



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

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 **armacell®**
ArmaFlex®

INSTALL IT. TRUST IT.

ArmaFlex Ultima

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

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.

Benefit from our
10 years warranty on ArmaFlex Ultima



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

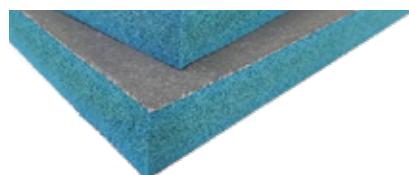


ArmaFix Ultima pipe support thermally isolates the pipe and its fixing from each

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
BYGGVARUBEDÖMINGEN
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.

Property	Value / Assessment	Standard / Test method
Temperature range		
Service temperature ¹	Min. °C -50	Max. °C ² 110
	Remarks	For temperatures below -50 °C (till -200 °C), please ask our customer service for relevant technical information.
Thermal conductivity		
Declared thermal conductivity	θm $\lambda_d \leq [W/(m\cdot K)]$ Formula	0 °C 0.040 $> 0^\circ\text{C}: \lambda_d = [40 + 0,1 \cdot \theta m + 0,0009 \cdot \theta m^2]/1000$ $\leq 0^\circ\text{C}: \lambda_d = [41,25 + 0,1 \cdot \theta m - (\theta m+50)^2 \cdot 0,0005]/1000$
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	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	No fungal growth observed	EN ISO 846, VDI 6022

Property	Value / Assessment	Standard / Test method
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

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	NRF	EAN	Content [metric]
12	UD-09X012	13	16	9451255	7612207395600	192 m
15	UD-09X015	16	19	9451256	7612207395617	180 m
18	UD-09X018	19	22	9451257	7612207395624	150 m
22	UD-09X022	23	26	9451258	7612207395631	124 m
28	UD-09X028	29	32	9451259	7612207395358	96 m
35	UD-09X035	36	39	9451261	7612207395648	70 m
42	UD-09X042	43	46	9451262	7612207395655	56 m
48	UD-09X048	49	52	9451263	7612207395334	52 m
54	UD-09X054	55	58	9451264	7612207395662	42 m
60	UD-09X060	61	64	9451265	7612207395679	40 m
64	UD-09X064	65	68	9451266	7612207395686	28 m
76	UD-09X076	77	70	9451267	7612207395693	32 m
89	UD-09X089	90	93	9451268	7612207395341	24 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

13 mm

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	NRF	EAN	Content [metric]
6	UD-13X006	7	10		7612207395723	164 m
10	UD-13X010	11	14		7612207395730	140 m
12	UD-13X012	13	16	9451269	7612207395747	130 m
15	UD-13X015	16	19	9451271	7612207395754	112 m
18	UD-13X018	19	22	9451272	7612207395761	98 m
22	UD-13X022	23	26	9451273	7612207395778	88 m
28	UD-13X028	29	32	9451274	7612207395785	64 m
35	UD-13X035	36	39	9451275	7612207395792	56 m
42	UD-13X042	43	46	9451276	7612207395808	48 m
48	UD-13X048	49	52	9451277	7612207395815	40 m
54	UD-13X054	55	58	9451278	7612207395822	36 m
60	UD-13X060	61	64	9451279	7612207395839	28 m
64	UD-13X064	65	68	9451281	7612207395846	26 m
76	UD-13X076	77	80	9451282	7612207395853	24 m
89	UD-13X089	90	93	9451283	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%

Tube – standard. Blue. Length: 2.0 m

13 mm

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	NRF	EAN	Content [metric]
Reaction to fire		B(L)-s1,d0				

Tube – standard. Blue. Length: 2.0 m

19 mm

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	NRF	EAN	Content [metric]
10	UD-19X010	11	14		7612207395884	92 m
12	UD-19X012	13	16		7612207395891	84 m
15	UD-19X015	16	19	9451284	7612207395907	64 m
18	UD-19X018	19	22	9451285	7612207395556	58 m
22	UD-19X022	23	26	9451286	7612207395914	56 m
28	UD-19X028	29	32	9451287	7612207395921	40 m
35	UD-19X035	36	39	9451288	7612207395938	40 m
42	UD-19X042	43	46	9451289	7612207395945	24 m
48	UD-19X048	49	52	9451291	7612207395563	24 m
54	UD-19X054	55	58	9451292	7612207395952	24 m
60	UD-19X060	61	64	9451293	7612207395570	16 m
64	UD-19X064	65	68	9451294	7612207395969	16 m
76	UD-19X076	77	80	9451295	7612207395976	16 m
89	UD-19X089	90	93	9451296	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

25 mm

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	NRF	EAN	Content [metric]
18	UD-25X018	19	22	9451297	7612207396010	46 m
22	UD-25X022	23	26	9451298	7612207396027	36 m
28	UD-25X028	29	32	9451299	7612207396034	36 m
35	UD-25X035	36	39	9451301	7612207396041	28 m
42	UD-25X042	43	46	9451302	7612207396058	24 m
48	UD-25X048	49	52	9451303	7612207396065	20 m
54	UD-25X054	55	58	9451304	7612207396072	18 m
60	UD-25X060	61	64	9451305	7612207396089	18 m
64	UD-25X064	65	68	9451306	7612207396096	16 m
76	UD-25X076	77	80	9451307	7612207396102	12 m
89	UD-25X089	90	93	9451308	7612207396119	12 m

Tube – standard. Blue. Length: 2.0 m

25 mm

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	NRF	EAN	Content [metric]
114	UD-25X114	115	118		7612207531862	10 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					
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

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	NRF	EAN	Content [metric]
15	UD-09X015-A	16	19	9451315	7612207401776	180 m
18	UD-09X018-A	19	22	9451316	7612207401783	150 m
22	UD-09X022-A	23	26	9451317	7612207401790	124 m
28	UD-09X028-A	29	32	9451318	7612207401806	96 m
35	UD-09X035-A	36	39	9451319	7612207401813	70 m
42	UD-09X042-A	43	46	9451321	7612207401820	56 m
48	UD-09X048-A	49	52	9451322	7612207401837	52 m
54	UD-09X054-A	55	58	9451323	7612207401844	42 m

Tube – self-seal. Blue. Length: 2.0 m**9 mm**

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	NRF	EAN	Content [metric]
60	UD-09X060-A	61	64	9451324	7612207401851	40 m
76	UD-09X076-A	77	80	9451325	7612207401868	32 m
89	UD-09X089-A	90	93	9451326	7612207401875	24 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**13 mm**

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	NRF	EAN	Content [metric]
15	UD-13X015-A	16	19	9451327	7612207401882	112 m
18	UD-13X018-A	19	22	9451328	7612207401899	98 m
22	UD-13X022-A	23	26	9451329	7612207401905	88 m
28	UD-13X028-A	29	32	9451331	7612207401912	64 m
35	UD-13X035-A	36	39	9451332	7612207401929	56 m
42	UD-13X042-A	43	46	9451333	7612207401936	48 m
48	UD-13X048-A	49	52	9451334	7612207401943	40 m
54	UD-13X054-A	55	58	9451335	7612207401950	36 m
60	UD-13X060-A	61	64	9451336	7612207401967	28 m
76	UD-13X076-A	77	80	9451337	7612207401974	24 m
89	UD-13X089-A	90	93	9451338	7612207401981	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**

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	NRF	EAN	Content [metric]
15	UD-19X015-A	16	19	9451339	7612207401998	64 m
18	UD-19X018-A	19	22	9451341	7612207402001	58 m
22	UD-19X022-A	23	26	9451342	7612207402018	56 m
28	UD-19X028-A	29	32	9451343	7612207402025	40 m
35	UD-19X035-A	36	39	9451344	7612207402032	40 m
42	UD-19X042-A	43	46	9451345	7612207402049	24 m
48	UD-19X048-A	49	52	9451346	7612207402056	24 m
54	UD-19X054-A	55	58	9451347	7612207402063	24 m
60	UD-19X060-A	61	64	9451348	7612207402070	16 m

Tube – self-seal. Blue. Length: 2.0 m

19 mm

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	NRF	EAN	Content [metric]
76	UD-19X076-A	77	80	9451349	7612207402094	16 m
89	UD-19X089-A	90	93	9451351	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

Tube – self-seal. Blue. Length: 2.0 m

25 mm

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	NRF	EAN	Content [metric]
18	UD-25X018-A	19	22	9451352	7612207402117	46 m
22	UD-25X022-A	23	26	9451353	7612207402124	36 m
28	UD-25X028-A	29	32	9451354	7612207402131	36 m
35	UD-25X035-A	36	39	9451355	7612207402087	28 m
42	UD-25X042-A	43	46	9451356	7612207402148	24 m
48	UD-25X048-A	49	52	9451357	7612207402155	20 m
54	UD-25X054-A	55	58	9451358	7612207402162	18 m
60	UD-25X060-A	61	64	9451359	7612207402179	18 m
76	UD-25X076-A	77	80	9451361	7612207402186	12 m
89	UD-25X089-A	90	93	9451362	7612207402193	12 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 – open. Blue

9 mm				13 mm				19 mm			
Item	Thickness [mm]	Length [m]	Content [metric]	Item	Thickness [mm]	Length [m]	Content [metric]	Item	Thickness [mm]	Length [m]	Content [metric]
UD-09X300	9	10	10 m ²	UD-13X300	13	8	8 m ²	UD-19X300	19	6	6 m ²

Other information

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

Reaction to fire B(L)-s1,d0

Tube – open. Blue

25 mm				32 mm			
Item	Thickness [mm]	Length [m]	Content [metric]	Item	Thickness [mm]	Length [m]	Content [metric]
UD-25X300	25	4	4 m ²	UD-32X300	32	3	3 m ²

Other information

Tube – open. Blue

25 mm				32 mm			
Item	Thickness [mm]	Length [m]	Content [metric]	Item	Thickness [mm]	Length [m]	Content [metric]
Thickness tolerance				9 mm - 19 mm : $\pm 1,5$ mm 25 mm - 32 mm : $\pm 2,0$ mm			
Reaction to fire				B(L)-s1,d0			

Roll – standard. Blue

Item	Thickness [mm]	Width [mm]	Length [m]	Content [metric]
UD-03-99/E	3	1,000	30	30 m ²
UD-06-99/E	6	1,000	15	15 m ²
UD-09-99/E	9	1,000	10	10 m ²
UD-13-99/E	13	1,000	8	8 m ²
UD-19-99/E	19	1,000	6	6 m ²
UD-25-99/E	25	1,000	4	4 m ²
UD-32-99/E	32	1,000	3	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
Length tolerance	+ 5% - 1,5 %

Roll – standard self-adhesive. Blue

Item	Thickness [mm]	Width [mm]	Length [m]	Content [metric]
UD-03-99/EA	3	1,000	30	30 m ²
UD-06-99/EA	6	1,000	15	15 m ²
UD-09-99/EA	9	1,000	10	10 m ²
UD-13-99/EA	13	1,000	8	8 m ²
UD-19-99/EA	19	1,000	6	6 m ²
UD-25-99/EA	25	1,000	4	4 m ²
UD-32-99/EA	32	1,000	3	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
Length tolerance	+ 5% - 1,5 %

Tape – insulation. Blue

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

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ABOUT ARMACELL

As the inventor of flexible foam for equipment insulation and a leading provider of engineered foams, Armacell develops innovative and safe thermal 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 3,300 employees and 25 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 acoustic and lightweight applications, recycled PET products, next-generation aerogel technology and passive fire protection systems.



For more information, please visit:

www.armacell.com