



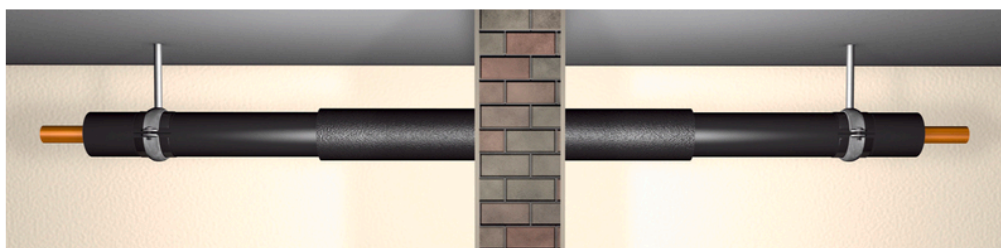
FOR PIPE PENETRATIONS UP  
TO LARGE DIAMETERS

# ArmaFlex Protect

Firestop tubes and sheets for fire seals  
in walls, floors, steel bulkheads and  
steel decks

- // Firestop and thermal insulation in one step
- // Fire resistance up to EI 120
- // Fire resistance up to A-60
- // For application with hot and cold pipes (from -50°C up to +85°C)
- // Can be combined with ArmaFlex products as continued insulation
- // Quick and easy installation

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



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

INSTALL IT. ENSURE SAFETY.

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# ArmaFlex Protect



The appropriate test certificates are to be consulted for information on permitted pipe materials and other necessary basic conditions. During planning and execution, not only the diagrams shown but also the basic conditions of the test certificate must be observed.



## // Ideal for preventing condensation on refrigeration and cooling water systems

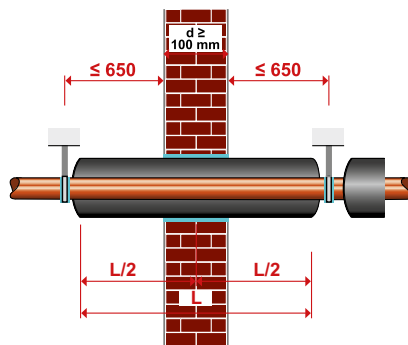
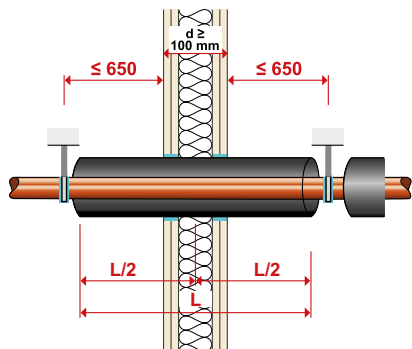
Pipe outer diameter	Line temperature / Ambient temperature			
	+6 °C / 23 °C	0 °C / 23 °C	-5 °C / 23 °C	-10 °C / 23 °C
≥ 10 mm ≤ 323,9 mm	Relative humidity ≤ 80 %	Relative humidity ≤ 75 %	Relative humidity ≤ 70 %	Relative humidity ≤ 65 %

## // Pipe Materials and Zero Distance

Due to its intumescent effect in the event of a fire, ArmaFlex Protect can be used to securely seal off penetrations not only for copper, steel and stainless steel pipework but also for combustible supply pipes such as multilayer composite pipes. ArmaFlex Protect is a system component working with all ArmaFlex elastomeric insulation materials and ArmaFlex 520 Adhesives.

## The greatest advantage:

Metal pipes up to an outside pipe diameter of up to 88.9 mm and plastic pipes up to an outside pipe diameter of up to 75 mm can be installed at „zero distance“ from each other.



Non-combustible material with classification A1 or A2-s1,d0 according to EN 13501-1 as e.g. mortar, cement or gypsum joint filler. Non-combustible material with classification A1 or A2-s1,d0 according to EN 13501-1 as e.g. mortar, cement or gypsum joint filler.

## // Lightweight Wall

In fire-rated lightweight walls, ArmaFlex Protect is installed centrally. The annular gap is closed within the insulation level using conventional filler is used against the gypsum board. Additional strips or protective insulation are not required.

## // Solid Wall

In fire-rated solid walls, ArmaFlex Protect is installed centrally. The gap is closed using ordinary mineral mortar. Additional strips are not required!

## TECHNICAL DATA - ARMAFLEX PROTECT

Brief description	Flexible fire seal and insulation for metal and composite pipes through fire-resistant walls and floors (up to EI 120).
Material type	Elastomeric foam based on synthetic rubber.
Product colour range	Black
Applications	Insulation and fire protection barrier for drinking water (hot/cold), heating and refrigeration metal pipes up to 324 mm diameter and composite pipes up to 75 mm. Detailed information on the fields of application (building elements, services, limits in size) and description of construction of the penetration seal are available in the ETA-11/0454. For information on marine applications, please consult your local Armacell contact or get in touch with our Customer Service.
Installation	For industrial applications it is recommended to consult the relevant Armacell application manual(s). Use ArmaFlex 520 adhesive for a reliable and seamless installation.

### Approvals and compliance

Specification compliance	<ul style="list-style-type: none"> <li>Meets IMO FTP Code 2010, part 3</li> </ul>
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Property	Value / Assessment		Standard / Test method
<b>Temperature range</b>			
Service temperature	Min. °C	Max. °C	EN 14706, EN 14707, EN 14304
	-50	85	
<b>Thermal conductivity</b>			
Declared thermal conductivity	Øm	0 °C	EN 12667, EN ISO 8497
	$\lambda d \leq [W/(m \cdot K)]$	0,056	
	Formula	$\lambda d = 0.056 + 0,0001 \cdot \vartheta m$	
<b>Fire Performance and Approvals</b>			
Use category	Type Y2 - intended for use at temperatures below 0 °C, but with no exposure to rain nor UV		EOTA TR 024
Fire resistance of bulkhead and decks	B-15 bulkheads up to 89 mm A-60 bulkheads and decks up to 89 mm		IMO 2010 FTP code, Part 3 (IMO A.754(18))
<b>Passive fire protection</b>			
Fire resistance of elements of construction	up to EI 120		EN 13501-2, EN 1366-3
<b>Fire performance</b>			
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames		
<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
Additional features	SCCP, MCCP-free		
<b>Other technical features</b>			
Shelf life	No shelf life.		
Storage	Cartons shall be stored horizontally. Can be stored in dry, clean rooms at normal relative humidity (50 % - 70 %) and ambient temperature (0 °C - 35 °C). Minimum temperature for transport -50 °C under condition of frost-free storage before installation.		

**Tube – standard. Black**

Pipe Ø [mm]	Item	Description	Insulation thickness [mm]	EAN	Primary content [metric]
6	PRO-AX-16X006	ArmaFlex Protect tube (1 m, outer-Ø 6 mm, 16 mm insulation thickness)	16	7612207297195	34 m
8	PRO-AX-16X008	ArmaFlex Protect tube (1 m, outer-Ø 8 mm, 16 mm insulation thickness)	16	7612207297201	30 m
10	PRO-AX-19X010	ArmaFlex Protect tube (1 m, outer-Ø 10 mm, 19 mm insulation thickness)	19	7612207284515	18 m
12	PRO-AX-19X012	ArmaFlex Protect tube (1 m, outer-Ø 12 mm, 19 mm insulation thickness)	19	7612207284522	17 m
15	PRO-AX-19X015	ArmaFlex Protect tube (1 m, outer-Ø 15 mm, 19 mm insulation thickness)	19	7612207284539	16 m
16	PRO-AX-20X016	ArmaFlex Protect tube (1 m, outer-Ø 16 mm, 20 mm insulation thickness)	20	7612207284546	14 m
16	PRO-AX-20X16 S	ArmaFlex Protect tube (150 mm, outer-Ø 16 mm, 20 mm insulation thickness)	20	7612207407143	35 m
18	PRO-AX-20X018	ArmaFlex Protect tube (1 m, outer-Ø 18 mm, 20 mm insulation thickness)	20	7612207284553	13 m
20	PRO-AX-20X020	ArmaFlex Protect tube (1 m, outer-Ø 20 mm, 20 mm insulation thickness)	20	7612207284560	12 m
22	PRO-AX-20X022	ArmaFlex Protect tube (1 m, outer-Ø 22 mm, 20 mm insulation thickness)	20	7612207284577	12 m
25	PRO-AX-20X025	ArmaFlex Protect tube (1 m, outer-Ø 25 mm, 20 mm insulation thickness)	20	7612207284584	11 m
28	PRO-AX-25X028	ArmaFlex Protect tube (1 m, outer-Ø 28 mm, 25 mm insulation thickness)	25	7612207284591	9 m
32	PRO-AX-25X032	ArmaFlex Protect tube (1 m, outer-Ø 32 mm, 25 mm insulation thickness)	25	7612207284607	8 m
35	PRO-AX-25X035	ArmaFlex Protect tube (1 m, outer-Ø 35 mm, 25 mm insulation thickness)	25	7612207284614	8 m
40	PRO-AX-25X040	ArmaFlex Protect tube (1 m, outer-Ø 40 mm, 25 mm insulation thickness)	25	7612207284621	6 m
42	PRO-AX-25X042	ArmaFlex Protect tube (1 m, outer-Ø 42 mm, 25 mm insulation thickness)	25	7612207284393	6 m
48	PRO-AX-25X048	ArmaFlex Protect tube (1 m, outer-Ø 48 mm, 25 mm insulation thickness)	25	7612207284409	5 m
50	PRO-AX-25X050	ArmaFlex Protect tube (1 m, outer-Ø 50 mm, 25 mm insulation thickness)	25	7612207284416	5 m
54	PRO-AX-25X054	ArmaFlex Protect tube (1 m, outer-Ø 54 mm, 25 mm insulation thickness)	25	7612207284423	5 m
60	PRO-AX-25X060	ArmaFlex Protect tube (1 m, outer-Ø 60 mm, 25 mm insulation thickness)	25	7612207284430	4 m
63	PRO-AX-25X063	ArmaFlex Protect tube (1 m, outer-Ø 63 mm, 25 mm insulation thickness)	25	7612207284447	4 m

**Tube – standard. Black**

Pipe Ø [mm]	Item	Description	Insulation thickness [mm]	EAN	Primary content [metric]
76	PRO-AX-25X076	ArmaFlex Protect tube (1 m, outer-Ø 76 mm, 25 mm insulation thickness)	25	7612207284454	4 m
89	PRO-AX-25X089	ArmaFlex Protect tube (1 m, outer-Ø 89 mm, 25 mm insulation thickness)	25	7612207284461	4 m

**Roll - standard. Black**

Item	Insulation thickness [mm]	Description	Width (m)	Length [m]	EAN	Primary content [metric]
PRO-AX-13MM/E	13	ArmaFlex Protect sheet 0,5 (6 m x 0,5 m, 13 mm insulation thickness)		6	7612207335880	6 m <sup>2</sup>

# 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.



All data and technical information are based on results achieved under the specific conditions defined according to the testing standards referenced. Despite taking every precaution to ensure that said data and technical information are up to date, Armacell does not make any representation or warranty, express or implied, as to the accuracy, content or completeness of said data and technical information. Armacell also does not assume any liability towards any person resulting from the use of said data or technical information. Armacell reserves the right to revoke, modify or amend this document at any moment. It is the customer's responsibility to verify if the product is suitable for the intended application. The responsibility for professional and correct installation and compliance with relevant building regulations lies with the customer. This document does not constitute nor is part of a legal offer to sell or to contract.

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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)