



INSTALL IT. TRUST IT.

SH/ArmaFlex

SH/ArmaFlex is specially tailored to meet the energy regulations to effectively ensure fast return on investments in heating and plumbing applications.

- // Complete system solution
- // Build-in with Microban for a better indoor air quality
- // Fast return on investment
- // Outstanding energy saving
- // Range meets energy regulations
- // FM Approved

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 **armacell**[®]
ArmaFlex[®]

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ACTIVE MICROBAN® ANTIMICROBIAL PROTECTION

When microbes come in contact with the insulation surface, MICROBAN® protection penetrates the cell wall of the microorganism, disabling its ability to function, grow and reproduce. Because the protection is built in during the manufacturing process, it will not wash off or wear away. This gives products with MICROBAN® technology an added level of protection against mould and mildew, thus positively contributing to the indoor air quality of the surrounding ambients. Insulation material equipped with MICROBAN® is therefore the ideal long-term solution for sanitary and heating systems in public buildings such as schools, hospitals, elderly homes, offices and airports.

// Energy Savings

Since the European Energy Performance of Buildings Directive (EPBD), the requirements of energy efficiency for both new and refurbished buildings increased. With this, the energy consumption levels became more visible and transparent to owners, tenants and users through a building certification, as an indispensable part of the building documentation. Correct insulation of heating and sanitary pipes is critical for the optimum energy performance of a building - which is ensured by the use of the SH/ArmaFlex range.

// Complete System

Armacell offers a complete carefully considered and coordinated system solution for any professional insulation challenge: SH/ArmaFlex standard, self-adhesive and endless tubes and sheets, tape and accessories. ArmaFix X pipe supports to avoid thermal bridging, ArmaFlex Protect fire barrier as well as ArmaProtect 1000 firestop filler. The wide range of specially developed accessories such as the new generation of adhesives and the ArmaFlex Toolbox for applying ArmaFlex insulation materials make installation even easier.



INVESTMENT PAYBACK

The static amortisation of the initial costs by using SH/ArmaFlex 25 mm is less than one year.

- compared to initial situation of noninsulated pipes
- domestic hot water and heating (70/55 °C)
- pipe lines located in unheated area
- fuel costs 0,55 € / liter

Payback time in less than 6 months!

PROTECTION THAT LIVES ON
MICROBAN®



TECHNICAL DATA - SH/ARMAFLEX

Brief description	Highly flexible closed-cell extruded insulation material with low thermal conductivity to minimise energy losses on heating and plumbing installations.
Material type	Elastomeric foam based on synthetic rubber. 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	Grey
Special features	SH/Armaflex is a closed-cell insulation material for heating and plumbing systems. Its water vapour diffusion resistance value is sufficient to comply with the condensation control requirements for these applications and especially for cold water pipelines.
Applications	Insulation/protection of pipes (heating, domestic hot and cold water, sewage water, drain water) and other heating and plumbing installations to optimally prevent heat losses and save energy.
Installation	Certified and compatible adhesive for a long-term performing system is ArmaFlex 520.

Property	Value / Assessment	Standard / Test method	
Temperature range			
Service temperature ¹	Max. °C	EN 14706, EN 14707, EN 14304	
	110		
	Remarks		Minimum service temperature as usual in heating and plumbing systems. +85 °C if sheet or tape is glued to the object with its whole surface
Thermal conductivity			
Declared thermal conductivity	Øm	40 °C	EN ISO 13787, EN 12667, EN ISO 8497
	$\lambda d \leq [W/(m \cdot K)]$	0.036	
	Range	Tubes SH-10x12 till SH-10x60	
	Formula	$\lambda d = [32 + 0,1 \cdot \varnothing m + 0,0008 \cdot (\varnothing m - 40)^2]/1000$	
Declared thermal conductivity	Øm	40 °C	EN ISO 13787, EN 12667, EN ISO 8497
	$\lambda d \leq [W/(m \cdot K)]$	0.040	
	Range	All other tubes and sheets	
	Formula	$\lambda d = [36 + 0,1 \cdot \varnothing m + 0,0008 \cdot (\varnothing m - 40)^2]/1000$	
Fire Performance and Approvals			
Reaction to fire	Tubes: up to 45 mm B(L)-s3, d0 Tubes: > 45 mm C(L)-s3, d0 Sheets: 10 mm C-s3, d0 Sheets: 20 mm D-s3, d0 Tapes: B-s3, d0	EN 13501-1, EN ISO 11925-2, EN 13823	
FM approved	4924 - Pipe and Duct Insulation	UBC26-3	
Passive fire protection			
Fire resistance of elements of construction	EI 30 - EI 90	EN 13501-2, EN 1366-3	
Fire performance			
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames		
Physical attributes			
Dimensions and tolerances	in accordance with EN 14304, table 1	EN 822, EN 823, EN 13467	
Weather and UV resistance			
UV resistance ²	Protection against UV radiation is necessary (see Technical Bulletin no. 142).		

Property	Value / Assessment	Standard / Test method
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
Antimicrobial behaviour	In-built Microban active antimicrobial protection: No fungal growth observed.	EN ISO 846, VDI 6022
Environmental aspects	Meets the requirements for sustainable construction in combination with ArmaFlex SF990 adhesive such as LEED.	
Environmental Product Declaration (EPD)	Type III Environmental Product Declaration (EPD): Declaration number "EPD-ARM-20200221-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 tapes, self-adhesive tubes: 1 year	
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% - 70%) and ambient temperature (0 °C -35 °C).	

¹For use in temperatures beyond the published value, please contact Technical Services.

²If ArmaFlex is used outdoors or in applications under UV radiation, it should be protected with a covering such as Arma-Chek within 3 days of installation.

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

As the inventors of flexible foam for equipment insulation and a leading provider of engineered foams, Armacell develops innovative and safe thermal, acoustic 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 3200 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 high-tech and lightweight applications and next generation aerogel blanket technology.



For more information, please visit:
www.armacell.com