

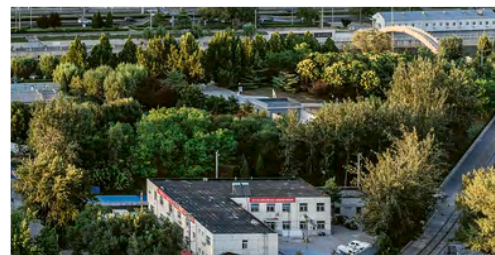


INSTALL IT. TRUST IT.

ArmaFlex Ultima

The first flexible insulation with low smoke emissions for improved fire safety

- // The best flexible insulation with low smoke density in case of fire
- // Based on Armacell's patented ArmaPrene technology
- // Complete system integration with adhesives and ArmaFix Ultima pipe hangers
- // Meets the requirements for sustainable construction in combination with ArmaFlex Ultima SF990 Adhesive
- // FM approved
- // IMO compliant



 **armacell**[®]
ArmaFlex[®]

INSTALL IT. TRUST IT.

ArmaFlex Ultima

- ✓
FIRE
SAFETY
- ✓
ENERGY
EFFICIENCY
- ✓
CONDENSATION
CONTROL
- ✓
INDOOR
AIR QUALITY
- ✓
LONG-TERM
SAFE OPERATION

Benefit
from our
10 years
warranty on
ArmaFlex Ultima

With ArmaFlex Ultima we have set a new safety standard in technical insulation. Based on the patented ArmaPrene® technology, we now offer a complete range of B/B_L-s1,d0 classified tubes and sheets.

In comparison to a standard elastomeric product, the flame-resistant insulation material develops 10 times less smoke and offers increased safety in the event of a fire.

ULTRA-LOW SMOKE PROPERTIES

As smoke is a significant risk in a fire, smoke density requirements for equipment insulation materials are becoming stricter. When assessing the fire behaviour of building products, the European fire classification not only tests the flammability, but also the smoke density and the production of burning droplets. By reducing the smoke density, ArmaFlex Ultima improves visibility and respiration, thus extending the time available to evacuate safer in the event of a fire.

RELIABLE THERMAL AND CONDENSATION CONTROL

Thanks to its good thermal conductivity and high resistance to water vapour diffusion, the closed-cell ArmaFlex Ultima ensures reliable condensation control and high energy savings in the long-term. This also minimises the risk of corrosion under insulation (CUI) and reduces the risk of costs associated with downtime, lost productivity, or even facility shutdown. ArmaFlex Ultima can be installed on mechanical equipment with service temperatures between +110 °C and -50 °C (-200 °C)*. It is FM-approved and IMO-certified.

*Please contact our Technical Customer Service for cryogenic applications

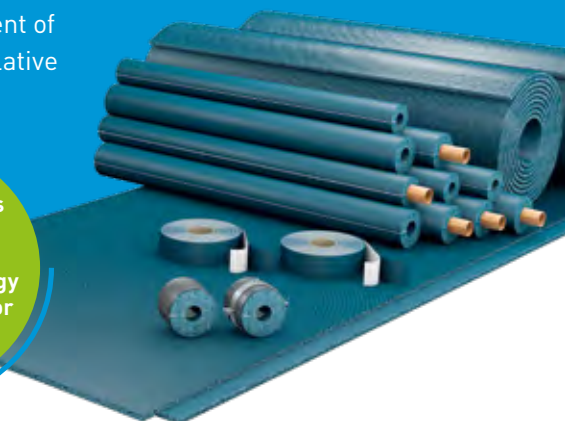


ARMAPRENE

Our patented ArmaPrene technology offers the highest fire standard in flexible insulation.

While standard elastomeric products with brominated flame retardants inhibit combustion very effectively in the event of a fire, they tend to produce a high level of smoke. Our breakthrough ArmaPrene technology resolves this conflict: due to the development of intrinsically flame-resistant polymers and by using ablative protective additives it is no longer necessary to add any brominated flame retardants.

ArmaFlex saves
140
times more energy
than is needed for
its production



SYSTEM SOLUTION FOR MAXIMUM RELIABILITY



ArmaFix Ultima pipe support thermally isolates the pipe and its fixing from each

other and, together with the adjoining ArmaFlex Ultima insulation, forms a long-term reliable insulation system. For the installation of ArmaFlex Ultima, we offer a range of specially formulated adhesives, including a solvent-free product which is predestined for sustainable construction projects realised according to LEED®, BREEAM, DGNB or national green building schemes.

ARMAFLEX ULTIMA C

With our new ArmaFlex Ultima C, we now offer insulation sheets meeting the highest fire classification for flexible technical insulation. This pre-covered insulation solution achieves Euroclass B-s1,d0 and is engineered for installation on airducts, large pipe diameters, vessels and tanks where an improved fire performance is required. The sheets provide a high level of protection against mechanical impact and are easy to clean. The covering reinforces the vapour barrier resistance creating a safer system to prevent condensation and energy losses in the long term. What's more, the dark-grey surface is highly absorptive and thinner insulation thicknesses can be installed to control condensation.



APPROVED FOR GREEN BUILDING

ArmaFlex Ultima meets the most stringent environmental requirements and saves specifiers time by being accredited in the most important green building schemes.

SUNDAHUS
NORDIC SWAN ECOLABEL
BYGGVARUBEDÖMNINGEN
MINERGIE-ECO
LEED | BREEAM | DGNB

Bromine-free
Antimony-free
PVC-free

TECHNICAL DATA - ARMAFLEX ULTIMA

Brief description	Flexible elastomeric foam on the basis of patented synthetic rubber composition with improved fire retardant properties, low smoke generation and a closed-cell material structure. For use in HVAC, refrigeration and process equipment applications.
Material type	Factory-made flexible elastomeric foam (FEF), according to EN 14304.
Additional material 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.
Product colour range	Dark blue
Special features	Low smoke performance.
Applications	Insulation/protection of pipes, air ducts, vessels (including elbows, fittings, flanges, etc.) to prevent condensation and save energy. Self-adhesive tubes shall additionally be secured by applying ArmaFlex Ultima tape.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature ¹	Min. °C	Max. °C ²	EN 14706, EN 14707, EN 14304
	-50	110	
	Remarks	For temperatures below -50 °C (till -200 °C), please ask our customer service for relevant technical information.	
Thermal conductivity			
Declared thermal conductivity	Øm	0 °C	EN ISO 13787, EN 12667, EN ISO 8497
	$\lambda d \leq [W/(m \cdot K)]$	0,040	
	Formula	$> 0\text{ °C: } \lambda d = [40 + 0,1 \cdot \vartheta m + 0,0009 \cdot \vartheta m^2]/1000$ $\leq 0\text{ °C: } \lambda d = [41,25 + 0,1 \cdot \vartheta m - (\vartheta m + 50)^2 \cdot 0,0005]/1000$	
Fire Performance and Approvals			
Reaction to fire	Tubes, Tubes self-adhesive, open tubes (up to 300 min insulated Øa): B(L)-s1,d0 Sheets, sheets self-adhesive: B-s2,d0 Tapes: B-s1,d0		EN 13501-1, EN ISO 11925-2, EN 13823
Surface flammability ³	low-flammable - 2010 FTP-Code (MED 96/98/EC, Module D)		IMO 2010 FTP Code, Part 5
FM approved	4924-Pipe and Duct Insulation		UBC26-3
Passive fire protection			
Fire resistance of elements of construction	EI 30 - EI 120		EN 13501-2, EN 1366-3
Fire performance			
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames; very low smoke density		
Resistance to water vapour			
Water vapour diffusion resistance factor	$\mu \geq 7,000$		EN 12086, EN 13469
Physical attributes			
Dimensions and tolerances	in accordance with EN 14304, table 1		EN 822, EN 823, EN 13467
Weather and UV resistance			
UV resistance ⁴	Protection against UV radiation is necessary (see Technical Bulletin no. 142).		
Health and environment			
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

Property	Value / Assessment	Standard / Test method
Antimicrobial behaviour	No fungal growth observed	EN ISO 846, VDI 6022
Environmental aspects	Meets the requirements for sustainable construction in combination with ArmaFlex Ultima SF990 adhesive such as LEED.	
Environmental Product Declaration (EPD)	Type III Environmental Product Declaration (EPD): Declaration number "EPD-ARM-20200218-IBB1-EN", Institut Bauen und Umwelt e.V. (IBU)	ISO 14025, EN 15804+A2
Green building assessment	Meets the sustainable construction requirements for LEED v4.1, BREEAM international, WELL v2 and DGNB.	
Additional features	SCCP, MCCP-free	
Other technical features		
Shelf life	Self-adhesive tubes, self-adhesive sheets, self-adhesive tape: 1 year	
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).	

¹For use in temperatures beyond the maximum and minimum service temperature range indicated in the technical data table, please contact our Customer Service Centre.

²+85 °C, for products with a self-adhesive layer.

³According to IMO 2010 FTP Code annex 2, clause 2.2 a fire technical test for smoke density and toxicity is not necessary.

⁴If ArmaFlex is used outdoors or in applications under UV radiation, it should be protected with a covering such as ArmaClad Arma-Chek within 3 days of installation.

Tube – standard. Blue. Length: 2.0 m

9 mm						13 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
12	UD-09X012	13	16	7612207395600	192 m	6	UD-13X006	7	10	7612207395723	164 m
15	UD-09X015	16	19	7612207395617	180 m	10	UD-13X010	11	14	7612207395730	140 m
18	UD-09X018	19	22	7612207395624	150 m	12	UD-13X012	13	16	7612207395747	130 m
22	UD-09X022	23	26	7612207395631	124 m	15	UD-13X015	16	19	7612207395754	112 m
28	UD-09X028	29	32	7612207395658	96 m	18	UD-13X018	19	22	7612207395761	98 m
35	UD-09X035	36	39	7612207395648	70 m	22	UD-13X022	23	26	7612207395778	88 m
42	UD-09X042	43	46	7612207395655	56 m	28	UD-13X028	29	32	7612207395785	64 m
48	UD-09X048	49	52	7612207395634	52 m	35	UD-13X035	36	39	7612207395792	56 m
54	UD-09X054	55	58	7612207395662	42 m	42	UD-13X042	43	46	7612207395808	48 m
60	UD-09X060	61	64	7612207395679	40 m	48	UD-13X048	49	52	7612207395815	40 m
64	UD-09X064	65	68	7612207395686	28 m	54	UD-13X054	55	58	7612207395822	36 m
76	UD-09X076	77	70	7612207395693	32 m	60	UD-13X060	61	64	7612207395839	28 m
89	UD-09X089	90	93	7612207395641	24 m	64	UD-13X064	65	68	7612207395846	26 m
-	-	-	-	-	-	76	UD-13X076	77	80	7612207395853	24 m
-	-	-	-	-	-	89	UD-13X089	90	93	7612207395860	18 m

Other information

Thickness tolerance 9 mm, 13 mm : ±1,5 mm
19 mm, 25 mm, 32 mm : ±2,5 mm

Length tolerance ±1,5%

Reaction to fire B(L)-s1,d0

Tube – standard. Blue. Length: 2.0 m

19 mm						25 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
10	UD-19X010	11	14	7612207395884	92 m	18	UD-25X018	19	22	7612207396010	46 m
12	UD-19X012	13	16	7612207395891	84 m	22	UD-25X022	23	26	7612207396027	36 m
15	UD-19X015	16	19	7612207395907	64 m	28	UD-25X028	29	32	7612207396034	36 m
18	UD-19X018	19	22	7612207395956	58 m	35	UD-25X035	36	39	7612207396041	28 m
22	UD-19X022	23	26	7612207395914	56 m	42	UD-25X042	43	46	7612207396058	24 m

Tube – standard. Blue. Length: 2.0 m

19 mm						25 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
28	UD-19X028	29	32	7612207395921	40 m	48	UD-25X048	49	52	7612207396065	20 m
35	UD-19X035	36	39	7612207395938	40 m	54	UD-25X054	55	58	7612207396072	18 m
42	UD-19X042	43	46	7612207395945	24 m	60	UD-25X060	61	64	7612207396089	18 m
48	UD-19X048	49	52	7612207395563	24 m	64	UD-25X064	65	68	7612207396096	16 m
54	UD-19X054	55	58	7612207395952	24 m	76	UD-25X076	77	80	7612207396102	12 m
60	UD-19X060	61	64	7612207395570	16 m	89	UD-25X089	90	93	7612207396119	12 m
64	UD-19X064	65	68	7612207395969	16 m	114	UD-25X114	115	118	7612207531862	10 m
76	UD-19X076	77	80	7612207395976	16 m	-	-	-	-	-	-
89	UD-19X089	90	93	7612207395983	16 m	-	-	-	-	-	-
114	UD-19X114	115	118	7612207531909	14 m	-	-	-	-	-	-

Other information

Thickness tolerance	9 mm, 13 mm : ±1,5 mm 19 mm, 25 mm, 32 mm : ±2,5 mm
Length tolerance	±1,5%
Reaction to fire	B(L)-s1,d0

Tube – standard. Blue. Length: 2.0 m

32 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
12	UD-32X012	13	16	7612207533101	32 m
15	UD-32X015	16	19	7612207401684	32 m
18	UD-32X018	18	21	7612207399950	32 m
20	UD-32X020	21	24	7612207401660	24 m
22	UD-32X022	23	26	7612207400083	24 m
28	UD-32X028	29	32	7612207399998	24 m
35	UD-32X035	36	39	7612207400007	18 m
42	UD-32X042	43	46	7612207400038	16 m
48	UD-32X048	49	52	7612207399974	12 m
54	UD-32X054	55	58	7612207399981	12 m
60	UD-32X060	61	64	7612207399967	10 m
64	UD-32X064	65	68	7612207400014	10 m
76	UD-32X076	77	80	7612207400021	10 m
89	UD-32X089	90	93	7612207400076	8 m

Other information

Tube – standard. Blue. Length: 2.0 m

32 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
Thickness tolerance		9 mm, 13 mm : ±1,5 mm 19 mm, 25 mm, 32 mm : ±2,5 mm			
Length tolerance		±1,5%			
Reaction to fire		B(L)-s1,d0			

Tube – self-seal. Blue. Length: 2.0 m

9 mm						13 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
15	UD-09X015-A 16	16	19	76122074017 76	180 m	15	UD-13X015-A 16	16	19	76122074018 82	112 m
18	UD-09X018-A 19	19	22	76122074017 83	150 m	18	UD-13X018-A 19	19	22	76122074018 99	98 m
22	UD-09X022-A 23	23	26	76122074017 90	124 m	22	UD-13X022-A 23	23	26	76122074019 05	88 m
28	UD-09X028-A 29	29	32	76122074018 06	96 m	28	UD-13X028-A 29	29	32	76122074019 12	64 m
35	UD-09X035-A 36	36	39	76122074018 13	70 m	35	UD-13X035-A 36	36	39	76122074019 29	56 m
42	UD-09X042-A 43	43	46	76122074018 20	56 m	42	UD-13X042-A 43	43	46	76122074019 36	48 m
48	UD-09X048-A 49	49	52	76122074018 37	52 m	48	UD-13X048-A 49	49	52	76122074019 43	40 m
54	UD-09X054-A 55	55	58	76122074018 44	42 m	54	UD-13X054-A 55	55	58	76122074019 50	36 m
60	UD-09X060-A 61	61	64	76122074018 51	40 m	60	UD-13X060-A 61	61	64	76122074019 67	28 m
76	UD-09X076-A 77	77	80	76122074018 68	32 m	76	UD-13X076-A 77	77	80	76122074019 74	24 m
89	UD-09X089-A 90	90	93	76122074018 75	24 m	89	UD-13X089-A 90	93	93	76122074019 81	18 m

Other information

Thickness tolerance	9 mm, 13 mm : ±1,5 mm 19 mm, 25 mm, 32 mm : ±2,5 mm
Length tolerance	±1,5%
Reaction to fire	B(L)-s1,d0

Tube – self-seal. Blue. Length: 2.0 m

19 mm						25 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
15	UD-19X015-A 16	16	19	76122074019 98	64 m	18	UD-25X018-A 19	19	22	76122074021 17	46 m
18	UD-19X018-A 19	19	22	76122074020 01	58 m	22	UD-25X022-A 23	23	26	76122074021 24	36 m
22	UD-19X022-A 23	23	26	76122074020 18	56 m	28	UD-25X028-A 29	29	32	76122074021 31	36 m

Tube – self-seal. Blue. Length: 2.0 m

19 mm						25 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
28	UD-19X028-A	29	32	7612207402025	40 m	35	UD-25X035-A	36	39	7612207402087	28 m
35	UD-19X035-A	36	39	7612207402032	40 m	42	UD-25X042-A	43	46	7612207402148	24 m
42	UD-19X042-A	43	46	7612207402049	24 m	48	UD-25X048-A	49	52	7612207402155	20 m
48	UD-19X048-A	49	52	7612207402056	24 m	54	UD-25X054-A	55	58	7612207402162	18 m
54	UD-19X054-A	55	58	7612207402063	24 m	60	UD-25X060-A	61	64	7612207402179	18 m
60	UD-19X060-A	61	64	7612207402070	16 m	76	UD-25X076-A	77	80	7612207402186	12 m
76	UD-19X076-A	77	80	7612207402094	16 m	89	UD-25X089-A	90	93	7612207402193	12 m
89	UD-19X089-A	90	93	7612207402100	16 m	-	-	-	-	-	-

Other information

Thickness tolerance 9 mm, 13 mm : ±1,5 mm
19 mm, 25 mm, 32 mm : ±2,5 mm

Length tolerance ±1,5%

Reaction to fire B(L)-s1,d0

Roll - standard. Blue

Item	Thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
UD-03-99/E	3	1.000	30	7612207396164	30 m ²
UD-06-99/E	6	1.000	15	7612207395587	15 m ²
UD-09-99/E	9	1.000	10	7612207395709	10 m ²
UD-13-99/E	13	1.000	8	7612207394375	8 m ²
UD-19-99/E	19	1.000	6	7612207528220	6 m ²
UD-25-99/E	25	1.000	4	7612207396126	4 m ²
UD-32-99/E	32	1.000	3	7612207400922	3 m ²

Other information

Thickness tolerance 3 mm - 6 mm : ±1,0 mm
9 mm - 19 mm : ±1,5 mm
25 mm - 32 mm : ±2,0 mm

Length tolerance + 5% - 1,5 %

Roll - standard self-adhesive. Blue

Item	Thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
UD-03-99/EA	3	1.000	30	7612207396171	30 m ²
UD-06-99/EA	6	1.000	15	7612207395594	15 m ²
UD-09-99/EA	9	1.000	10	7612207395716	10 m ²
UD-13-99/EA	13	1.000	8	7612207395877	8 m ²
UD-19-99/EA	19	1.000	6	7612207528237	6 m ²
UD-25-99/EA	25	1.000	4	7612207396140	4 m ²

Roll - standard self-adhesive. Blue

Item	Thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
UD-32-99/EA	32	1.000	3	7612207405637	3 m ²

Other information

Thickness tolerance	3 mm - 6 mm : $\pm 1,0$ mm 9 mm - 19 mm : $\pm 1,5$ mm 25 mm - 32 mm : $\pm 2,0$ mm
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Length tolerance	+ 5% - 1,5 %
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Tape - insulation. Blue

Item	Thickness [mm]	Width [mm]	Length [m]	Content [quantity]
UD-TAPE	3	50	15	12 roll

Adhesives and Cleaners

Item	Description	Content [quantity]
AHU-700/1,0	ArmaFlex Ultima 700 adhesive. Available in 1.0 litre cans.	12 tin
AHU-SF990/0,8	ArmaFlex Ultima SF990 adhesive. Available in 0.8 litre cans.	12 tin
CLEANER/1,0	Special cleaner for use with ArmaFlex adhesives	4 tin
SF-CLEANER/1,0	Solvent-free cleaner for use with ArmaFlex	6 tin