Armaflex® Ultima

INSTALL SAFETY



- Low smoke emissions in a fire
- Meets the requirements for sustainable construction
- Complete system integration with adhesives and pipe support

EPD
Environmental Product Declaration

RAL GÜTEZEICHEN
Dämmstoffe aus Schaumkunststoffen
FEF / PEF

BUREAU VERITAS 1828
BUREAU VERITAS

FM APPROVED

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_L-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
PATENTED





SOLVENT-FREE 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_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 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 materials 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	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. Traces of silicon can be found on the protection paper/foil used to protect self-adhesive closures.
Applications	Insulation / protection of pipes, air ducts, vessels (incl. elbows, fittings, flanges etc.) to prevent condensation and save energy. Self-adhesive tubes shall additionally be secured by applying Armaflex Ultima Tape.
Special Features	Low smoke performance
Safety and Environment	Meets the requirements for sustainable construction in combination with Armaflex Ultima SF990 adhesive such as LEED. 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	Super-vision*2	Special Remark
Temperature Range						
Temperature Range	max. service temperature	+110 °C	(+ 85 °C if sheet or tape is glued to the object with its whole surface.)	EU 5846	○/●	Tested acc. to EN 14706 EN 14707 and EN 14304
	min. service temperature[1]	-50 °C (-200 °C)				
Thermal Conductivity						
Thermal Conductivity	ϑ_m ±0 °C		λ=	EU 5846	○/●	Declared acc. to EN ISO 13787 Tested acc. to EN 12667 EN ISO 8497
	λ ≤ 0,040		$[40 + 0,1 \cdot \vartheta_m + 0,0009 \cdot \vartheta_m^2]/1000$			
Water vapour diffusion resistance						
Water vapour diffusion resistance	μ	≥	7.000	EU 5846	○/●	Tested acc. to EN 12086 EN 13469
Fire performance						
Reaction to fire	Tubes, Tubes self-adhesive, open tubes (up to 300 mm insulated $Ø_a$)	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, DNV-GL		D 5243 EU 5954	○/●	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[2]	Protection against UV-radiation is necessary.					
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			EU 5961		Tested acc. to EN ISO 846 (VDI 6022)

1. For temperatures below -50 °C please contact our Customer Service Center to request for the corresponding technical information.
2. If Armaflex is applied under UV-radiation the material must be protected within 3 days with a covering or painting.

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

*2 ●: Official supervision by independent institutes and /or test authorities
○: Own in-factory quality monitoring

All data and technical information are based on results achieved under typical application conditions. Recipients of this information should, in their own interest and responsibility, clarify with us in due time whether or not the data and information apply to the intended application area. Installation instructions are available in our Armaflex installation manual. Please consult our Customer Service Center before insulating stainless steels. For some refrigerants the discharge temperature may exceed +110 °C, please consult our Customer Service Center for further information.

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