FOR MEDIUM-TO-LARGE
FIRESTOP PENETRATIONS

ArmaProtect CB
Coated firestop board system

Ablative coated board system for
mixed fire seals in walls and floors

// Blank openings
// Mixed and multiple services
// Cables, cable bundles and cable trays
// Conduit and conduit bundles
// Non-combustible and combustible pipes

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ArmaProtect™

INSTRUCTIONS FOR USE

The recommended application temperature is between 5 °C and 25 °C and relative humidity of less than 85%. Ensure that surfaces to be coated are free of impurities and old coatings.

- ArmaProtect ABLC: Use brush, roller or airless sprayer (nozzle orifice > 0.48mm / 0.019¨).
- ArmaProtect ABLF: Use spatula.

// Consumption guide

Solid content (per weight): 66 - 68%

Applied material	Wet film material	Dry film material
1,000 g/m²	ca. 900 µm	ca. 500 µm
2,000 g/m²	ca. 1,800 µm	ca. 1,000 µm
3,200 g/m²	ca. 2,700 µm	ca. 1,600 µm
4,000 g/m²	ca. 3,600 µm	ca. 2,000 µm

Take note of potential material loss during application at the job site.

MAIN APPLICATIONS ACC. ETA-22/0063
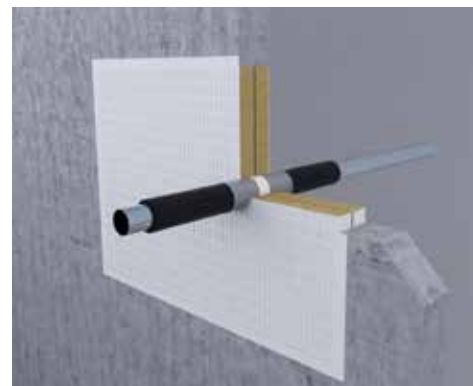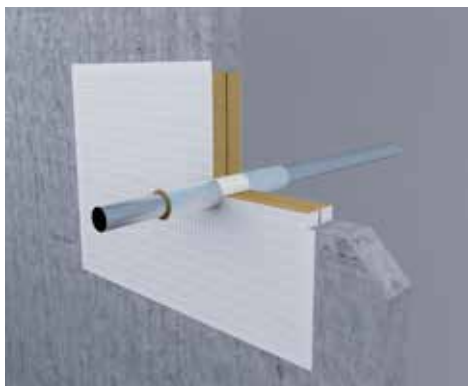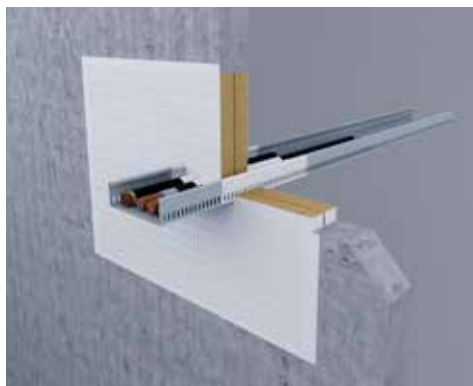
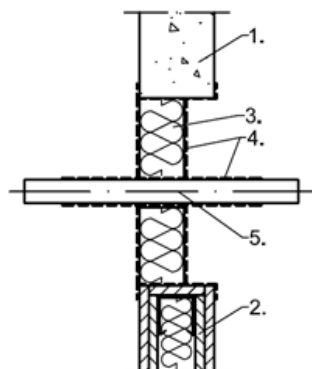**Single board system (1 x mineral wool board 60 mm, 2 side coated)[1]**

Base material	Drywall, concrete wall, aerated concrete wall, masonry wall, concrete floor
Base material thickness	≥ 100 mm (wall) ≥ 125 mm (floor)
Seal thickness	≥ 60 mm (wall) ≥ 60 mm (floor)
Maximum seal size (wall)	1175 mm x 1200 mm
Maximum seal size (floor)	1200 mm x 2400 mm or 800 x ∞
Penetrants • Cables ≤ Ø 80 mm[2] • Cable bundles ≤ Ø 100 mm (with cables ≤ Ø 21 mm)[2] • Cable trays[2] • Plastic conduits ≤ Ø 32 mm (with cables ≤ Ø 21 mm)[2] • Plastic conduit bundles ≤ Ø 100 mm (conduits ≤ Ø 32 mm, with cables ≤ Ø 21 mm)[2] • PE lines "speed pipes" (24 x ≤ Ø 7.0 mm, 7 x ≤ Ø 10.0 mm, 5 x ≤ Ø 12.0 mm)[1] • Non-combustible pipe with mineral wool insulation (steel pipes ≤ Ø 219.1 mm, copper pipes ≤ Ø 88.9 mm[1] • Non-combustible pipe with FEF insulation (steel pipes ≤ Ø 170 mm, copper pipes ≤ Ø 108 mm)[1] • Multilayer composite pipes ≤ Ø 63 mm[1] • Combustible pipes ≤ Ø 110 mm[1] • HVAC split-line-combinations[1]	up to EI 90[1]

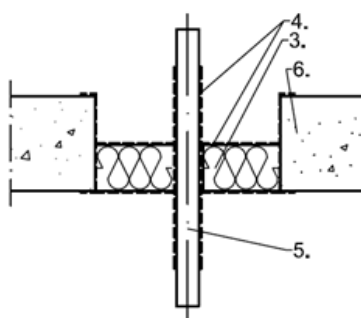[1] See ETA-22/0063 for further installation details.
[2] Cables / cable bundles / cable trays to be coated with ArmaProtect ABLC or wrapped with ArmaProtect FW2, see further details in the ETA-22/0063

// Typical ETA approved systems[1]

Wall application

Floor application

Legend
1. Rigid wall ≥ 100 mm
2. Flexible wall ≥ 100 mm
3. Mineral wool board
4. ArmaProtect ABLC Firestop coating
5. Cable
6. Rigid floor ≥ 125 mm

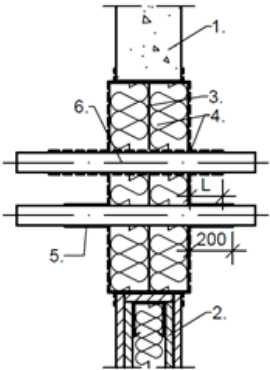[1] See ETA 22/0063 for further installation details.

Double board system (2 x mineral wool board 60mm, 1 side coated)[1]

|	
Base material	Drywall, concrete wall, aerated concrete wall, masonry wall, concrete floor
Base material thickness	≥ 100 mm (wall) ≥ 150 mm (floor)
Seal thickness	≥ 120 mm (wall) ≥ 150 mm (floor)
Maximum seal size (wall)	1400 mm x 2000 mm
Maximum seal size (floor)	1400 mm x 2000 mm
Penetrants • Cables ≤ Ø 80 mm[2] • Cable bundles ≤ Ø 100 mm (with cables ≤ Ø 21 mm)[2] • Cable trays[2] • Plastic conduits ≤ Ø 32 mm (with cables ≤ Ø 21 mm)[2] • Plastic conduit bundles ≤ Ø 100 mm (conduits ≤ Ø 32 mm, with cables ≤ Ø 21 mm)[2] • PE lines "speed pipes" (24 x ≤ Ø 7.0 mm, 7 x ≤ Ø 10.0 mm, 5 x ≤ Ø 12.0 mm)[2] • Non-combustible pipe with mineral wool insulation (steel pipes ≤ Ø 323.9 mm, copper pipes ≤ Ø 108 mm)[1] • Non-combustible pipe with FEF insulation (steel pipes ≤ Ø 170 mm, copper pipes ≤ Ø 108 mm)[1] • Multilayer composite pipes ≤ Ø 63 mm[1] • Combustible pipes ≤ Ø 160 mm[1] • HVAC split-line-combinations[1]	up to EI 120[1]

[1] See ETA-22/0063 for further installation details.
[2] Cables / cable bundles / cable trays to be coated with ArmaProtect ABLC or wrapped with ArmaProtect FW2, see further details in the ETA-22/0063.

// Typical ETA approved systems[1]

Wall application

Floor application
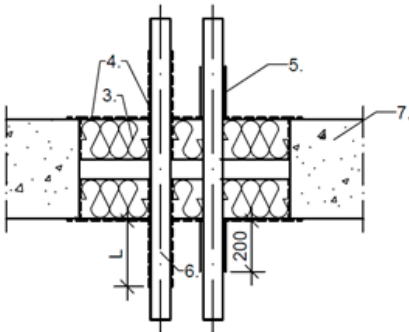
Legend
1. Rigid wall ≥100 mm
2. Flexible wall ≥100 mm
3. Mineral wool board
4. ArmaProtect ABLC Firestop coating
5. ArmaProtect FW2 Firestop wrap
6. Cable
7. Rigid floor ≥150 mm
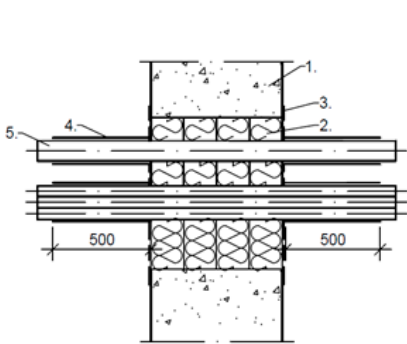
[1] See ETA 22/0063 for further installation details.

Quadruple board system (4 x mineral wool board 60 mm, 1 side coated)[1]

|	
Base material	Concrete wall, aerated concrete wall, masonry wall, concrete floor
Base material thickness	≥ 240 mm (wall) ≥ 200 mm (floor)
Seal thickness	≥ 240 mm (wall) ≥ 240 mm (floor)
Maximum seal size (wall)	600 mm x 600 mm
Maximum seal size (floor)	600 mm x 1000 mm
Penetrants • Cables ≤ Ø 80 mm[2] • Cable bundles ≤ Ø 100 mm (with cables ≤ Ø 21 mm)[2] • Cable trays[2]	up to EI 240[1]

[1] See ETA-22/0063 for further installation details.
[2] Cables / cable bundles / cable trays to be wrapped with ArmaProtect FW2, see further details in the ETA-22/0063.

// Typical ETA approved systems[1]

Wall application

Floor application
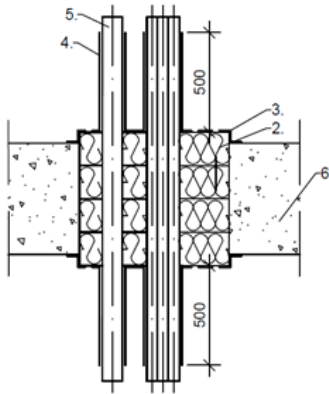
Legend
1. Rigid wall ≥ 240 mm
2. Mineral wool board
3. ArmaProtect ABLC Firestop coating
4. ArmaProtect FW2 Firestop wrap
5. Cable
6. Rigid floor ≥ 200 mm

[1] See ETA 22/0063 for further installation details.

OTHER APPROVED SYSTEMS ACC. ETA-22/0063

Sealing system made of mineral wool and ArmaProtect ABLF Firestop Filler[1]

Base material	Concrete wall, aerated concrete wall, masonry wall, concrete floor
Base material thickness	⩾ 100 mm (wall) ⩾ 150 mm (floor)
Seal thickness	⩾ 100 mm (wall) ⩾ 150 mm (floor)
Maximum seal size (wall)	500 mm x 200 mm (rectangular) Ø 350 mm (round)
Maximum seal size (floor)	350 mm x 150 mm (rectangular) Ø 160 mm (round)

Penetrants
- Cables ⩽ Ø 21 mm[1]
- Cable bundles ⩽ Ø 100 mm (with cables ⩽ Ø 21 mm)[1]
- Plastic conduits ⩽ Ø 32 mm (with cables ⩽ Ø 21 mm)[2]
- Plastic conduit bundles ⩽ Ø 70 mm (conduits ⩽ Ø 16 - 50 mm, with cables ⩽ Ø 21 mm)[2]
- Plastic conduit bundles ⩽ Ø 100 mm (conduits ⩽ Ø 32 mm, with cables ⩽ Ø 21 mm)[2]
- Metal conduits ⩽ Ø 16 mm (with cables ⩽ Ø 14 mm) and ⩽ Ø 50 mm (with cables ⩽ Ø 21 mm)[2]
- Combustible pipes ⩽ Ø 32 mm[1]
- Combustible pipes ⩽ 219.1 mm (with mineral wool insulation)[11]
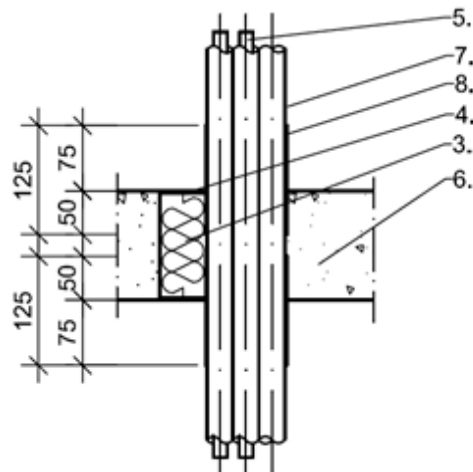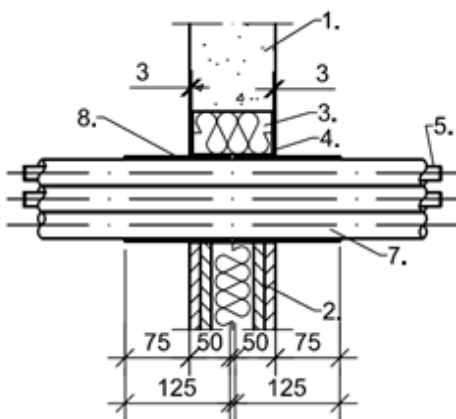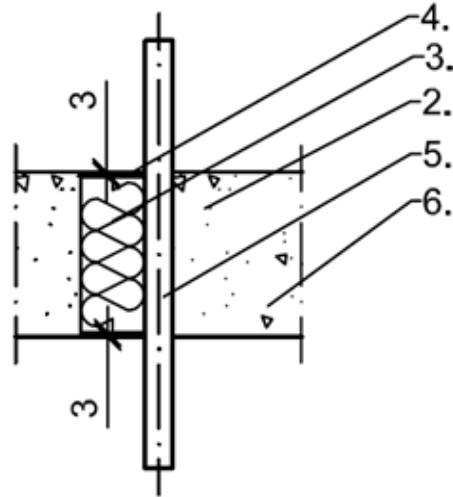- HVAC split-line-combinations[1]

up to EI 90[1]

[1] See ETA-22/0063 for further installation details.
[2] Plastic conduits/plastic conduit bundles to be wrapped with ArmaProtect FW2, see further details in the ETA-22/0063.

// Typical ETA approved systems[1]
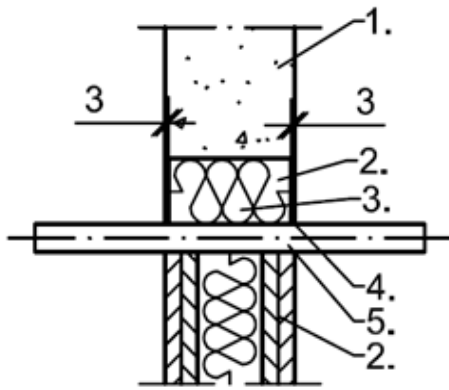
Wall application

Floor application

Legend
1. Rigid wall ≥ 100 mm
2. Flexible wall ≥ 100 mm
3. Loose mineral wool
4. ArmaProtect ABLF Firestop filler
5. Cable
6. Rigid floor ≥ 150 mm
7. Conduits
8. ArmaProtect FW2 Firestop wrap

[1] See ETA 22/0063 for further installation details.

UL APPROVED SYSTEMS

// Typical UL approved systems[1]

Penetrants

|	
• Blank openings	≤ 400 mm x 600 mm
• Cable trays	≤ 500 mm width
• Cable bundles	≤ Ø 150 mm
• PE-HD conduit bundles	≤ Ø 100 mm (conduits Ø ≤ 32 mm)
• Copper tubes	≤ Ø 32 mm
• Waveguides	≤ Ø 63 mm
• Speed pipe bundles	
• Bus bars	
• Steel pipes	≤ Ø 323.9 mm
• Copper pipes	≤ Ø 159 mm
• PE/Al/PE composite pipes	≤ Ø 32 mm
• PVC pipes	≤ Ø 110 mm
• PE pipes	≤ Ø 110 mm
• PP-HT pipes	≤ Ø 100 mm
• PP pipes	≤ Ø 75 mm
• AB/PVC pipes	≤ Ø 75 mm
• Clima split bundles	
• Ducts	up to 400 mm x 300 mm (rectangular) up to Ø 300 mm (round)

[1]See relevant UL system for further installation details.

// Selected exemplary UL approved systems

System No. C-AJ-0181 (blank floor opening)
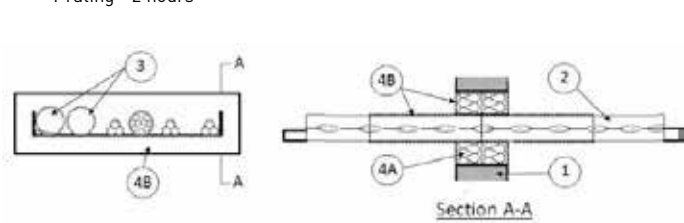
ANSI/UL 1479 (ASTM E814)
• F rating - 3 hours
• T rating - 3 hours
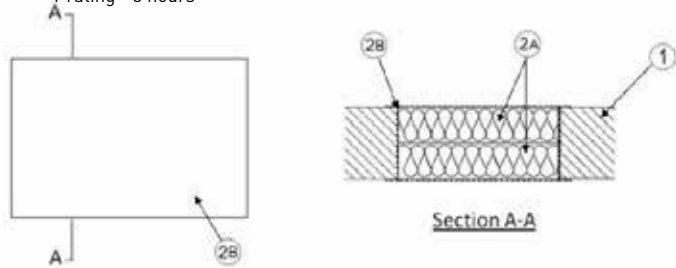
System No. W-J-4106 (cable tray in wall opening)
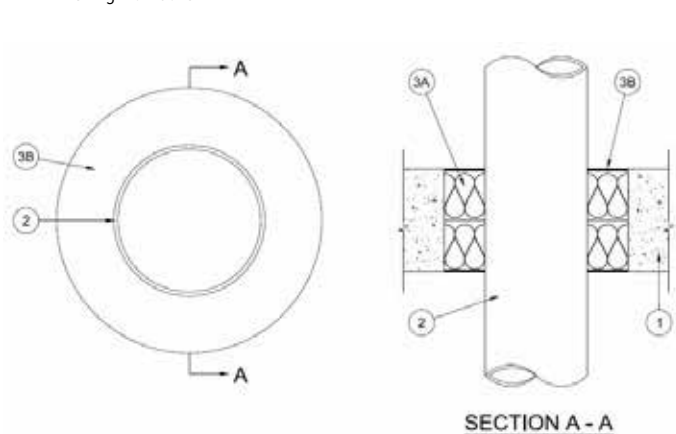
ANSI/UL 1479 (ASTM E814)
• F rating - 3 hours
• T rating - 2 hours

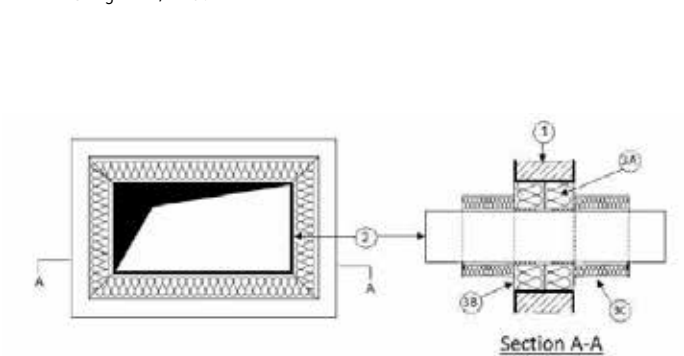**System No. C-AJ-1753 (Steel pipe in floor opening)**

ANSI/UL 1479 (ASTM E814)
• F rating - 3 hours
• T rating - 0 hours

System No. W-J-1330 (duct in wall opening)

ANSI/UL 1479 (ASTM E814)
• F rating - 3 hours
• T rating - 1-1/2 hour

TECHNICAL DATA - ARMAPROTECT CB COATED BOARD SYSTEM

Brief description	ArmaProtect CB is an ablative coated board system to maintain the fire resistance performance of fire penetrations in walls and floors.
Material type	Mineral wool board with ablative firestop coating and ablative firestop filler mastic.
Additional material information	The entire system as well as the separate components (coated board, ablative firestop coating and ablative firestop filler mastic) are halogen- and solvent-free.
Product colour range	White
Special features	In a cured state, the ablative firestop coating (ArmaProtect ABLC) and ablative firestop filler mastic (ArmaProtect ABLF) are resistant against humidty, frost-dew-change and UV radiation.
Product range	Coated boards are packed as 4 pieces in a box. The length x width x height of the boards are as follows: - One-side coated board: 1000 mm x 600 mm x 60 mm with dry-film thickness of 0.7 mm - Two-side coated board: 1000 mm x 600 mm x 60 mm with dry-film thickness of 0.7 mm ArmaProtect ABLC ablative firestop coating is available in pails of 12.5 kg and 15 kg. ArmaProtect ABLF ablative firestop filler mastic is available as 310 ml cartridges with 12 cartridges packed in a carton.
Applications	Ablative coated board system for mixed fire seals in walls and floors for blank openings, mixed and multiple services, cables, cable bundles and cable trays and non-combustible and combustible pipes.
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.
Declaration of Performance (DoP)	ArmaProtect CB

Approvals and compliance

Specification compliance	• ETA-22/0063 acc. EN 1366-3 • UL acc. UL 1479 (ASTM E814)

Property	Value/Assessment	Standard/Test method
Temperature range		
Operating temperature	-40°C to +70°C (-40°F to 158°F)	
Application temperature	5°C to 25°C (41°F to 77°F)	
Storage and transportation temperature	ArmaProtect CB Coated firestop board: 5°C to 25°C (41°F to 77°F) ArmaProtect ABLC Firestop coating: 5°C to 25°C (41°F to 77°F) ArmaProtect ABLF Firestop filler mastic: 5°C to 25°C (41°F to 77°F)	
Mechanical properties		
Density	ArmaProtect ABLC Firestop coating: 1.34 - 1.48 g/cm³ (at 20 °C) ArmaProtect ABLF Firestop filler mastic: 1.34 - 1.48 g/cm³ (at 20 °C)	
Fire performance		
Reaction to fire	Class E	EN 13501-1
Resistance to fire	See Annex	
Health and environment		
Emission of dangerous substances	No dangerous substances.	ETAG 026-02
Volatile organic compounds (VOC) content	ArmaProtect ABLC Firestop coating: < 50 g/l ArmaProtect ABLF Firestop filler mastic: < 50 g/l	GS-11, Green Seal Standard
Other technical features		
Durability and serviceability	Use category type X.	EOTA TR 024
Cure time	Dust-dry: > 4 h (23 °C / 65% relative humidity 2nd layer: > 8 h (23 °C / 65% relative humidity) Fully cured: > 4 d (23 °C / 65% relative humidity)	
Safety information	Please refer to the safety data sheet available on our website.	
Shelf life	Can be kept for at least 18 months if unopened and stored properly.[1]	
Storage	Store in a cool and dry place with an ambient temperature of 5 °C to 25 °C and protect from frost.	

[1] ArmaProtect ABLC Firestop coating and ArmaProtect ABLF Firestop filler mastic only.

Firestop coating. Colour: White

Item	Description	Content
PRO-ABLC-12.5kg	ArmaProtect ABLC Firestop coating packed in a pail	12.5 kg
PRO-ABLC-15kg	ArmaProtect ABLC Firestop coating packed in a pail	15 kg

Firestop filler mastic. Colour: White

Item	Description	Content
PRO-ABLF-12.5kg	ArmaProtect ABLF Firestop filler mastic packed in a pail	12.5 kg
PRO-ABLF-15kg	ArmaProtect ABLF Firestop filler mastic packed in a pail	15 kg
PRO-ABLF-310ml	ArmaProtect ABLF Firestop filler mastic packed in a cartridge	310 ml

Coated board system. Colour: White

Item	Description	Content
PRO-CB-60S1	ArmaProtect CB Coated firestop board 1000 mm x 600 mm x 60 mm S1 (dry-film thickness: 0.7 mm)	4 piece(s)
PRO-CB-60S2	ArmaProtect CB Coated firestop board 1000 mm x600 mm x 60 mm S2 (dry-film thickness: 0.7 mm)	4 piece(s)

Firestop wrap.

Item	Description	Content
PRO-FW1-10m	ArmaProtect FW1 Firestop wrap	10 m
PRO-FW2-10m	ArmaProtect FW2 Firestop wrap	10 m

Firestop identification plate.

Item	Description	Content
PRO-ID-SET	ArmaProtect ID identification plate set	5 pieces

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 3,000 employees and 24 production plants in 16 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.

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