	7612207394580	6 m <sup>2</sup>
ACE/P-50-99-EP	50	4	7612207394597	4 m <sup>2</sup>

Other information

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

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

Item	Thickness [mm]	Length [m]	EAN	Primary content [metric]
ACE/P-06-99-EAP	6	30	7612207394481	30 m <sup>2</sup>
ACE/P-09-99-EAP	9	22	7612207394498	22 m <sup>2</sup>
ACE/P-13-99-EAP	13	18	7612207394511	18 m <sup>2</sup>
ACE/P-19-99-EAP	19	14	7612207394559	14 m <sup>2</sup>
ACE/P-25-99-EAP	25	9	7612207394603	9 m <sup>2</sup>
ACE/P-32-99-EAP	32	7	7612207394474	7 m <sup>2</sup>
ACE/P-40-99-EAP	40	6	7612207394610	6 m <sup>2</sup>
ACE/P-50-99-EAP	50	4	7612207394627	4 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%

Accessories

Item	Description	Primary content [pieces]
ACE-TAPE/50	ArmaFlex ACE tape	12 roll
CUTTING-SET	ArmaFlex knife set (3 knives and 1 sharpening stone).	1 set
GLUEMASTER B	ArmaFlex Gluemaster adhesive pump	12 piece
GLUEM-BRUSH11MM	Extra brush points with cap (11mm diameter) for use with ArmaFlex Gluemaster.	20 piece
GLUEM-BRUSH17MM	Extra brush points with cap (17mm diameter) for use with ArmaFlex Gluemaster.	20 piece

Adhesives and Cleaners

Item	Description	Primary content [pieces]
ADH520/0,25E	0.25 litre tins of ArmaFlex 520 adhesive with built-in brush, packed in a carton.	24 tin



**Adhesives and Cleaners**

<b>Item</b>	<b>Description</b>	<b>Primary content [pieces]</b>
ADH520/0,5E	0.5 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
ADH520/1,0E	1.0 litre tins of ArmaFlex 520 adhesive packed in a carton.	12 tin
CLEANER/1,0	Special cleaner for use with ArmaFlex adhesives	4 piece
ADH-RS850/0,5	ArmaFlex RS850 adhesive. Available in 0.5 litre cans.	6 piece

OUR CUSTOMERS  
EXPECT THE BEST.  
WE WORK HARD TO  
GO BEYOND THAT  
AND EXCEED THEIR  
EXPECTATIONS.

Our extensive product portfolio has been designed and developed to meet the specific requirements of our customers and their end-users. Discover how Armacell is making a difference around the world with our products in the following pages.

To offer our customers the best service, we hold stocks of our most popular products. **Lead times and form of delivery may vary per product and per country, and may be affected during peak season and holidays.** We aim to create open lines of communication with our customers, so please contact Customer Services who can answer questions about our service commitment to you.

Standard Pipe Table

Pipe Ø [mm]	Copper pipe (ASTM B280) [inch]
3	-
6	0.25
8	-
9.5	0.375
10	-
12	-
13	0.5
14	-
15	-
16	0.625
17	-
18	-
19	0.75
20	-
22	0.875
25	-
28	1.125
30	-
32	-
35	1.375
38	-
40	-
42	1.625
45	-
48	-
50	-
54	2.125
57	-
60	-
63	-
64	-
65	-
67	2.625
70	-
73	-
75	-
76	-
80	3.125
89	-
90	3.625
100	-
102	-

Standard Pipe Table

Pipe Ø [mm]	Copper pipe (ASTM B280) [inch]
104.8	4.125
108	
110	
114	
125	
127.5	-
130.7	5.125
133	
140	
150	
152	
154	-
156.2	6.125
159	
160	
165	
168	
175	
180	
197	
200	
204	-
207.2	8.125
219	
225	
242	
250	
254	
267	
273	
306	
324	
356	
406	
457	
508	
610	-

All data and technical information are based on results achieved under the specific conditions defined according to the testing standards referenced. Despite taking every precaution to ensure that said data and technical information are up to date, Armacell does not make any representation or warranty, express or implied, as to the accuracy, content or completeness of said data and technical information. Armacell also does not assume any liability towards any person resulting from the use of said data or technical information. Armacell reserves the right to revoke, modify or amend this document at any moment. 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. This document does not constitute nor is part of a legal offer to sell or to contract.

At Armacell, your trust means everything to us, so we want to let you know your rights and make it easier for you to understand what information we collect and why we collect it. If you would like to find out about our processing of your data, please visit our Data Protection Policy.

© Armacell, 2022. All rights reserved. Trademarks followed by ® or ™ are trademarks of the Armacell Group.

Microban is a registered trademark of Microban Products Company.

ArmaFlex | ArmaFlex ACE Plus | Brochure | 012023 | en-IN

## 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 more than 3200 employees and 27 production plants in 19 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.



For more information, please visit:  
[www.armacell.com](http://www.armacell.com)