



INSTALL IT. TRUST IT.

# ArmaFlex Ultima

Based on Armacell's patented ArmaPrene technology, ArmaFlex Ultima sets the highest standard in fire safety among flexible elastomeric technical insulation materials achieving Euroclass B(L)-s1,d0

- // The best flexible insulation with low smoke density in case of fire
- // 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

[www.armacell.eu](http://www.armacell.eu)



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

INSTALL IT. TRUST IT.

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# ArmaFlex Ultima

With ArmaFlex Ultima Armacell has set a new safety standard in technical insulation. Based on the patented ArmaPrene® technology, ArmaFlex Ultima is the first flexible technical insulation material in the world with fire class B<sub>1</sub>-s1,d0.

- Tubes with an insulation thickness of 32 mm
- Sheets with an insulation thickness of 32 mm
- ArmaFlex SF Cleaner



European  
patent  
No. 2 261 305



## // Solvent-based Accessories for a Sustainable Insulation System

Besides ArmaFlex Ultima 700 adhesive, Armacell provides a solvent-free product. **ArmaFlex Ultima SF990** meets the higher requirements of green building schemes regarding environmental and health aspects of the building products used. A completely new addition to the range of accessories is a solvent-free cleaner: the **ArmaFlex SF Cleaner** can be used to clean soiled surfaces of technical installations and also the surface of insulation materials. The cleaner is supplied in a practical spray bottle so that it can be applied sparingly and precisely.





## // 1. New Safety Standard in Technical Insulation

95 % of fire fatalities occur due to smoke inhalation. In a fire, low smoke density can be a matter of life or death for those trapped. With the innovative ArmaPrene technology Armacell has been able to resolve the conflict of objectives between high flame resistance and minimal smoke development. ArmaFlex Ultima is the only elastomeric product in the market to achieve the fire class B<sub>L</sub>-s1,d0. In comparison to a standard product, the flame-resistant insulation material exhibits 10 times less smoke development.



## // 2. The Future Belongs to Sustainable Construction

Today Armacell is the only manufacturer of flexible technical insulation materials to publish environmental product declarations based on an independent life cycle assessment (LCA). Environmental product declarations (EPDs) provide a transparent, independent and reproducible analysis of the environmental impacts of construction products and give detailed information with sound data and figures. As a “sustainability passport” EPDs form the basis for designing green buildings in accordance with certification schemes such as LEED®, BREEAM®, HQE or DGNB.

## // 3. Jürgen Saalfeld, Insulator, Schmengler Dämmtechnik GmbH, Germany

*„We used ArmaFlex Ultima for the first time on cold installations in Yara’s German distribution centre. In a fire, ArmaFlex Ultima develops 10 times less smoke than traditional flexible insulation materials, making it the safest insulation product for cold applications. The new material is slightly darker than the first Ultima generation. The foam is very flexible, but it is firmer than other rubber insulation material and keeps its shape very well. The product can be cut and glued very easily and neatly.“*



## 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	Flexible elastomeric foam-based rubber manufactured with ArmaPrene patented technology, US patent no. 8 163 811, EU patent no. 2 261 305. 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 <a href="http://www.armacell.com/DoP">www.armacell.com/DoP</a> .

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature <sup>1</sup>	Min. °C	Max. °C <sup>2</sup>	EN 14706, EN 14707, EN 14304
	-50	110	
	Remarks	For temperatures below -50 °C (to -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
	λd ≤ [W/(m·K)]	0.040	
	Formula	> 0°C: λd = [40 + 0,1· Øm + 0,0009 · Øm²]/1000 ≤ 0 °C: λd = [41,25 + 0,1· Øm - (Øm+50)² · 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 <sup>3</sup>	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	μ ≥ 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 <sup>4</sup>	Protection against UV radiation is necessary (see Technical Bulletin no. 142).		

Property	Value / Assessment	Standard / Test method
<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	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	
<b>Other technical features</b>		
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).	

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

<sup>2</sup>+85 °C, for products with a self-adhesive layer.

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

<sup>4</sup>If 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]	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Content [metric]
12	UD-09X012	13	16	192 m	6	UD-13X006	7	10	164 m
15	UD-09X015	16	19	180 m	10	UD-13X010	11	14	140 m
18	UD-09X018	19	22	150 m	12	UD-13X012	13	16	130 m
22	UD-09X022	23	26	124 m	15	UD-13X015	16	19	112 m
28	UD-09X028	29	32	96 m	18	UD-13X018	19	22	98 m
35	UD-09X035	36	39	70 m	22	UD-13X022	23	26	88 m
42	UD-09X042	43	46	56 m	28	UD-13X028	29	32	64 m
48	UD-09X048	49	52	52 m	35	UD-13X035	36	39	56 m
54	UD-09X054	55	58	42 m	42	UD-13X042	43	46	48 m
60	UD-09X060	61	64	40 m	48	UD-13X048	49	52	40 m
64	UD-09X064	65	68	28 m	54	UD-13X054	55	58	36 m
76	UD-09X076	77	70	32 m	60	UD-13X060	61	64	28 m
89	UD-09X089	90	93	24 m	64	UD-13X064	65	68	26 m
-	-	-	-	-	76	UD-13X076	77	80	24 m
-	-	-	-	-	89	UD-13X089	90	93	18 m
-	-	-	-	-	114	UD-13X114	115	118	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]	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Content [metric]
10	UD-19X010	11	14	92 m	12	UD-25X012	13	16	50 m
12	UD-19X012	13	16	84 m	15	UD-25X015	16	19	40 m
15	UD-19X015	16	19	64 m	18	UD-25X018	19	22	46 m
18	UD-19X018	19	22	58 m	22	UD-25X022	23	26	36 m
22	UD-19X022	23	26	56 m	28	UD-25X028	29	32	36 m
28	UD-19X028	29	32	40 m	35	UD-25X035	36	39	28 m
35	UD-19X035	36	39	40 m	42	UD-25X042	43	46	24 m
42	UD-19X042	43	46	24 m	48	UD-25X048	49	52	20 m
48	UD-19X048	49	52	24 m	54	UD-25X054	55	58	18 m
54	UD-19X054	55	58	24 m	60	UD-25X060	61	64	18 m
60	UD-19X060	61	64	16 m	64	UD-25X064	65	68	16 m
64	UD-19X064	65	68	16 m	76	UD-25X076	77	80	12 m
76	UD-19X076	77	80	16 m	89	UD-25X089	90	93	12 m
89	UD-19X089	90	93	16 m	114	UD-25X114	115	118	10 m
114	UD-19X114	115	118	14 m	-	-	-	-	-

Tube – standard. Blue. Length: 2.0 m

19 mm					25 mm				
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Content [metric]
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]	Content [metric]
12	UD-32X012	13	16	32 m
15	UD-32X015	16	19	32 m
18	UD-32X018	18	21	32 m
20	UD-32X020	21	24	24 m
22	UD-32X022	23	26	24 m
28	UD-32X028	29	32	24 m
35	UD-32X035	36	39	18 m
42	UD-32X042	43	46	16 m
48	UD-32X048	49	52	12 m
54	UD-32X054	55	58	12 m
60	UD-32X060	61	64	10 m
64	UD-32X064	65	68	10 m
76	UD-32X076	77	80	10 m
89	UD-32X089	90	93	8 m
114	UD-32X114	115	118	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					13 mm				
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Content [metric]
15	UD-09X015-A	16	19	180 m	15	UD-13X015-A	16	19	112 m
18	UD-09X018-A	19	22	150 m	18	UD-13X018-A	19	22	98 m
22	UD-09X022-A	23	26	124 m	22	UD-13X022-A	23	26	88 m
28	UD-09X028-A	29	32	96 m	28	UD-13X028-A	29	32	64 m
35	UD-09X035-A	36	39	70 m	35	UD-13X035-A	36	39	56 m
42	UD-09X042-A	43	46	56 m	42	UD-13X042-A	43	46	48 m
48	UD-09X048-A	49	52	52 m	48	UD-13X048-A	49	52	40 m

Tube – self-seal. Blue. Length: 2.0 m

9 mm					13 mm				
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Content [metric]
54	UD-09X054-A	55	58	42 m	54	UD-13X054-A	55	58	36 m
60	UD-09X060-A	61	64	40 m	60	UD-13X060-A	61	64	28 m
76	UD-09X076-A	77	80	32 m	76	UD-13X076-A	77	80	24 m
89	UD-09X089-A	90	93	24 m	89	UD-13X089-A	90	93	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]	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Content [metric]
15	UD-19X015-A	16	19	64 m	18	UD-25X018-A	19	22	46 m
18	UD-19X018-A	19	22	58 m	22	UD-25X022-A	23	26	36 m
22	UD-19X022-A	23	26	56 m	28	UD-25X028-A	29	32	36 m
28	UD-19X028-A	29	32	40 m	35	UD-25X035-A	36	39	28 m
35	UD-19X035-A	36	39	40 m	42	UD-25X042-A	43	46	24 m
42	UD-19X042-A	43	46	24 m	48	UD-25X048-A	49	52	20 m
48	UD-19X048-A	49	52	24 m	54	UD-25X054-A	55	58	18 m
54	UD-19X054-A	55	58	24 m	60	UD-25X060-A	61	64	18 m
60	UD-19X060-A	61	64	16 m	76	UD-25X076-A	77	80	12 m
76	UD-19X076-A	77	80	16 m	89	UD-25X089-A	90	93	12 m
89	UD-19X089-A	90	93	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 – 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 m²	UD-13X300	13	8	8 m²	UD-19X300	19	6	6 m²
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 m²	UD-32X300	32	3	3 m²
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					

Roll - standard. Blue

Item	Thickness [mm]	Width [m]	Length [m]	Content [metric]
UD-03-99/E	3	1	30	30 m²
UD-06-99/E	6	1	15	15 m²
UD-09-99/E	9	1	10	10 m²
UD-13-99/E	13	1	8	8 m²
UD-19-99/E	19	1	6	6 m²
UD-25-99/E	25	1	4	4 m²
UD-32-99/E	32	1	3	3 m²
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 [m]	Length [m]	Content [metric]
UD-03-99/EA	3	1	30	30 m²
UD-06-99/EA	6	1	15	15 m²
UD-09-99/EA	9	1	10	10 m²
UD-13-99/EA	13	1	8	8 m²
UD-19-99/EA	19	1	6	6 m²
UD-25-99/EA	25	1	4	4 m²
UD-32-99/EA	32	1	3	3 m²
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 %		

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

Adhesives and Cleaners

Item	Description	Content [quantity]
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

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

At Armacell we want to create a unique customer experience. We understand the challenges of today's construction industry and support you in the successful delivery of your projects. From planning to delivery, our 360° service supports you throughout the entire process.



## **SERVICE AND TECHNICAL INFORMATION AVAILABLE 24/7**

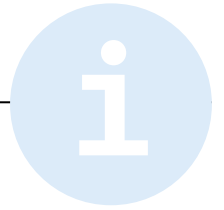
At Armacell, we do everything we can to ensure your project runs smoothly. This is why the information about the Armacell services you benefit from is available 24/7 from Armacell.com website as well as from our planning tools (BIM, specification documents, ArmaWin, as well as our sustainable building policy)

## **DEDICATED LOCAL CONTACTS**

We aim to create open lines of communication with our customers. From on-site trainings and webinars by our Armacell technical experts advising on project planning and safety instructions to our local dedicated sales and customer services, your local Armacell dedicated team is working in partnership with you to achieve more together.

## **DIGITAL INFORMATION FLOWS**

From order to delivery, we also provide you with digital information flows such as EDI and other well-known data formats that are widely used in the construction sector worldwide.



### OUR STANDARD LOGISTICS SERVICES INCLUDE

- // Material ordered will be shipped from our facilities within 48 hours after order confirmation
- // Full truck loads and full pallets (not mixed – 1 SKU per pallet)
- // List prices in this document are based on Ex Works
- // Container loading with standard goods
- // Customs clearance (including documentation) for standard deliveries outside EU
- // Dangerous goods process for road freight

### WE GO BEYOND STANDARD SERVICES AND ALSO PROPOSE YOU ADDITIONAL SERVICES\*

#### OPIMISED PACKAGING

- Edge protection
- Strapping
- Doubled stretching
- Reinforced cardboard with extra layer
- Additional warning tape

#### LABELLING

- Extra label for transport instructions

#### EXTRA DELIVERY SERVICES

- Just in time delivery
- Delivery with lifting platform for partial or complete load
- Express and direct shipments
- Booking a delivery time slot via your EDP system
- Forklift truck for unloading at construction site
- Air and sea freight deliveries
- Dangerous goods shipment process for air and sea freight



To mitigate cost increases and reduce waste generation, we also propose a pallet return service\* by which pallets can be handed at Armacell collection points.

\* Please contact your local Customer Service Centre to see which of these services apply to your country.

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## ABOUT ARMACELL

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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 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 acoustic and lightweight applications, recycled PET products, next-generation aerogel technology and passive fire protection systems.



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