



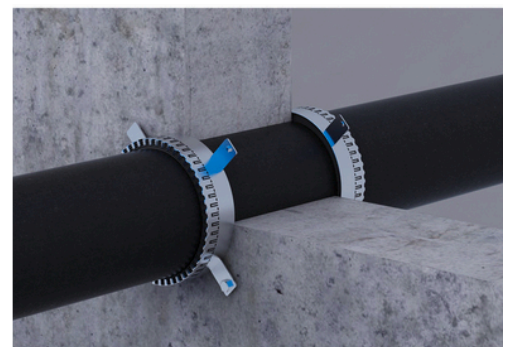
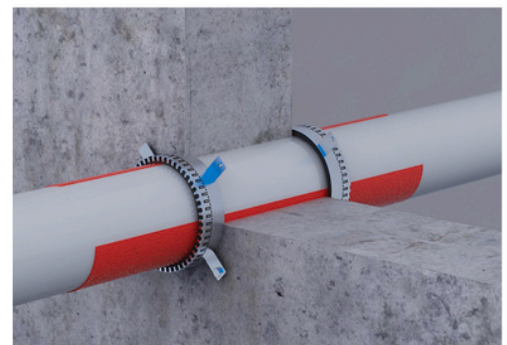
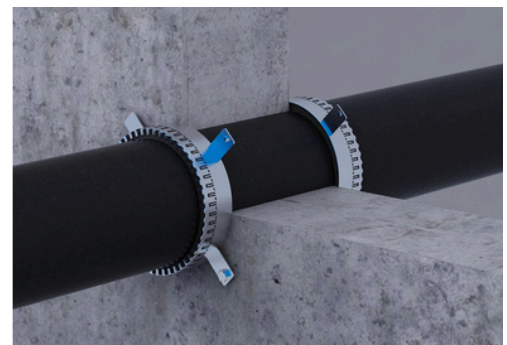
## ENDLESS FIRESTOP COLLAR

# 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.

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# 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.

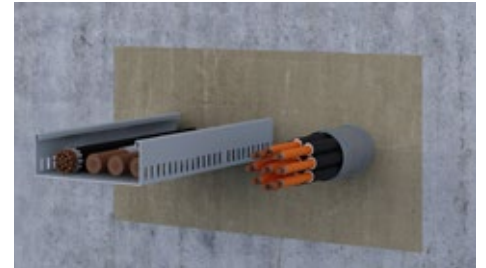
The ArmaProtect portfolio is an ideal addition to ArmaFlex Protect, Armacell's unique firestop solution which combines high fire resistance, condensation control and thermal insulation in a single product.

**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"> <li>ETA-22/0061 acc. EN 1366-3</li> </ul>
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Property	Value / Assessment	Standard / Test method
<b>Operating temperature</b>		
Operating temperature	-40°C to 70°C (40°F to 158°F)	
<b>Processing Temperature</b>		
Processing temperature	5°C to 25°C (41°F to 77°F)	
<b>Thermal conductivity</b>		
Declared thermal conductivity	$\theta_m$	0 °C
	$\lambda_d \leq [W/(m \cdot K)]$	0.403
<b>Fire Performance and Approvals</b>		
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
<b>Passive fire protection</b>		
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
<b>Physical attributes</b>		
Density	1200 ± 10 kg/m <sup>3</sup>	
<b>Mechanical properties</b>		
Start of reaction / Volume expansion	> 190 °C / 18 to 34 times	
Expansion pressure	> 0.8 N/mm <sup>2</sup>	
<b>Health and environment</b>		
Health aspects	Please refer to the safety data sheet available on our website.	
Emission of dangerous substances	No dangerous substances.	ETAG 026-02
<b>Other technical features</b>		
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.	

## Firestop collar

Item	Description	Content [quantity]
PRO-EFC1-3M	ArmaProtect EFC1 Endless Firestop collar comprised of 10m firestop wrap and 3m stainless steel strap	1 piece
PRO-EFC2-3M	ArmaProtect EFC2 Endless Firestop collar comprised of 10m firestop wrap and 3m stainless steel strap	1 piece

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 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](http://www.armacell.com)

  
MAKING A DIFFERENCE AROUND THE WORLD