

**Armaflex®
Ultima**

THE FIRST FLEXIBLE INSULATION WITH
A Bs1, d0 FIRE RATING



- Low smoke emissions in the event of a fire
- Meets the requirements for sustainable construction
- Complete insulation system solution with compatible adhesives and pipe supports

EPD
Environmental Product Declaration



**BUREAU
VERITAS**



APPROVED

ARMAFLEX ULTIMA

Armaflex Ultima sets 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 to achieve the fire class B_L-s1, d0.

- Now available in 32mm insulation thickness for tubes and sheet
- New Armaflex solvent free cleaner available for compatibility with Armaflex Ultima adhesives

European
patent

No. 2 261 305

PATENTED



SOLVENT-FREE ACCESSORIES FOR A SUSTAINABLE INSULATION SYSTEM

In addition to the Armaflex Ultima 700 adhesive and the reduced solvent Armaflex Ultima RS850, Armacell also provides the new **Armaflex SF cleaner** for preparing and cleaning pipe and ductwork surfaces and the surface of insulation materials before installation. 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

ARMAFLEX ULTIMA

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 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_L-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 based on 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 - EASY TO INSTALL

Using Armaflex Ultima on cold and HVAC installations provides installers with a flexible product combined with a good density that retains its shape whilst also being easy to cut and glue neatly with Armaflex Ultima 700 or RS850 adhesive.

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	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.
Colour	dark blue
Material Special Information	Self-adhesive coating: pressure-sensitive adhesive coating on modified acrylate basis with mesh structure, covered with polyethylene foil. The protective backing present on the self-adhesive tubes and sheets may contain traces of silicon.
Applications	Insulation / protection of pipes, air ducts, vessels (incl. elbows, fittings, flanges etc.) to prevent condensation and save energy. Armaflex Ultima tape should also be used to fully secure self-adhesive tube seams.
Special Features	Low smoke performance
Safety and Environment	Meets the requirements for sustainable construction in combination with Armaflex Ultima RS850 adhesive such as BREEAM, LEED, DGNB. Type III Environmental Product Declaration (EPD): Declaration number "EPD-ARM-20150109-IBB1-DE", Institut Bauen und Umwelt e.V. (IBU)
Remarks	Declaration of Performance is available in accordance with Article 7(3) of Regulation (EU) No 305/2011 on our homepage: www.armacell.com/DoP

Property	Value/Assessment	Test ¹	Special Remarks
Temperature Range			
Temperature Range	Max. service temperature	+110 °C (+ 85 °C if sheet or tape is glued to a flat object)	EU 5846 Tested acc. to EN 14706 EN 14707 and EN 14304
	Min. service temperature ¹	-50 °C	
Thermal Conductivity			
Thermal Conductivity	$\vartheta_m \pm 0 \text{ °C}$	$\lambda =$	EU 5846 Declared acc. to EN ISO 13787 Tested acc. to EN 12667 EN ISO 8497
	$\lambda \leq 0.040$	$[40 + 0,1 \cdot \vartheta_m + 0,0009 \cdot \vartheta_m^2]/1000$	
Water vapour diffusion resistance			
Water vapour diffusion resistance	μ	$\geq 7,000$	EU 5846 Tested acc. to EN 12086 EN 13469
Fire performance			
Reaction to fire ²	Tubes, Tubes self-adhesive	B _L -s1,d0	EU 5846 Classified acc. to EN 13501-1 Tested acc. to EN 13823 and EN ISO 11925-2
	Sheets, sheets self-adhesive	B-s2,d0	
	Tape	B-s1,d0	
Other fire class	Ship Building	Bureau Veritas, Det Norske Veritas, Lloyds Register	D 5243 D 5244 D 5245 Classified acc. to MED 96/98/EC MODULE D Tested acc. to IMO Resolution
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames; low smoke density		
Fire resistance of structural element	EI 30 - EI 120		EU 5846 EU 5584 Classified acc. to EN 13501-2 Tested acc. to EN 1366-3
Other	FM-approved up to 25 mm		D 5192 FM: Tested according to UBC26-3, Class No.4924
Other technical features			
Dimensions and tolerances	In accordance with EN 14304, table 1		EU 5846 Tested acc. to EN 822, EN 823, EN 13467
UV resistance	Protection against UV necessary using cladding systems such as Okabell for outdoor applications and Okatherm for indoor applications.		D 5813 Tested acc. to EN ISO 4892-1
Storage & Shelf life	self-adhesive tubes, self-adhesive sheets, self-adhesive tape: 1 year, can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).		
Antimicrobial behaviour	No fungal growth observed		D 5184 Tested acc. to ASTM G21

1. For temperatures below -50 °C please contact our Technical Department to request the corresponding technical information.

2. The building materials classification is valid on metal or solid, mineral surfaces.

*1 Further documents such as test certificates and approvals can be requested using the registration number given.

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Installation instructions are given in our Armaflex installation manual. Please consult our Technical Department before insulating stainless steel. With some refrigerants the discharge temperature may exceed +110 °C, please consult our Technical Department for further information.

Armaflex Ultima tubes



Length 2.0 m, Colour Blue, B_L-s1,d0

Pipe max. Outside-Ø [mm]	9,0 mm insulation thickness		13,0 mm insulation thickness	
	Code	m/carton	Code	m/carton
6	-	-	UD-13X006	164
10	-	-	UD-13X010	140
12	UD-09X012 ●	192	UD-13X012	130
15	UD-09X015	180	UD-13X015	112
18	UD-09X018	150	UD-13X018	98
22	UD-09X022	124	UD-13X022	88
28	UD-09X028	96	UD-13X028	64
35	UD-09X035	70	UD-13X035	56
42	UD-09X042	56	UD-13X042	48
48	UD-09X048	52	UD-13X048	40
54	UD-09X054	42	UD-13X054	36
60	UD-09X060	40	UD-13X060	28
64	UD-09X064 ●	28	UD-13X064 ●	26
76	UD-09X076	32	UD-13X076	24
89	UD-09X089	24	UD-13X089	18

Pipe max. Outside-Ø [mm]	19,0 mm insulation thickness		25 mm insulation thickness	
	Code	m/carton	Code	m/carton
10	UD-19X010	92	-	-
12	UD-19X012	84	-	-
15	UD-19X015	64	-	-
18	UD-19X018	58	UD-25X018	46
22	UD-19X022	56	UD-25X022	36
28	UD-19X028	40	UD-25X028	36
35	UD-19X035	40	UD-25X035	28
42	UD-19X042	24	UD-25X042	24
48	UD-19X048	24	UD-25X048	20
54	UD-19X054	24	UD-25X054	18
60	UD-19X060	16	UD-25X060	18
64	UD-19X064	16	UD-25X064	16
76	UD-19X076	16	UD-25X076	12
89	UD-19X089	16	UD-25X089	12

Pipe max. Outside-Ø [mm]	32,0 mm insulation thickness			
	Code	m/carton		
15	UD-32X015 ●	32		
18	UD-32X018 ●	32		
20	UD-32X020 ●	24		
22	UD-32X022 ●	24		
28	UD-32X028 ●	24		
35	UD-32X035 ●	18		
42	UD-32X042	16		
48	UD-32X048	12		
54	UD-32X054	12		
60	UD-32X060	10		
64	UD-32X064 ●	10		
76	UD-32X076	10		
89	UD-32X089	8		

Length tolerance for tubes: ± 1,5 %
 Thickness tolerance
 9 mm, 13 mm : ±1,5 mm
 19 mm, 25 mm : ±2,5 mm
 ● Not a stock item. Delivery on request. 32 mm : ±3,0 mm

Armaflex Ultima self-adhesive tubes (Self Seal)



Length 2.0 m, Colour Blue, B_L-s1,d0

Pipe max. Outside-Ø [mm]	9,0 mm insulation thickness		13,0 mm insulation thickness	
	Code	m/carton	Code	m/carton
15	UD-09X015-A	180	UD-13X015-A	112
18	UD-09X018-A	150	UD-13X018-A	98
22	UD-09X022-A	124	UD-13X022-A	88
28	UD-09X028-A	96	UD-13X028-A	64
35	UD-09X035-A	70	UD-13X035-A	56
42	UD-09X042-A	56	UD-13X042-A	48
48	UD-09X048-A	52	UD-13X048-A	40
54	UD-09X054-A	42	UD-13X054-A	36
60	UD-09X060-A	40	UD-13X060-A	28
76	UD-09X076-A	32	UD-13X076-A	24
89	UD-09X089-A	24	UD-13X089-A	18

Pipe max. Outside-Ø [mm]	19,0 mm insulation thickness		25 mm insulation thickness	
	Code	m/carton	Code	m/carton
15	UD-19X015-A	64	-	-
18	UD-19X018-A	58	UD-25X018-A	46
22	UD-19X022-A	56	UD-25X022-A	36
28	UD-19X028-A	40	UD-25X028-A	36
35	UD-19X035-A	40	UD-25X035-A	28
42	UD-19X042-A	24	UD-25X042-A	24
48	UD-19X048-A	24	UD-25X048-A	20
54	UD-19X054-A	24	UD-25X054-A	18
60	UD-19X060-A	16	UD-25X060-A	18
76	UD-19X076-A	16	UD-25X076-A	12
89	UD-19X089-A	16	UD-25X089-A	12

Length tolerance for tubes:	± 1,5 %
Thickness tolerance	9 mm, 13 mm : ±1,5 mm 19 mm, 25 mm : ±2,5 mm

Armaflex Ultima continuous sheets (rolls)



Width 1.0 m, Colour Blue, B-s2,d0

Code	Thickness [mm]	Roll length [m]	m ² /carton
UD-06-99/E	6.0	15	15
UD-09-99/E	9.0	10	10
UD-13-99/E	13.0	8	8
UD-19-99/E	19.0	5	5
UD-25-99/E	25.0	4	4
UD-32-99/E ●	32.0	3	3

Length tolerance for sheets	+5% to -1,5 %
Thickness tolerance for sheets	6 mm : ±1,0 mm 9 mm - 19 mm : ±1,5 mm 25 mm - 32 mm : ±2,0 mm

● Not a stock item. Delivery on request.

Armaflex Ultima continuous sheets self-adhesive (rolls)



Width 1.0 m, Colour Blue, B-s2,d0

Code	Thickness [mm]	Roll length [m]	m ² /carton	
UD-06-99/EA	6.0	15	15	
UD-09-99/EA	9.0	10	10	
UD-13-99/EA	13.0	8	8	
UD-19-99/EA	19.0	5	5	
UD-25-99/EA	25.0	4	4	
UD-32-99/EA •	32.0	3	3	

Length tolerance for sheets

+5% to -1.5%

Thickness tolerance for sheets

6 mm : ±1,0 mm

9 mm - 19 mm : ±1,5 mm

25 mm - 32 mm : ±2,0 mm

• Not a stock item. Delivery on request.

Armaflex Ultima self-adhesive tapes



Colour Blue, B-s1,d0

Code	Width [mm]	Length [m]	Thickness [mm]	Rolls/carton	
UD-TAPE	50.0	15	3	12	

Armaflex Ultima adhesive



Code	Description	Pieces/carton	
AHU-700/1,0	Armaflex Ultima Adhesive 700, blue one component adhesive, 1 litre cans	12	
AHU-RS850/0,7	Armaflex Ultima Adhesive RS850, reduced solvent, non-drip blue gel form adhesive, 0.75 litre cans	6	

Armaflex Ultima Cleaner



Code	Description	Pieces/carton	
SF-CLEANER/1,0	Solvent-free cleaner for use with Armaflex	6	