



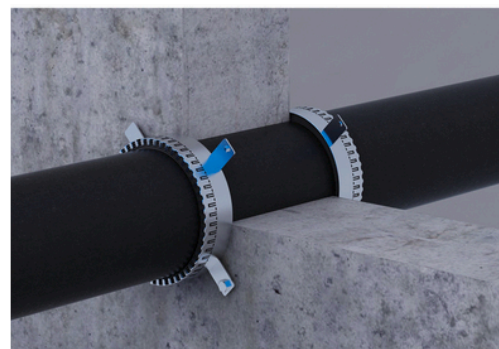
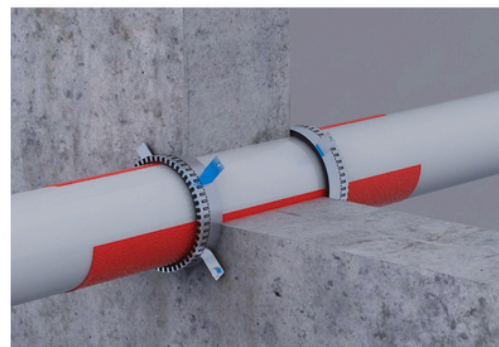
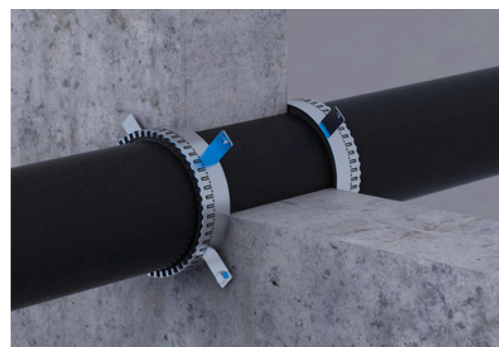
ENDLESS FIRESTOP COLLAR

ArmaProtect EFC1 and EFC2

Flexible solution for firestop pipe penetrations

Endless firestop collar for fire seals in walls and floors

- // Combustible pipes $\varnothing \leq 160$ mm (with and without sound insulation)
- // Combustible pipes $\varnothing \leq 110$ mm (with combustible insulation)
- // Non-combustible pipes $\varnothing \leq 108$ mm (with combustible insulation)
- // Multi-layer composite pipes $\varnothing \leq 110$ mm



INSTALL IT. ENSURE SAFETY.

ArmaProtect™

Passive fire protection (PFP) products and systems are designed to provide fire-safe circumstances in the event of a fire emergency. Often built as part of the building component, PFP measures are not visible to building users and hence often overlooked as a fire protection measure.



// Fire safety is top priority

The requirements for fire protection are increasing. Regulated by building codes, buildings are sub-divided in fire compartments. In the event of a fire, they keep fire and smoke contained in a limited area for a given amount of time. Fire ratings typically range from 30 to 120 or even up to 240 minutes

ArmaProtect firestop products reliably seal off penetrations in walls, floors or service shafts and keep escape routes free of smoke and toxic gases. This gives occupants valuable time to leave the building and rescue teams unhindered access for evacuation.

// One-stop-shop solution

Whether flexible walls, rigid wall or rigid floors with cable and pipe penetrations – Armacell offers specifiers and installers compliant solutions for almost all firestop penetrations.

The range includes intumescent firestop wraps, firestop collars, coated firestop boards, intumescent firestop sealants and mortars.

The ArmaProtect portfolio is an ideal addition to ArmaFlex Protect, Armacell's unique firestop solution which combines high fire resistance, condensation control and thermal insulation in a single product.

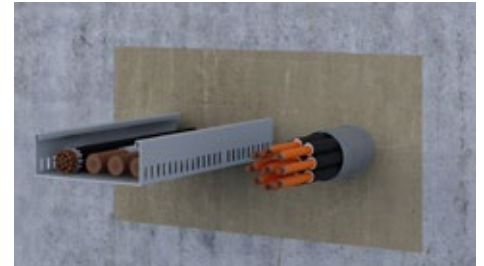


**SOLUTIONS
WITH EN TESTING
(ETA)**

The firestop portfolio from Armacell

Firestop penetration seals with cables, conduits, combustible and non-combustible pipes for residential, commercial and industrial building.

- ✓ Specifiable, reliable and flexible – **for each firestop application in residential, commercial and industrial buildings**
- ✓ Cost efficient solution – **the ideal choice for specifiers**
- ✓ Easy to install and maintain – **perfectly designed for the need of installers**
- ✓ Easy to inspect – **compliant solutions to fulfill the expectations of firestop inspectors**
- ✓ Firestop solutions for cable, pipe and mixed penetrations – **globally tested with European Technical Assessments and tested UL systems**
- ✓ Full approval range from small to large openings – **covering customer's requirement on the job sites**



ArmaProtect EXPS
Firestop sealant



ArmaProtect FW2 & FW3
Firestop wrap



ArmaProtect FC1 & FC2
Firestop collar



ArmaProtect CB
Coated firestop board
(includes **ArmaProtect ABLC**
Firestop coating and
ArmaProtect ABLF
Firestop filler mastic)



ArmaProtect CM
Firestop mortar



ArmaProtect CT
Firestop cable tube



ArmaProtect EFC1 & EFC2
Endless firestop collar

TECHNICAL DATA - ARMAPROTECT EFC1 AND EFC2

Brief description	ArmaProtect EFC1 and EFC2 are endless firestop collars as solution for covering various pipe diameters and design variants.
Material type	Stainless steel strap with self-adhesive flexible intumescent strip based on blowing graphite technology.
Product colour range	Stainless steel (strap) and anthracite (intumescent strip)
Special features	Easy visual inspection.
Product range	Self-adhesive firestop wrap: 10 m x 40 mm x 2 mm, stainless steel strap: 3 m (including 18 hooks).
Applications	Endless Firestop collar for fire seals in walls and floors for combustible pipes (with and without insulation) and non-combustible pipes (with combustible insulation).
Installation	For professional use only. Refer to third party published listings, national approvals / assessments and Armacell's product literature for specific application details as well as before handling this product.

Approvals and compliance

Specification compliance	<ul style="list-style-type: none"> ETA-22/0061 acc. EN 1366-3
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Property	Value / Assessment	Standard / Test method
Operating temperature		
Operating temperature	-40°C to 70°C (40°F to 158°F)	
Processing Temperature		
Processing temperature	5°C to 25°C (41°F to 77°F)	
Thermal conductivity		
Declared thermal conductivity	θ_m	0 °C
	$\lambda_d \leq [W/(m \cdot K)]$	0.403
Fire Performance and Approvals		
Reaction to fire	Class A1 (stainless steel collar) / Class E (intumescent strip)	EN 13501-1
Use category	Type Y1: intended for use at temperatures below 0°C with exposure to UV but no exposure to rain	EOTA TR 024
Passive fire protection		
Fire resistance of elements of construction	Drywall, concrete wall, aerated concrete wall, masonry wall: up to EI 120 Concrete floors: up to EI 240	EN 13501-2
Physical attributes		
Density	1200 ± 10 kg/m ³	
Mechanical properties		
Start of reaction / Volume expansion	> 190 °C / 18 to 34 times	
Expansion pressure	> 0.8 N/mm ²	
Health and environment		
Health aspects	Please refer to the safety data sheet available on our website.	
Emission of dangerous substances	No dangerous substances.	ETAG 026-02
Other technical features		
Shelf life	No shelf life.	
Storage	Store / Transport in a cool and dry place with an ambient temperature of 5 °C to 25 °C (41°F to 77°F) and protect from frost.	

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

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 25 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

