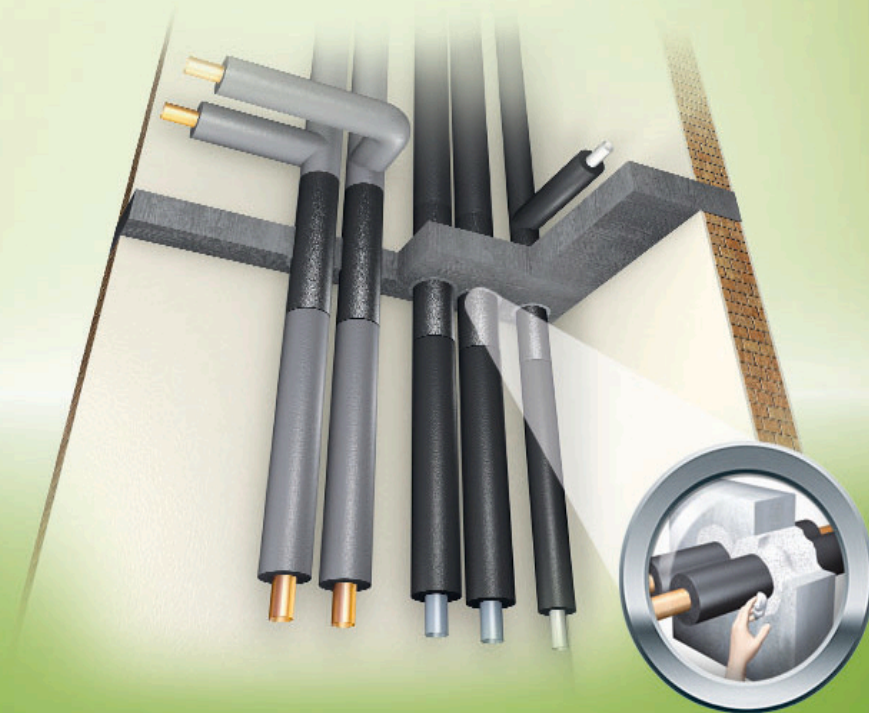
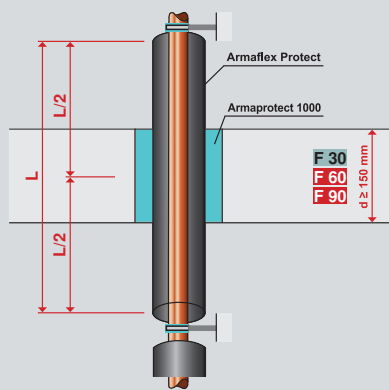


Armaprotect®

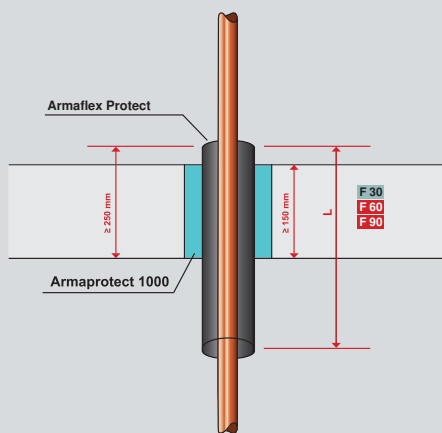
INSTALL FIRE PROTECTION



- Fire protection and condensation control in one.
- To combine with all Armaflex products.
- Flexible and easy to install.
- Secure sealing of gaps in wall and ceiling penetrations.

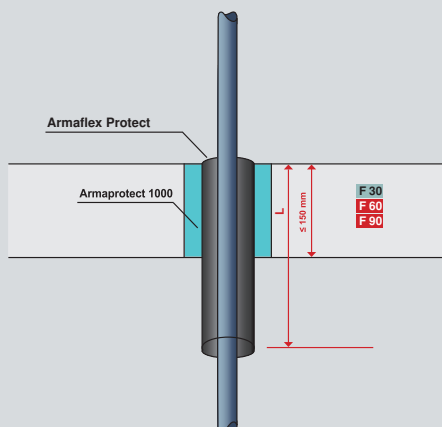


Armaflex Protect can also be installed centrally in ceiling penetrations. Armaprotect 1000 or mineral mortar is used to close the remaining gap in the penetration or core-drilled hole.



If no insulation is required or possible above the ceiling, Armaflex Protect can be installed under the ceiling. In this way radiator connections, for example, can be sealed off simply and safely.

Under-ceiling insulation on copper, steel, stainless steel pipes.



Under-ceiling insulation in the case of plastic pipes.

PIPE MATERIALS AND ZERO DISTANCE

Due to its intumescent effect in the event of a fire, the new 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, PE, PE-HD, PP or PVC pipes. Armaflex Protect is a system component working with all Armaflex elastomeric insulation materials and Armaflex 520 Adhesives.

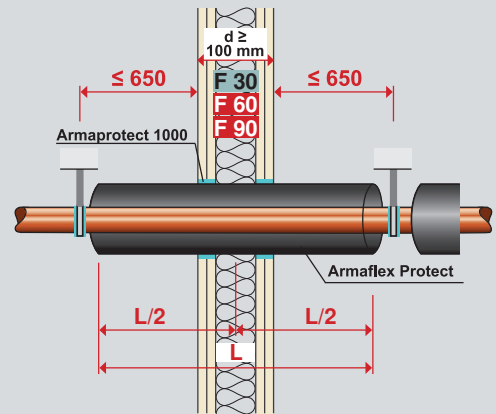
Best of all:

There are no minimum distance requirements with Armaflex Protect, so all pipes can be installed with zero distance.



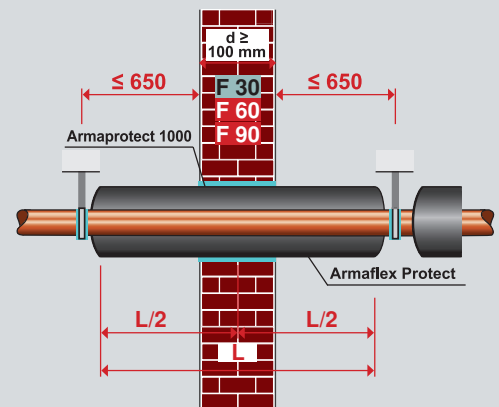
LIGHTWEIGHT WALL

In fire-rated lightweight walls, Armaflex Protect is installed centrally. The annular gap is closed within the insulation level using Armaproprotect 1000 or conventional filler is used against the gypsum board. Additional strips or protective insulation are not required.



SOLID WALL

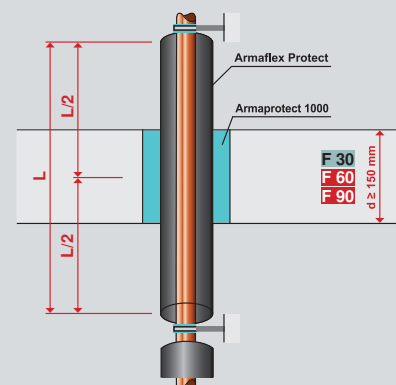
In fire-rated solid walls, Armaflex Protect is installed centrally. The gap is closed using Armaproprotect 1000 or ordinary mineral mortar. Additional strips are not required!



CEILING PENETRATION

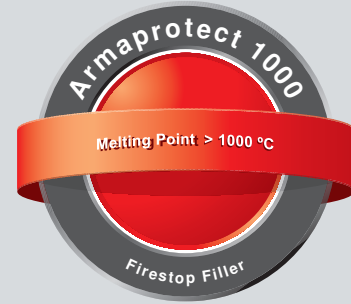
Armaflex Protect can also be installed centrally in ceiling penetrations. Armaproprotect 1000 or mineral mortar is used to close the remaining gap in the penetration or core-drilled hole.

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.



ARMAPROTECT 1000

FIRESTOP FILLER



The revolutionary aspect of this product is the consistency of the ready-to-use material. It can be applied directly from the bucket using either fingers or a spatula. In this way the annular gap in wall and ceiling penetrations can be sealed quickly and neatly. With the firestop filler Armaprotect 1000 it is possible to seal wall and ceiling penetrations safely and reliably even under difficult conditions on the building site. The non-combustible compound with a melting point of >1000 °C not only ensures reliable and effective fire protection, but also protects the pipes against heat losses and prevents noise being transmitted to adjoining structural elements.

ARMAPROTECT 1000 AND ARMAFLEX PROTECT: THE PERFECT COMBINATION

In applications in which Armaflex Protect is used, Armaprotect 1000 completes the system perfectly. But it can also be applied directly onto pipes or even electricity cables in wall and ceiling penetrations. The product complies with European standard EN 998-2 and bears the CE marking.

IN A PRACTICAL TUBE:

The firestop filler is now also available in a practical tube. It is very easy to squeeze out the required amount of the paste. After use the tube is resealed simply by replacing the screw top.



EASY TO APPLY

The firestop filler is ready to use, stirring is not necessary. The product can be scooped easily from the bucket directly by hand into the gap. The surface can be smoothed using your hand or a scraper. No waste because of resealable bucket.



Technical Data - Armaflex Protect

Brief description	Flexible fire seal and insulation for non-combustible and combustible pipes through fire-resistant walls and ceilings (EI 30 to EI 120).
Material type	Elastomeric foam based on synthetic rubber.
Colour	black
Applications	Insulation and fire protection barrier for drinking water hot / cold, heating and refrigeration non combustible pipes up to 326 mm diameter and combustible pipes up to 75 mm.
Special Features	Acc. to ETA 3.2.1.2. 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 Armaflex Protect installation instructions
Remarks	Declaration of Performance is available in accordance with Article 7(3) of Regulation (EU) No 305/2011 on our homepage: www.armacell.com/DoP "

Property	Value/Assessment	Test ¹	Special Remark
Temperature Range			
Temperature Range	max. service temperature	+85 °C	
	min. service temperature	-50 °C	
Thermal Conductivity			
Thermal Conductivity	ϑ_m	0 °C	Tested according to EN 12667 EN ISO 8497
	$\lambda \leq$	0,056 W/(m · K)	
Water vapour diffusion resistance			
Water vapour diffusion resistance	$\mu \geq$	7.000	Tested acc. to EN 12086 and EN 13469
Fire performance			
Reaction to fire	product range		EU 5925 Classified acc. to EN 13501-1 Tested acc. to EN ISO 11925-2
	tubes	E _L	
	sheets	E	
Practical Fire Behaviour	Self-extinguishing, does not drip, does not spread flames		
Fire resistance of structural element	EI 30 - EI 120		EU 4384 European Technical Approval ETA-11/0454
Other technical features			
UV resistance ¹	Protection against UV-radiation is necessary.		
Storage & Shelf life	3 years from production date		Can be stored in dry, clean rooms at normal relative humidity (50 % - 70 %) and ambient temperature (0 °C - 35 °C) Cartons shall be stored horizontally. Minimum temperature for transport -50 °C under condition of frost-free storage before installation.

1. If Armaflex is applied under UV-radiation the material must be protected within 3 days with a covering or painting.

*1 Further documents such as test certificates, approvals and the like can be requested using the registration number given.

Armaflex Protect – ideal for condensation control on refrigeration and coolant piping

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 %

All data and technical information are based on results achieved under typical application conditions. Recipients of this information should, in their own interest and responsibility, promptly clarify with us to determine whether or not the data and information apply to the intended application area.
 Installation instructions are available in our Armaflex installation manual. Please consult our Customer Service Center before insulating stainless steels. Adhesive Armaflex 520 must be used to guarantee proper installation. For some refrigerants, the discharge temperature may exceed +110 °C; please consult our Customer Service Center for further information. For outside use, Armaflex should be protected within 3 days, e.g. with Armafinish 99 Paint or Arma-Chek covering.

Technical Data - Armaprotect 1000

Brief description	Armaprotect 1000 Firestop Filler is a particularly practical, ready-to-use, high-temperature resistant mortar with excellent fire-protection, thermal insulation and noise control properties. It is self-hardening and very easy to apply by hand. No need for formwork – and it can be used even in tight spots.
Material type	High-temperature resistant mortar with hollow microspheres and inorganic binding agents.
Colour	light grey
Applications	Ideal system solution for sealing the annular gap in applications using Armaflex Protect. Furthermore, in accordance with the German MLAR 2005, Armaprotect 1000 can be used for penetrations with individual pipes or even electricity cables. Only for indoor use.
Special Features	Can be used in combination with Armaflex Protect and other fire resistant systems.
Assembly	The ready-to-use Armaprotect 1000 Firestop Filler is supplied in buckets and can be applied using either a spatula or fingers. The substrate must be dry and free of dust and grease. The room temperature must not fall below 5 °C during application. Once it has dried hard, the Firestop Filler can be sanded, drilled and cut without any difficulties.
Remarks	When used to fill the annular gap, Armaprotect 1000 Firestop Filler fulfils the German guidelines for pipe installations (MLAR, version 2005) and the legal guidelines for pipe installations issued by the federal states.

Property	Value/Assessment	Test ^{*1}	Special Remark
Thermal Conductivity			
Thermal Conductivity	ϑ_m	10 °C	EU 5738 Tested according to EN 12667
	λ	≤ 0,052 W/(m · K)	
Fire performance			
Reaction to fire	Euroclass A1	EU 5738	Classified acc. to EN 13501-1 Tested according to EN ISO 1182 EN ISO 1716
Other technical features			
Density	approx. 180 kg/m ³ (after drying)		
Compression strength	0,4 N/mm ²		Tested according to EN 1015-11
Drying time	48 h		high humidity, low temperature and as well limited convection extend the drying time
Melting point	> 1000 °C	EU 5738	Tested according to DIN 4102-17
Water-soluble chlorides	≤ 0,01 %	EU 5738	Tested according to DIN EN 1015-17
Yield	1:1		
Storage & Shelf life	24 month in sealed original container.		in a cool and dry place. Protect from temperatures below +5 °C!

*1 Further documents such as test certificates, approvals and the like can be requested using the registration number given.

All data and technical information are based on results achieved under typical application conditions. Recipients of this information should, in their own interest and responsibility, promptly clarify with us to determine whether or not the data and information apply to the intended application area. Installation instructions are available in our Armaflex installation manual. Please consult our Customer Service Center before insulating stainless steels. Adhesive Armaflex 520 must be used to guarantee proper installation. For some refrigerants, the discharge temperature may exceed +110 °C; please consult our Customer Service Center for further information. For outside use, Armaflex should be protected within 3 days, e.g. with Armafinish 99 Paint or Arma-Chek covering.

Technical Data - Armaprotect A1

Brief description	2-part pipe sections made material with inorganic-based ceramic binding agents, consisting of 2-component silicon oxide and aluminum oxide. The product is covered with the aluminum foil enclosed and a vapour tight seal is created with aluminium adhesive tape.
Material type	Insulation: inorganic-based ceramic binding agents, consisting of 2-component silicon oxide and aluminum oxide. Covering: aluminum foil, thickness 50 µm.
Colour	light grey (insulation)
Applications	Fire protection of pipe penetrations through walls and ceilings according to the German Model Conduit Systems Directive (MLAR) for non-combustible pipes up to an outer diameter of 160 mm and plastic pipes up 32 mm.
Assembly	The non-combustible Armaprotect A1 adhesive paste is used to install the Armaprotect A1 shells

Property	Value/Assessment	Test ^{*1}	Special Remark
Fire performance			
Reaction to fire	Non-combustible A1	D 3215	Classified acc. to EN 13501-1 Tested acc. to DIN EN ISO 1182 DIN EN ISO 1716
Other technical features			
Density	350 kg/m ³		
Pipe dimensions	Non-combustible pipes ≤ 168mm outer diameter, plastic pipes ≤ 32 mm outer diameter		
Melting point	> 1000 °C	D 3158	Tested according to DIN 4102-17

1. For temperatures below 0 °C please contact our Customer Service Center to request for the corresponding technical information.

*1 Further documents such as test certificates, approvals and the like can be requested using the registration number given.

All data and technical information are based on results achieved under typical application conditions. Recipients of this information should, in their own interest and responsibility, clarify with us in due time whether or not the data and information apply to the intended application area.

Technical Data - Armaprotect PP

Brief description	Pipe collar for creating pipe penetration seals of fire resistance class R90.
Material type	A solid metal sleeve which is equipped with several layers of the high performance intumescent material. In the event of a fire, the intumescent material expands with high pressure and thus seals the opening hermetically against flames and smoke
Colour	light grey
Applications	Fire resistant collar for pipe penetrations in solid walls and ceilings made of concrete or aerated concrete and lightweight partition walls. Two pieces are needed for walls, one piece for ceilings.
Special Features	Identification sign provided. Particularly suitable for multiple-use beverage lines (python tubing). Free of halogens, PVC, silicone. Moisture resistant.
Assembly	For fire resistant seals on combustible supply / drainage pipes with/without insulation: - PVC; PP; PE-HD; LDPE; PB; PE-X; ABS; ASA pipes up to Ø 200 mm - multi-layer composite pipes up to Ø 110 mm - pipe-in-pipe system up to Ø 160 mm - PVDF pipes up to Ø 90 mm - sound-reducing wastewater pipes (Friaphon, Geberit dB 20 + Silent PP, Georg Fischer COOL-FIT, POLO-KAL NG + XS, Rehau Raupiano plus, Wavin AS + Si Tech, Ostendorf Skolan dB) up to Ø 200 mm - Beverage lines up to Ø 108 mm - PE/PVC pipes with AF/Armaflex or SH/Armaflex insulation up to Ø 160 mm Can be installed on pipe sleeves / inclined penetrations.
Remarks	The collar may only be used for the pipe materials and dimensions defined in the allgemeinen bauaufsichtlichen Zulassung (general building authorities approval).

Property	Value/Assessment	Test ^{*1}	Special Remark
Fire performance			
Fire resistance of structural element	Wall penetrations	≤ R90	D 3968 Tested acc. to DIN 4102, Part 11
	Ceiling penetrations	≤ R90	
Other technical features			
Start of reaction / volume expansion	approx. +170 °C / 18 times in the event of fire		
Health aspects	Free of fibres and compounds containing heavy metals.		

*1 Further documents such as test certificates, approvals and the like can be requested using the registration number given.

All data and technical information are based on results achieved under typical application conditions. Recipients of this information should, in their own interest and responsibility, clarify with us in due time whether or not the data and information apply to the intended application area.

Armaflex Protect tubes



Length 1,0 m

Pipe max. Outside-Ø [mm]	Insulation thickness [mm]	Code	m/carton
6	16,0	PRO-AX-16X006	34
8	16,0	PRO-AX-16X008	30
10	19,0	PRO-AX-19X010	18
12	19,0	PRO-AX-19X012	17
15	19,0	PRO-AX-19X015	16
16	20,0	PRO-AX-20X016	14
18	20,0	PRO-AX-20X018	13
20	20,0	PRO-AX-20X020	12
22	20,0	PRO-AX-20X022	12
25	20,0	PRO-AX-20X025	11
28	25,0	PRO-AX-25X028	9
32	25,0	PRO-AX-25X032	8
35	25,0	PRO-AX-25X035	8
40	25,0	PRO-AX-25X040	6
42	25,0	PRO-AX-25X042	6
48	25,0	PRO-AX-25X048	5
50	25,0	PRO-AX-25X050	5
54	25,0	PRO-AX-25X054	5
60	25,0	PRO-AX-25X060	4
64	25,0	PRO-AX-25X063	4
76	25,0	PRO-AX-25X076	4
89	25,0	PRO-AX-25X089	4

Armaflex Protect sheets endless



Code	Roll length [m]	Width [m]	Insulation thickness [mm]	m ² /carton	Rolls/carton
PRO-AX-13MM/E	6	0.5	13,0	2 x 3	2

Remark

For sealing purposes at least two layers of sheet material must be installed; DIN 4140 requires that, in addition to being glued, they are secured by wire.

Reaction to fire

Euroclass E

Armaprotect 1000 fire protection compound



pro-1000-0,5B in easy to handle plastic bag with removable lid
Ready to use in plastic buckets

Code	Packaging units	Pieces/carton
PRO-1000-0,5B ●	0,5 l	20
PRO-1000-1,0	1,0 l	27
PRO-1000-2,5	2,5 l	12
PRO-1000-5,0	5,0 l	8

Remark

other packaging units on request

● Item not in stock. Delivery on request. [MTO]

Armaprotect A1 fire protection system



Length 0,3 m, including Aluminium foile

20,0 mm insulation thickness			30,0 mm insulation thickness		
Code	Outer- Ø [mm]	Pieces/carton	Code	Outer- Ø [mm]	Pieces/carton
PRO20006-A1 ●	50	1	-	-	-
PRO20008-A1 ●	50	1	-	-	-
PRO20010-A1 ●	54	1	-	-	-
PRO20012-A1 ●	54	1	-	-	-
PRO20015-A1 ●	57	1	-	-	-
PRO20018-A1 ●	60	1	-	-	-
PRO20021-A1 ●	64	1	PRO30021-A1 ●	84	1
PRO20027-A1 ●	70	1	PRO30027-A1 ●	90	1
PRO20033-A1 ●	77	1	PRO30033-A1 ●	97	1
PRO20042-A1 ●	84	1	PRO30042-A1 ●	104	1
PRO20048-A1 ●	90	1	PRO30048-A1 ●	110	1
PRO20054-A1 ●	96	1	PRO30054-A1 ●	117	1
PRO20060-A1 ●	102	1	PRO30060-A1 ●	122	1
PRO20064-A1 ●	106	1	PRO30064-A1 ●	127	1
PRO20076-A1 ●	118	1	PRO30076-A1 ●	138	1
PRO20089-A1 ●	131	1	PRO30089-A1 ●	151	1
PRO20102-A1 ●	144	1	PRO30102-A1 ●	165	1
PRO20108-A1 ●	150	1	PRO30108-A1 ●	171	1
PRO20114-A1 ●	157	1	PRO30114-A1 ●	177	1
-	-	-	PRO30133-A1 ●	196	1
-	-	-	PRO30139-A1 ●	202	1
-	-	-	PRO30154-A1 ●		1
-	-	-	PRO30160-A1 ●	223	1
-	-	-	PRO30168-A1 ● ¹	231	1

● Item not in stock. Delivery on request. [MTO]

¹ Not conform with Paragraph 4.2 MLAR. Approval necessary in individual cases.

Armaprotect A1 adhesive paste non-combustible



Adhesive paste in flexible bag for installing the Armaprotect A1 fire wall / ceiling penetration.

Code	Pieces/carton	kg/unit
ADHPR ●	6	1 kg

Remark

Shelf-life: 12 months protected from frost .

● Item not in stock. Delivery on request. [MTO]

Armaprotect A1 tapes self-adhesive



Material: Aluminium

Code	Width [mm]	Length [m]	Thickness [mm]	Rolls/carton
OKF-TAPE50100	50,0	100	0.05	6

Armaprotect PP fire protection sleeves



For flameproof sealing of combustible supply / sewage pipes with / without insulation.

Height mm	Outer-Ø pipe or insulation [mm]	Code	Pieces/carton
26	32/34	PRO-PP-032	5
26	40/42	PRO-PP-040	5
26	50/52	PRO-PP-050	5
26	63/65	PRO-PP-063 ●	10
26	75/77	PRO-PP-075	10
26.6	90/92	PRO-PP-090	10
26.6	110/112	PRO-PP-110	10
40	125	PRO-PP-125 ●	2
40	140	PRO-PP-140 ●	2
40	160	PRO-PP-160 ●	2
40	200	PRO-PP-200 ●	2

● Item not in stock. Delivery on request. [MTO]

Armaprotect PP application set



For installation with solid walls and ceilings.

Code	For Armaprotect PP	Pieces/carton
PRO-PP-032-052	32 - 52	1
PRO-PP-063-125 ●	63 - 125	1
PRO-PP-140-160 ●	140 - 160	1
PRO-PP-180-200 ●	180 - 200	1

● Item not in stock. Delivery on request. [MTO]