

BEYOND BETTER SOLUTIONS

Product catalogue

Armacell's innovative and safe thermal, acoustic and mechanical insulation solutions are key to a wide range of everyday applications adding value to people's lives around the world.

The Netherlands

www.armacell.com



 **armacell**[®]
MAKING A DIFFERENCE AROUND THE WORLD

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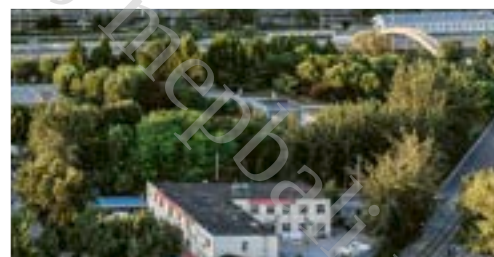
INSTALL IT. TRUST IT.

ArmaFlex Ultima

The first flexible insulation with low smoke emissions for improved fire safety

- // The best flexible insulation with low smoke density in case of fire
- // Based on Armacell's patented ArmaPrene technology
- // Complete system integration with adhesives and ArmaFix Ultima pipe hangers
- // Meets the requirements for sustainable construction in combination with ArmaFlex Ultima EC0550 Adhesive
- // FM approved
- // IMO compliant

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 **armacell**
ArmaFlex®

INSTALL IT. TRUST IT.

ArmaFlex Ultima

- ✓
FIRE
SAFETY
- ✓
ENERGY
EFFICIENCY
- ✓
CONDENSATION
CONTROL
- ✓
INDOOR
AIR QUALITY
- ✓
LONG-TERM
SAFE OPERATION

Benefit
from our
10 years
warranty on
ArmaFlex Ultima

With ArmaFlex Ultima we have set a new safety standard in technical insulation. Based on the patented ArmaPrene® technology, we now offer a complete range of B/B_L-s1,d0 classified tubes and sheets.

In comparison to a standard elastomeric product, the flame-resistant insulation material develops 10 times less smoke and offers increased safety in the event of a fire.

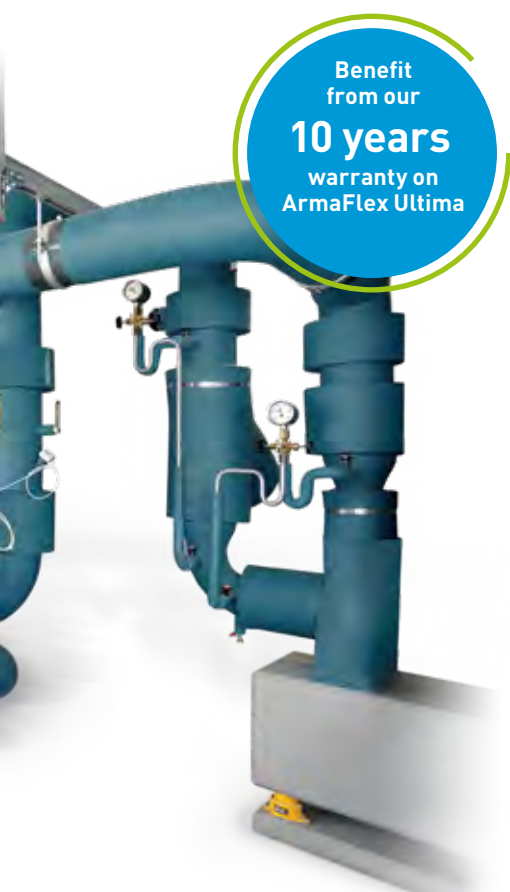
ULTRA-LOW SMOKE PROPERTIES

As smoke is a significant risk in a fire, smoke density requirements for equipment insulation materials are becoming stricter. When assessing the fire behaviour of building products, the European fire classification not only tests the flammability, but also the smoke density and the production of burning droplets. By reducing the smoke density, ArmaFlex Ultima improves visibility and respiration, thus extending the time available to evacuate safer in the event of a fire.

RELIABLE THERMAL AND CONDENSATION CONTROL

Thanks to its good thermal conductivity and high resistance to water vapour diffusion, the closed-cell ArmaFlex Ultima ensures reliable condensation control and high energy savings in the long-term. This also minimises the risk of corrosion under insulation (CUI) and reduces the risk of costs associated with downtime, lost productivity, or even facility shutdown. ArmaFlex Ultima can be installed on mechanical equipment with service temperatures between +110 °C and -50 °C (-200 °C)*. It is FM-approved and IMO-certified.

*Please contact our Technical Customer Service for cryogenic applications



ARMAPRENE

Our patented ArmaPrene technology offers the highest fire standard in flexible insulation.

While standard elastomeric products with brominated flame retardants inhibit combustion very effectively in the event of a fire, they tend to produce a high level of smoke. Our breakthrough ArmaPrene technology resolves this conflict: due to the development of intrinsically flame-resistant polymers and by using ablative protective additives it is no longer necessary to add any brominated flame retardants.

ArmaFlex saves

140

times more energy
than is needed for
its production

SYSTEM SOLUTION FOR MAXIMUM RELIABILITY



ArmaFix Ultima pipe support thermally isolates the pipe and its fixing from each

other and, together with the adjoining ArmaFlex Ultima insulation, forms a long-term reliable insulation system. For the installation of ArmaFlex Ultima, we offer a range of specially formulated adhesives, including a solvent-free product which is predestined for sustainable construction projects realised according to LEED®, BREEAM, DGNB or national green building schemes.

ARMAFLEX ULTIMA C

With our new ArmaFlex Ultima C, we now offer insulation sheets meeting the highest fire classification for flexible technical insulation. This pre-covered insulation solution achieves Euroclass B-s1,d0 and is engineered for installation on airducts, large pipe diameters, vessels and tanks where an improved fire performance is required. The sheets provide a high level of protection against mechanical impact and are easy to clean. The covering reinforces the vapour barrier resistance creating a safer system to prevent condensation and energy losses in the long term. What's more, the dark-grey surface is highly absorptive and thinner insulation thicknesses can be installed to control condensation.



APPROVED FOR GREEN BUILDING

ArmaFlex Ultima meets the most stringent environmental requirements and saves specifiers time by being accredited in the most important green building schemes.

SUNDAHUS
NORDIC SWAN ECOLABEL
BYGGVARUBEDÖMNINGEN
MINERGIE-ECO
LEED | BREEAM | DGNB

Bromine-free
Antimony-free
PVC-free



TECHNICAL DATA - ARMAFLEX ULTIMA

Brief description	Flexible elastomeric foam on the basis of patented synthetic rubber composition with improved fire retardant properties, low smoke generation and a closed-cell material structure. For use in HVAC, refrigeration and process equipment applications.
Material type	Factory-made flexible elastomeric foam (FEF), according to EN 14304.
Additional material information	Self-adhesive coating: pressure-sensitive adhesive coating on modified acrylate basis with mesh structure, covered with polyethylene foil. Traces of silicon can be found on the protection paper/foil used to protect self-adhesive closures.
Product colour range	Dark blue
Special features	Low smoke performance.
Applications	Insulation/protection of pipes, air ducts, vessels (including elbows, fittings, flanges, etc.) to prevent condensation and save energy. Self-adhesive tubes shall additionally be secured by applying ArmaFlex Ultima tape.

Property	Value / Assessment			Standard / Test method
Temperature range				
Service temperature ¹	Min. °C		Max. °C	EN 14706, EN 14707, EN 14304
	-50		110	
	Remarks		For temperatures below -50 °C (till -200 °C), please ask our customer service for relevant technical information.	
Thermal conductivity				
Declared thermal conductivity	Øm	0 °C	40°C	EN ISO 13787, EN 12667, EN ISO 8497
	λd ≤ [W/(m·K)]	0,040	0,045	
Fire Performance and Approvals				
Reaction to fire	Tubes, Tubes self-adhesive, open tubes (up to 300 min insulated Øa): B(L)-s1,d0 Sheets, sheets self-adhesive: B-s2,d0 Tapes: B-s1,d0			EN 13501-1, EN ISO 11925-2, EN 13823
Surface flammability ²	low-flammable - 2010 FTP-Code (MED 96/98/EC, Module D)			IMO 2010 FTP Code, Part 5
FM approved ³	4924-Pipe and Duct Insulation			UBC26-3
Passive fire protection				
Fire resistance of elements of construction	EI 30 - EI 120			EN 13501-2, EN 1366-3
Fire performance				
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames; very low smoke density			
Resistance to water vapour				
Water vapour diffusion resistance factor	μ ≥ 7,000			EN 12086, EN 13469
Physical attributes				
Dimensions and tolerances	in accordance with EN 14304, table 1			EN 822, EN 823, EN 13467
Weather and UV resistance				
UV resistance	Protection against UV radiation is necessary (see Technical Bulletin no. 142).			
Health and environment				
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
Antimicrobial behaviour	No fungal growth observed			EN ISO 846, VDI 6022
Environmental aspects	Meets the requirements for sustainable construction in combination with ArmaFlex Ultima EC0550 adhesive such as LEED.			

Property	Value / Assessment	Standard / Test method
Environmental Product Declaration (EPD)	Type III Environmental Product Declaration (EPD): Declaration number "EPD-ARM-20200218-IBB1-EN", Institut Bauen und Umwelt e.V. (IBU)	ISO 14025, EN 15804+A2
Green building assessment	Meets the sustainable construction requirements for LEED v4.1, BREEAM international, WELL v2 and DGNB.	
Additional features	SCCP, MCCP-free	
Other technical features		
Shelf life	Self-adhesive tubes, self-adhesive sheets, self-adhesive tape: 1 year	
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).	

¹For use in temperatures beyond the maximum and minimum service temperature range indicated in the technical data table, please contact our Customer Service Centre.

²According to IMO 2010 FTP Code annex 2, clause 2.2 a fire technical test for smoke density and toxicity is not necessary.

³Tube range: Maximum ID 89 mm and maximum wall thickness 25mm

Tube – standard. Blue. Length: 2.0 m

9 mm						13 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
12	UD-09X012	13	16	7612207395600	192 m	6	UD-13X006	7	10	7612207395723	164 m
15	UD-09X015	16	19	7612207395617	180 m	10	UD-13X010	11	14	7612207395730	140 m
18	UD-09X018	19	22	7612207395624	150 m	12	UD-13X012	13	16	7612207395747	130 m
22	UD-09X022	23	26	7612207395631	124 m	15	UD-13X015	16	19	7612207395754	112 m
28	UD-09X028	29	32	7612207395358	96 m	18	UD-13X018	19	22	7612207395761	98 m
35	UD-09X035	36	39	7612207395648	70 m	22	UD-13X022	23	26	7612207395778	88 m
42	UD-09X042	43	46	7612207395655	56 m	28	UD-13X028	29	32	7612207395785	64 m
48	UD-09X048	49	52	7612207395334	52 m	35	UD-13X035	36	39	7612207395792	56 m
54	UD-09X054	55	58	7612207395662	42 m	42	UD-13X042	43	46	7612207395808	48 m
60	UD-09X060	61	64	7612207395679	40 m	48	UD-13X048	49	52	7612207395815	40 m
64	UD-09X064	65	68	7612207395686	28 m	54	UD-13X054	55	58	7612207395822	36 m
76	UD-09X076	77	70	7612207395693	32 m	60	UD-13X060	61	64	7612207395839	28 m
89	UD-09X089	90	93	7612207395341	24 m	64	UD-13X064	65	68	7612207395846	26 m
-	-	-	-	-	-	76	UD-13X076	77	80	7612207395853	24 m
-	-	-	-	-	-	89	UD-13X089	90	93	7612207395860	18 m
-	-	-	-	-	-	114	UD-13X114	115	118	7612207531848	18 m

Other information

Thickness tolerance 9 mm, 13 mm : ±1,5 mm
19 mm, 25 mm, 32 mm : ±2,5 mm

Length tolerance ±1,5%

Reaction to fire B(L)-s1,d0

Tube – standard. Blue. Length: 2.0 m

19 mm						25 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
10	UD-19X010	11	14	7612207395884	92 m	15	UD-25X015	16	19	7612207533125	40 m
12	UD-19X012	13	16	7612207395891	84 m	18	UD-25X018	19	22	7612207396010	46 m
15	UD-19X015	16	19	7612207395907	64 m	22	UD-25X022	23	26	7612207396027	36 m
18	UD-19X018	19	22	7612207395556	58 m	28	UD-25X028	29	32	7612207396034	36 m

Tube – standard. Blue. Length: 2.0 m

19 mm						25 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
22	UD-19X022	23	26	7612207395914	56 m	35	UD-25X035	36	39	7612207396041	28 m
28	UD-19X028	29	32	7612207395921	40 m	42	UD-25X042	43	46	7612207396058	24 m
35	UD-19X035	36	39	7612207395938	40 m	48	UD-25X048	49	52	7612207396065	20 m
42	UD-19X042	43	46	7612207395945	24 m	54	UD-25X054	55	58	7612207396072	18 m
48	UD-19X048	49	52	7612207395563	24 m	60	UD-25X060	61	64	7612207396089	18 m
54	UD-19X054	55	58	7612207395952	24 m	64	UD-25X064	65	68	7612207396096	16 m
60	UD-19X060	61	64	7612207395570	16 m	76	UD-25X076	77	80	7612207396102	12 m
64	UD-19X064	65	68	7612207395969	16 m	89	UD-25X089	90	93	7612207396119	12 m
76	UD-19X076	77	80	7612207395976	16 m	114	UD-25X114	115	118	7612207531862	10 m
89	UD-19X089	90	93	7612207395983	16 m	-	-	-	-	-	-
114	UD-19X114	115	118	7612207531909	14 m	-	-	-	-	-	-

Other information

Thickness tolerance	9 mm, 13 mm : ±1,5 mm 19 mm, 25 mm, 32 mm : ±2,5 mm
Length tolerance	±1,5%
Reaction to fire	B(L)-s1,d0

Tube – standard. Blue. Length: 2.0 m

32 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
15	UD-32X015	16	19	7612207401684	32 m
18	UD-32X018	18	21	7612207399950	32 m
20	UD-32X020	21	24	7612207401660	24 m
22	UD-32X022	23	26	7612207400083	24 m
28	UD-32X028	29	32	7612207399998	24 m
35	UD-32X035	36	39	7612207400007	18 m
42	UD-32X042	43	46	7612207400038	16 m
48	UD-32X048	49	52	7612207399974	12 m
54	UD-32X054	55	58	7612207399981	12 m
60	UD-32X060	61	64	7612207399967	10 m
64	UD-32X064	65	68	7612207400014	10 m
76	UD-32X076	77	80	7612207400021	10 m
89	UD-32X089	90	93	7612207400076	8 m
114	UD-32X114	115	118	7612207531879	8 m

Tube – standard. Blue. Length: 2.0 m

32 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
Other information					
Thickness tolerance		9 mm, 13 mm : ±1,5 mm 19 mm, 25 mm, 32 mm : ±2,5 mm			
Length tolerance		±1,5%			
Reaction to fire		B(L)-s1,d0			

Tube – self-seal. Blue. Length: 2.0 m

9 mm						13 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
15	UD-09X015-A	16	19	76122074017 76	180 m	15	UD-13X015-A	16	19	76122074018 82	112 m
18	UD-09X018-A	19	22	76122074017 83	150 m	18	UD-13X018-A	19	22	76122074018 99	98 m
22	UD-09X022-A	23	26	76122074017 90	124 m	22	UD-13X022-A	23	26	76122074019 05	88 m
28	UD-09X028-A	29	32	76122074018 06	96 m	28	UD-13X028-A	29	32	76122074019 12	64 m
35	UD-09X035-A	36	39	76122074018 13	70 m	35	UD-13X035-A	36	39	76122074019 29	56 m
42	UD-09X042-A	43	46	76122074018 20	56 m	42	UD-13X042-A	43	46	76122074019 36	48 m
48	UD-09X048-A	49	52	76122074018 37	52 m	48	UD-13X048-A	49	52	76122074019 43	40 m
54	UD-09X054-A	55	58	76122074018 44	42 m	54	UD-13X054-A	55	58	76122074019 50	36 m
60	UD-09X060-A	61	64	76122074018 51	40 m	60	UD-13X060-A	61	64	76122074019 67	28 m
76	UD-09X076-A	77	80	76122074018 68	32 m	76	UD-13X076-A	77	80	76122074019 74	24 m
89	UD-09X089-A	90	93	76122074018 75	24 m	89	UD-13X089-A	90	93	76122074019 81	18 m
Other information											
Thickness tolerance		9 mm, 13 mm : ±1,5 mm 19 mm, 25 mm, 32 mm : ±2,5 mm									
Length tolerance		±1,5%									
Reaction to fire		B(L)-s1,d0									

Tube – self-seal. Blue. Length: 2.0 m

19 mm						25 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
15	UD-19X015-A	16	19	76122074019 98	64 m	18	UD-25X018-A	19	22	76122074021 17	46 m
18	UD-19X018-A	19	22	76122074020 01	58 m	22	UD-25X022-A	23	26	76122074021 24	36 m
22	UD-19X022-A	23	26	76122074020 18	56 m	28	UD-25X028-A	29	32	76122074021 31	36 m

Tube – self-seal. Blue. Length: 2.0 m

19 mm						25 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
28	UD-19X028-A	29	32	7612207402025	40 m	35	UD-25X035-A	36	39	7612207402087	28 m
35	UD-19X035-A	36	39	7612207402032	40 m	42	UD-25X042-A	43	46	7612207402148	24 m
42	UD-19X042-A	43	46	7612207402049	24 m	48	UD-25X048-A	49	52	7612207402155	20 m
48	UD-19X048-A	49	52	7612207402056	24 m	54	UD-25X054-A	55	58	7612207402162	18 m
54	UD-19X054-A	55	58	7612207402063	24 m	60	UD-25X060-A	61	64	7612207402179	18 m
60	UD-19X060-A	61	64	7612207402070	16 m	76	UD-25X076-A	77	80	7612207402186	12 m
76	UD-19X076-A	77	80	7612207402094	16 m	89	UD-25X089-A	90	93	7612207402193	12 m
89	UD-19X089-A	90	93	7612207402100	16 m	-	-	-	-	-	-

Other information

Thickness tolerance 9 mm, 13 mm : ±1,5 mm
19 mm, 25 mm, 32 mm : ±2,5 mm

Length tolerance ±1,5%

Reaction to fire B(L)-s1,d0

Roll - standard. Blue

Item	Thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
UD-06-99/E	6	1.000	15	7612207395587	15 m ²
UD-09-99/E	9	1.000	10	7612207395709	10 m ²
UD-13-99/E	13	1.000	8	7612207394375	8 m ²
UD-19-99/E	19	1.000	6	7612207528220	6 m ²
UD-25-99/E	25	1.000	4	7612207396126	4 m ²
UD-32-99/E	32	1.000	3	7612207400922	3 m ²

Other information

Thickness tolerance 3 mm - 6 mm : ±1,0 mm
9 mm - 19 mm : ±1,5 mm
25 mm - 32 mm : ±2,0 mm

Length tolerance + 5% - 1,5 %

Roll - standard self-adhesive. Blue

Item	Thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
UD-06-99/EA	6	1.000	15	7612207395594	15 m ²
UD-09-99/EA	9	1.000	10	7612207395716	10 m ²
UD-13-99/EA	13	1.000	8	7612207395877	8 m ²
UD-19-99/EA	19	1.000	6	7612207528237	6 m ²
UD-25-99/EA	25	1.000	4	7612207396140	4 m ²
UD-32-99/EA	32	1.000	3	7612207405637	3 m ²

Other information

Roll - standard self-adhesive. Blue

Item	Thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
Thickness tolerance		3 mm - 6 mm : $\pm 1,0$ mm 9 mm - 19 mm : $\pm 1,5$ mm 25 mm - 32 mm : $\pm 2,0$ mm			
Length tolerance		+ 5% - 1,5 %			

Tape - insulation. Blue

Item	Thickness [mm]	Width [mm]	Length [m]	Content [quantity]
UD-TAPE	3	50	15	12 roll



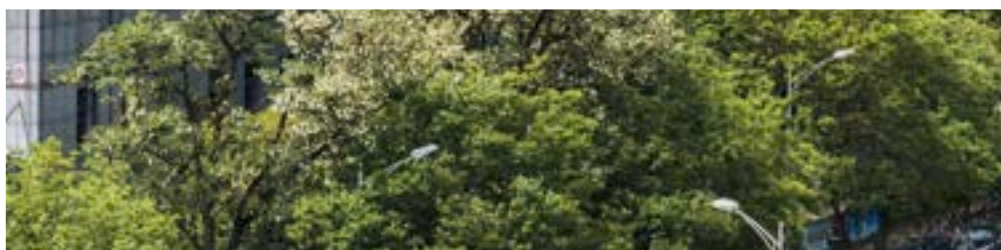
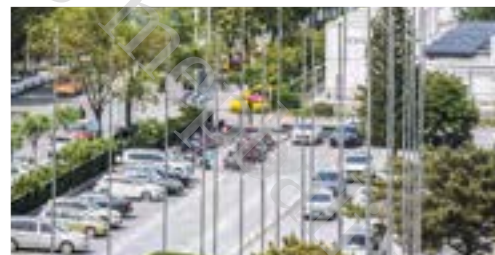
INSTALL IT. TRUST IT.

ArmaFlex Ultima C

Pre-covered insulation sheets for the
highest safety in case of fire

- // Fire safety - B-s1,d0
- // Free of dust and fibers improving the indoor air quality
- // PVC and bromine free
- // UV Resistant
- // Meets the requirements for sustainable construction
in combination with ArmaFlex Ultima EC0550 Adhesive

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 **armacell**
ArmaFlex®

TECHNICAL DATA - ARMAFLEX ULTIMA C

Brief description	Pre-covered flexible elastomeric foam on the basis of patented synthetic rubber composition with improved fire retardant properties, low smoke generation and a closed-cell material structure, laminated with a functional intumescent covering. For use in HVAC, refrigeration and process equipment applications.
Material type	Flexible elastomeric foam based rubber manufactured with ArmaPrene patented technology, US patent no. 8 163 811, EU patent no. 2 261 305. Factory-made flexible elastomeric foam (FEF), according to EN 14304. Self-adhesive equipped intumescent covering
Product colour range	Blue with grey covering
Special features	Low smoke performance.
Applications	Insulation/protection of pipes, air ducts, vessels (including elbows, fittings, flanges, etc.) to prevent condensation and save energy.

Property	Value / Assessment			Standard / Test method
Temperature range				
Service temperature ¹	Min. °C	Max. °C ²		EN 14706, EN 14707, EN 14304
	-50	110		
Thermal conductivity				
Declared thermal conductivity	Øm	0°C	40°C	EN ISO 13787, EN 12667, EN ISO 8497
	λd ≤ [W/(m·K)]	0,040	0,045	
	Formula	> 0°C: λd = [40 + 0,1· Øm + 0,0009 · Øm²]/1000 ≤ 0 °C: λd = [41,25 + 0,1· Øm - {Øm+50}² · 0,0005]/1000		
Fire Performance and Approvals				
Reaction to fire	B-s1,d0			EN 13501-1, EN ISO 11925-2, EN 13823
Fire performance				
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames, intumescent coating; very low smoke density			
Resistance to water vapour				
Water vapour diffusion resistance factor	μ ≥ 10.000			EN 12086, EN 13469
Physical attributes				
Dimensions and tolerances	in accordance with EN 14304, table 1			EN 822, EN 823, EN 13467
Weather and UV resistance				
UV resistance	Very high			EN ISO 4892-2
Health and environment				
Environmental aspects	Meets the requirements for sustainable construction in combination with ArmaFlex Ultima ECO550 adhesive such as LEED.			
Green building assessment	Meets the sustainable construction requirements for LEED v4.1, BREEAM international, WELL v2 and DGNB.			
Additional features	SCCP, MCCP-free			
Other technical features				
Shelf life	Self-adhesive sheets, self-adhesive tape: 1 year			
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).			

¹ For use in temperatures beyond the maximum and minimum service temperature range indicated in the technical data table, please contact our Customer Service Centre.² +85 °C, for products with a self-adhesive layer.

Sheet – precovered. Blue foam with grey covering

Item	Thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
UDC-09-99	9	1	2	7612207538045	12 m ²
UDC-13-99	13	1	2	7612207538083	10 m ²
UDC-19-99	19	1	2	7612207538069	8 m ²
UDC-25-99	25	1	2	7612207538076	8 m ²
UDC-32-99	32	1	2	7612207538090	6 m ²
Other information					
Thickness tolerance		9 - 19 ± 1,5 mm 25 - 32 ± 2,0 mm			
Length tolerance		± 1,5 %			
Width tolerance		± 2,0 %			
Regulation		B-s1,d0			

Sheet – precovered and self-adhesive. Blue foam with grey covering

Item	Thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
UDC-09-99/A	9	1	2	7612207538106	12 m ²
UDC-13-99/A	13	1	2	7612207538113	10 m ²
UDC-19-99/A	19	1	2	7612207538120	8 m ²
UDC-25-99/A	25	1	2	7612207538052	8 m ²
UDC-32-99/A	32	1	2	7612207538137	6 m ²
Other information					
Thickness tolerance		9 - 19 ± 1,5 mm 25 - 32 ± 2,0 mm			
Length tolerance		± 1,5 %			
Width tolerance		± 2,0 %			
Regulation		B-s1,d0			

Item	Description	Width (m)	Length [m]	EAN	Content [quantity]
UDC-FOIL-10	Intumescent foil, self-adhesive	1	10	7612207548983	1 roll

Item	Description	Width [mm]	Length [m]	Content [quantity]
UDC-TAPE-75	Aluminium tape, dark grey colour	75	45	16 roll

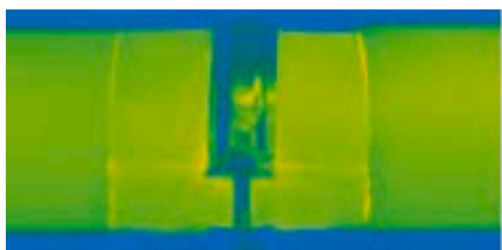
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ArmaFix Ultima

The only pipe support for B-s1, d0
ArmaFlex systems with low smoke
requirements

- // Increased safety through superior fire performance
and reduced smoke density
- // Fully matching the ArmaFlex Ultima product range
- // Prevents thermal bridges and reduces energy losses
and minimises CO₂ emissions
- // First flexible closed-cell insulation with Euroclass
B(L)-s1,d0

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 **armacell**
ArmaFix™

TECHNICAL DATA - ARMAFIX ULTIMA

Brief description	Pipe and duct support for refrigeration and air-conditioning installations to prevent condensation at fixing points. Thermally non-interacting single piece, with 2 ArmaFORM PET foam sections and with self-adhesive closure. All dimensions are matching the ArmaFlex Ultima range.
Material type	PET-foam bearing segments, embedded in and glued to ArmaFlex Ultima elastomeric foam material. Outside bearing shells made of painted aluminium sheeting 0.8mm thick, which simultaneously serves as a vapour barrier for the PET bearing segments.
Product colour range	Dark blue
Special features	Traces of silicone can be found on the protection paper / foil used to protect self-adhesive closures.
Applications	When used in installations with intermittent temperatures, thermal length extensions may cause inherent pressure in the installation; this needs to be considered in the overall insulation construction.

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature	Min. °C ¹	Max. °C	EN 14706, EN 14707, EN 14304
	-50	110	
Thermal conductivity			
Remarks	Same as ArmaFlex Ultima		EN ISO 13787, EN 12667, EN ISO 8497
Fire Performance and Approvals			
Reaction to fire	Euroclass: E Entire system with ArmaFlex Ultima tubes: B(L)-s1, d0 Entire system with ArmaFlex Ultima sheets: B-s2, d0		EN 13501-1, EN 13823, EN ISO 11925-2
Surface flammability ²	low-flammable - 2010 FTP-Code (MED 96/98/EC, Module D)		IMO 2010 FTP Code, Part 5
Fire performance			
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames		
Resistance to water vapour			
Water vapour diffusion resistance factor	Same as ArmaFlex Ultima		EN 12086, EN 13469
Physical attributes			
Density	95 - 105 kg/m³ (pipe bearing segments)		
Health and environment			
Additional features	MCCP-free		
Other technical features			
Shelf life	3 years		
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).		

¹For temperatures below -50 °C please contact our Customer Service Center to request for the corresponding technical information.

²According to IMO 2010 FTP Code annex 2, clause 2.2 a fire technical test for smoke density and toxicity is not necessary.

Duct support

Item	Insulation thickness [mm]	Width [mm]	Length [m]	EAN	Content [quantity]
AS-DB-19 MM	19	100	2	7612207453850	5 piece
AS-DB-25 MM	25	100	2	7612207453867	4 piece

Pipe support – donut type

13 mm						Related pipe clamp		
Pipe Ø [mm]	Also fits pipe OD [mm]	Maximum permissible distance [m]	Item	Insulation thickness [mm]	EAN	Content [quantity]	Item	Content [quantity]
10	12	2,00	UDP13(9)-10/12	13	7612207415025	32 piece	-	-
15	18	2,00	UDP13(9)-15/18	13	7612207415032	32 piece	-	-
22	25	2,75	UDP13(9)-22/25	13	7612207415049	32 piece	PCX 033/037	25 piece
28	30	3,00	UDP13(9)-28/30	13	7612207415001	32 piece	PCX 047/052	25 piece
35	38	2,00	UDP13(9)-35/38	13	7612207415018	28 piece	PCX 054/058	25 piece
42	45	3,75	UDP13(9)-42/45	13	7612207414950	28 piece	PCX 063/068	25 piece
48		4,25	UDP13(9)-48	13	7612207414967	28 piece	PCX 068/073	10 piece
54	57	4,25	UDP13(9)-54/57	13	7612207414974	28 piece	PCX 068/073	10 piece
60	64	4,75	UDP13(9)-60/64	13	7612207414981	24 piece	PCX 082/085	10 piece
76	80	5,50	UDP13(9)-76/80	13	7612207414998	20 piece	PCX 092/099	10 piece
89		6,00	UDP13(9)-89	13	7612207414943	16 piece	PCX 108/112	10 piece
102	108	6,00	UDP13(9)-102/108	13	7612207414936	16 piece	PCX 125/130	10 piece
110	114	6,00	UDP13(9)-110/114	13	7612207414899	12 piece	PCX 133/137	10 piece
125		6,00	UDP13(9)-125	13	7612207414905	12 piece	PCX 145/152	10 piece
133	140	6,00	UDP13(9)-133/140	13	7612207414912	12 piece	PCX 145/152	10 piece
160		6,00	UDP13(9)-160	13	7612207414837	9 piece	PCX 190	10 piece
165	168	6,00	UDP13(9)-165/168	13	7612207414844	9 piece	PCX 199	10 piece

Pipe support – donut type

19 mm							Related pipe clamp	
Pipe Ø [mm]	Also fits pipe OD [mm]	Maximum permissible distance [m]	Item	Insulation thickness [mm]	EAN	Content [quantity]	Item	Content [quantity]
10	12	2,00	UDP19-10/12	19	7612207414851	28 piece	PCX 038/041	25 piece
15	18	2,00	UDP19-15/18	19	7612207414868	28 piece	PCX 047/052	25 piece
22	25	2,75	UDP19-22/25	19	7612207414875	28 piece	PCX 054/058	25 piece
28	30	3,00	UDP19-28/30	19	7612207414882	28 piece	PCX 059/063	25 piece
35	38	3,50	UDP19-35/38	19	7612207414691	24 piece	PCX 063/068	25 piece
42	45	3,75	UDP19-42/45	19	7612207414707	24 piece	PCX 068/073	10 piece
48		4,25	UDP19-48	19	7612207414714	24 piece	PCX 072/080	10 piece
54	57	4,25	UDP19-54/57	19	7612207414653	24 piece	PCX 082/085	10 piece
60	64	4,75	UDP19-60/64	19	7612207414660	20 piece	PCX 088/092	10 piece
76	80	5,50	UDP19-76/80	19	7612207414721	16 piece	PCX 099/103	10 piece
89		6,00	UDP19-89	19	7612207414738	12 piece	PCX 112/118	10 piece
102	108	6,00	UDP19-102/108	19	7612207414677	12 piece	PCX 133/137	10 piece
110	114	6,00	UDP19-110/114	19	7612207414684	12 piece	PCX 137/142	10 piece

Pipe support – donut type

19 mm							Related pipe clamp	
Pipe Ø [mm]	Also fits pipe OD [mm]	Maximum permissible distance [m]	Item	Insulation thickness [mm]	EAN	Content [quantity]	Item	Content [quantity]
133	140	6,00	UDP19-133/140	19	7612207414776	12 piece	PCX 164/169	10 piece
165	168	6,00	UDP19-165/168	19	7612207414790	6 piece	PCX 206	10 piece
180		6,00	UDP19-180	19	7612207414806	3 piece	-	-
204		6,00	UDP19-204	19	7612207414813	4 piece	-	-
216	219	6,00	UDP19-216/219	19	7612207414820	4 piece	-	-
254		6,00	UDP19-254	19	7612207414752	3 piece	-	-
267	273	6,00	UDP19-267/273	19	7612207414769	3 piece	-	-
356		4,20	UDP19-356	19	7612207414561	6 piece	-	-

Pipe support – donut type

25 mm							Related pipe clamp	
Pipe Ø [mm]	Also fits pipe OD [mm]	Maximum permissible distance [m]	Item	Insulation thickness [mm]	EAN	Content [quantity]	Item	Content [quantity]
15	18	2,00	UDP25-15/18	25	7612207414578	28 piece	PCX 059/063	25 piece
22	25	2,75	UDP25-22/25	25	7612207414585	28 piece	PCX 063/068	25 piece
28	30	3,00	UDP25-28/30	25	7612207414615	28 piece	PCX 068/073	10 piece
34	38	3,50	UDP25-35/38	25	7612207414622	24 piece	PCX 072/080	10 piece
42	45	3,75	UDP25-42/45	25	7612207414592	24 piece	PCX 082/085	10 piece
48		4,25	UDP25-48	25	7612207414608	24 piece	PCX 088/092	10 piece
54	57	4,75	UDP25-54/57	25	7612207414639	24 piece	PCX 092/099	10 piece
60	64	4,75	UDP25-60/64	25	7612207414646	20 piece	PCX 099/103	10 piece
76	80	5,50	UDP25-76/80	25	7612207414516	16 piece	PCX 112/118	10 piece
89		6,00	UDP25-89	25	7612207414509	12 piece	PCX 137/142	10 piece
110	114	6,00	UDP25-110/114	25	7612207414523	12 piece	PCX 159/164	10 piece
133	140	6,00	UDP25-133/140	25	7612207414530	12 piece	PCX 190	10 piece
160		6,00	UDP25-160	25	7612207414486	6 piece	PCX 206	10 piece
165	168	6,00	UDP25-165/168	25	7612207414493	6 piece	PCX 222	10 piece
204		6,00	UDP25-204	25	7612207414554	4 piece	-	-
216	219	6,00	UDP25-216/219	25	7612207414431	4 piece	-	-
254		6,00	UDP25-254	25	7612207414479	3 piece	-	-
267	273	6,00	UDP25-267/273	25	7612207414455	3 piece	-	-
306		6,00	UDP25-306	25	7612207414462	1 piece	-	-
324		4,20	UDP25-324	25	7612207414387	1 piece	-	-
356		4,20	UDP25-356	25	7612207414394	3 piece	-	-
406		4,20	UDP25-406	25	7612207414400	6 piece	-	-
457		3,70	UDP25-457	25	7612207414417	4 piece	-	-

Pipe support – donut type

32 mm						Related pipe clamp	
Pipe Ø [mm]	Maximum permissible distance [m]	Item	Insulation thickness [mm]	EAN	Content [quantity]	Item	Content [quantity]
12	2,00	UDP32-10/12	32	7612207533552	20 piece	PCX 068/073	10 piece
18	2,00	UDP32-15/18	32	7612207533569	20 piece	PCX 072/080	10 piece
22	2,75	UDP32-22/25	32	7612207533576	20 piece	PCX 072/080	10 piece
28	3,00	UDP32-28/30	32	7612207533583	20 piece	PCX 082/085	10 piece
35	3,50	UDP32-35/38	32	7612207533736	16 piece	PCX 092/099	10 piece
42	3,75	UDP32-42/45	32	7612207533590	16 piece	PCX 099/103	10 piece
48	4,25	UDP32-48	32	7612207533606	16 piece	PCX 099/103	10 piece
60	4,75	UDP32-60/64	32	7612207533651	12 piece	PCX 112/118	10 piece
76	5,50	UDP32-76/80	32	7612207533613	12 piece	PCX 133/137	10 piece
89	6,00	UDP32-89	32	7612207533620	12 piece	PCX 145/152	10 piece
114	6,00	UDP32-110/114	32	7612207533637	12 piece	PCX 168/173	10 piece
140	6,00	UDP32-133/140	32	7612207529180	8 piece	PCX 199	10 piece
168	6,00	UDP32-165/168	32	7612207533668	5 piece	PCX 231	10 piece



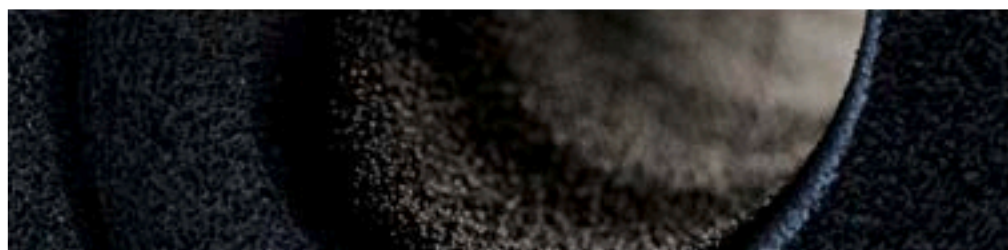
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AF/ArmaFlex Evo

Discover the new generation in elastomeric insulation. AF/ArmaFlex Evo. The safest AF/ArmaFlex ever.

- // Fire Safety – B/B(L)-s2,d0
- // Antimicrobial Protection – Microban
- // Engineered Wall Thicknesses – Maximum Safety
- // System reliability – One-Stop Solution
- // Extended warranty – 10 Years
- // Brand new – ArmaFlex 525 Adhesive

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INSTALL IT. TRUST IT.

AF/ArmaFlex® Evo

THE SAFEST AF/ARMAFLEX EVER.

History meeting the future through generations. That's what AF/ArmaFlex stands for. For more than 40 years. We strive for perfection so you can benefit from the best ArmaFlex experience. Now it's time to discover the new generation in elastomeric insulation.

Today, in its 8th product generation, we present a new AF/ArmaFlex technology that combines excellent condensation control and energy efficiency with advanced fire safety. The new B/B_L-s2,d0 product provides highest insulation reliability and contributes to the overall safety in buildings.



// Fire safety

At Armacell, safety comes first and maximum reliability is crucial. AF/ArmaFlex Evo increases the fire safety in buildings. By mitigating the fire and smoke risk, it improves visibility and respiration, thus extending the time for evacuating a building safely in the event of a fire.

// Antimicrobial protection

AF/ArmaFlex Evo is equipped with Microban®. These antimicrobial additives provide 'proactive' protection against harmful bacteria, mould and mildew. Armacell is the only manufacturer of flexible technical insulation materials to offer built-in antimicrobial protection.

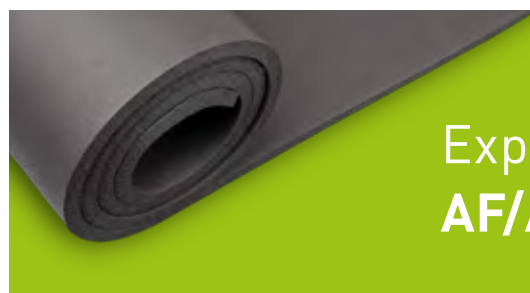
// Engineered wall thicknesses

The engineered wall thicknesses of AF/ArmaFlex Evo tubes guarantee reliable condensation control for different pipe sizes under defined design conditions. This makes calculations much easier for specifiers and provides maximum reliability to prevent condensation and energy losses.

Udo Dohlen

Owner and managing director of Dohlen Isoliertechnik, Stolberg (Germany)

"AF/ArmaFlex isn't just any black tube or sheet. When we insulate our customers' mechanical equipment we make sure to use the best product in the market: AF/ArmaFlex. An investment that pays off. For us and for our customers. Now we can help to make people's homes even safer. AF/ArmaFlex Evo releases 50 percent less smoke in case of fire."



Experience
AF/ArmaFlex Evo

B/B_L-s2,d0

The evolution of an innovation

When tradition meets the future, new products and technologies evolve. AF/ArmaFlex is our heritage product. The highly flexible insulation material with an in-built vapour barrier revolutionised the insulation industry. Today, we provide a complete range of solutions based on this innovation.

Armacell has developed the new ArmaFlex 525 adhesive to be used with AF/ArmaFlex Evo.



// System reliability

AF/ArmaFlex Evo is more than a black tube or sheet. Armacell provides solutions where individual components fit flawlessly together and are tested as a system. ArmaFix AF pipehangers, our ArmaFlex Protect passive fire protection solution, flexible cladded Arma-Chek® 2-in-1 products and ArmaFlex adhesives complement and strengthen the system to guarantee long-term functionality.

// Extended warranty

To ensure AF/ArmaFlex products are installed professionally we developed a unique concept: trained ArmaFlex installation partners can be certified by Armacell and receive an extended warranty of up to 10 years on AF/ArmaFlex products for specific projects. In many European countries this certification has established itself as a seal of quality.

TECHNICAL DATA - AF/ARMAFLEX EVO

Brief description	Flexible elastomeric foam with improved fire-retardant properties, low smoke generation, closed-cell insulation material structure and built-in Microban antimicrobial protection. For use in HVAC, refrigeration and process equipment application.
Material type	Elastomeric foam based on synthetic rubber. Factory-made flexible elastomeric foam (FEF), according to EN 14304.
Additional material information	Self-adhesive coating: pressure-sensitive adhesive coating on modified acrylate basis with mesh structure, covered with polyethylene foil. Traces of silicon can be found on the protection paper/foil used to protect self-adhesive closures.
Product colour range	Black
Special features	This product is infused with Microban antimicrobial protection to provide additional assurance against mould and mildew growth in the insulation.
Applications	Insulation/protection for pipes, air ducts, vessels (including elbows, fittings, flanges, etc.) of air-conditioning/refrigeration and process equipment to prevent condensation and save energy.
Installation	Please refer to the ArmaFlex application manual for advice.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Property	Value / Assessment			Standard / Test method
Temperature range				
Service temperature	Min. °C ¹	Max. °C ²		EN 14706, EN 14707, EN 14304
	-50	110		
Thermal conductivity				
Declared thermal conductivity	Θm	0 °C	40°C	EN ISO 13787, EN ISO 8497
	λd ≤ [W/(m·K)]	0,033	0,038	
	Range	Tubes (AF-EVO-1 - AF-EVO-4)		
	Formula	λd = [33 + 0,1 · Θm + 0,0008 · Θm²]/1000		
Declared thermal conductivity	Θm	0 °C	40°C	EN ISO 13787, EN 12667, EN ISO 8497
	λd ≤ [W/(m·K)]	0,036	0,041	
	Range	Tubes (AF-EVO-5 - AF-EVO-6) as well as sheets and tapes (3 - 32 mm)		
	Formula	λd = [36 + 0,1 · Θm + 0,0008 · Θm²]/1000		
Declared thermal conductivity	Θm	0 °C	40°C	EN ISO 13787, EN 12667
	λd ≤ [W/(m·K)]	0,037	0,042	
	Range	Sheets (> 32 mm - 50 mm)		
	Formula	λd = [37 + 0,1 · Θm + 0,0008 · Θm²]/1000		
Fire Performance and Approvals				
Reaction to fire	Tubes: B(L)-s2, d0 Sheets, Tapes: B-s2,d0 Tubes/sheets with ArmaFix AF: B(L)-s2,d0 Class 0			EN 13501-1, EN ISO 11925-2, EN 13823, BS 476 Part 6
Surface flammability ³	low-flammable - 2010 FTP-Code (MED 96/98/EC, Module D)			IMO 2010 FTP Code, Part 5
FM approved	4924 - Pipe and duct insulation			UBC26-3
Passive fire protection				
Fire resistance of elements of construction	EI 30 - EI 90			EN 13501-2, EN 1366-3
UL standards				
UL 94 5VA ⁴	Pass (tubes and sheets ≥ 3.0 mm)			UL 94, IEC 60695-11-10, UL 746B, UL 746 A

Property	Value / Assessment	Standard / Test method
Fire performance		
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames, low smoke development	
Resistance to water vapour		
Water vapour diffusion resistance factor	Tubes (AF-Evo-1 to AF-Evo-4): $\mu \geq 10.000$ Tubes (AF-Evo-5 to AF-Evo-6); Sheets (3 -50mm) and Tape: $\mu \geq 7.000$	EN 12086, EN 13469
Physical attributes		
Dimensions and tolerances	in accordance with EN 14304, table 1	EN 822, EN 823, EN 13467
Weather and UV resistance		
UV resistance ⁵	Protection against UV-radiation is necessary (see Technical Bulletin no. 142).	
Health and environment		
Antimicrobial behaviour	In-built Microban active antimicrobial protection: No fungal growth observed	EN ISO 846, VDI 6022
Environmental Product Declaration (EPD)	Type III Environmental Product Declaration (EPD): Declaration number "EPD-ARM-20220038-IBB1-EN", Institut Bauen und Umwelt e.V. (IBU)	ISO 14025, EN 15804+A2
Other technical features		
Adhesion and sealing	ArmaFlex 525 is the certified adhesive for this product. However, ArmaFlex 520 adhesive can potentially be used for tubes.	
Shelf life	Self-adhesive tapes, self-adhesive sheets, self-adhesive tubes: 1 year	
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).	

¹For use in temperatures beyond the maximum and minimum service temperature range indicated in the technical data table, please contact our Customer Service Centre.

²+85 °C, for products with a self-adhesive layer.

³According to IMO 2010 FTP Code annex 2, clause 2.2 a fire technical test for smoke density and toxicity is not necessary.

⁴Only for products without self-adhesive-layer.

⁵If ArmaFlex is used outdoors or in applications under UV radiation, it should be protected with a covering such as ArmaClad Arma-Chek within 3 days of installation.

Tube – standard. Black. 2.0m length

AF-EVO-1

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
6	AF-EVO-1-006	7	8,5	7	7612207480597	360 m
15	AF-EVO-1-015	16	17,5	8	7612207480566	192 m
18	AF-EVO-1-018	19	20,5	8	7612207480511	140 m
22	AF-EVO-1-022	23	24,5	8,5	7612207480542	132 m
25	AF-EVO-1-025	26	27,5	8,5	7612207480856	108 m
28	AF-EVO-1-028	29	30,5	8,5	7612207480863	100 m
30	AF-EVO-1-030	31	33	9	7612207480726	96 m
32	AF-EVO-1-032	33	35	9	7612207495003	84 m
35	AF-EVO-1-035	36	38	9	7612207480740	76 m
42	AF-EVO-1-042	43,5	45,5	9	7612207480986	60 m
45	AF-EVO-1-045	46	47,5	9	7612207495010	56 m
48	AF-EVO-1-048	49,5	51,5	9	7612207481006	50 m
54	AF-EVO-1-054	55	57	9	7612207481044	48 m
57	AF-EVO-1-057	58	60	9	7612207495027	40 m
60	AF-EVO-1-060	61,5	63,5	9	7612207481075	36 m
64	AF-EVO-1-064	65	67,5	9,5	7612207481099	32 m
70	AF-EVO-1-070	71	73,5	9,5	7612207480702	32 m
76	AF-EVO-1-076	77	79,5	9,5	7612207480719	28 m
80	AF-EVO-1-080	81	84	9,5	7612207480764	24 m
89	AF-EVO-1-089	90,5	93	9,5	7612207480801	22 m
102	AF-EVO-1-102	105	108	9,5	7612207480825	16 m
108	AF-EVO-1-108	109,5	113	9,5	7612207480832	16 m
110	AF-EVO-1-110	112	116	9,5	7612207480870	16 m
114	AF-EVO-1-114	116	120	9,5	7612207480887	16 m
125	AF-EVO-1-125	127	131	9,5	7612207494990	12 m
140	AF-EVO-1-140	142	146	10	7612207480894	12 m
160	AF-EVO-1-160	162	166	10	7612207495034	8 m

Other information

Thickness tolerance

AF-EVO-1, AF-EVO-2: ± 1.0 mm
 AF-EVO-3, AF-EVO-4: ± 1.5 mm
 AF-EVO-5: ± 2.5 mm
 AF-EVO-6: ± 3.0 mm

Length tolerance

± 1.5 %

Tube – standard. Black. 2.0m length

AF-EVO-2

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
6	AF-EVO-2-006	7	8,5	9,5	7612207480900	288 m
8	AF-EVO-2-008	9	10,5	10	7612207480924	240 m
10	AF-EVO-2-010	11	12,5	11	7612207480948	170 m
12	AF-EVO-2-012	13	14,5	11	7612207481013	168 m
15	AF-EVO-2-015	16	17,5	11,5	7612207480788	130 m

Tube – standard. Black. 2.0m length

AF-EVO-2

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
18	AF-EVO-2-018	19	20,5	11,5	7612207481488	120 m
22	AF-EVO-2-022	23	24,5	12	7612207481532	100 m
25	AF-EVO-2-025	26	27,5	12,5	7612207481433	88 m
28	AF-EVO-2-028	29	30,5	12,5	7612207481464	84 m
30	AF-EVO-2-030	31	33	12,5	7612207481365	72 m
32	AF-EVO-2-032	33	35	13	7612207495041	64 m
35	AF-EVO-2-035	36	38	13	7612207481389	62 m
40	AF-EVO-2-040	41	42,5	13,5	7612207481426	44 m
42	AF-EVO-2-042	42,5	45,5	13,5	7612207481440	48 m
48	AF-EVO-2-048	49,5	51,5	13,5	7612207481471	44 m
50	AF-EVO-2-050	51	52,5	13,5	7612207495058	32 m
54	AF-EVO-2-054	55	57	13,5	7612207481525	36 m
57	AF-EVO-2-057	58	60	14	7612207495065	34 m
60	AF-EVO-2-060	61,5	63,5	14	7612207482324	32 m
64	AF-EVO-2-064	65	67,5	14	7612207495294	30 m
70	AF-EVO-2-070	71	73,5	14	7612207481839	28 m
76	AF-EVO-2-076	77	79,5	14	7612207481976	28 m
80	AF-EVO-2-080	81	84	14,5	7612207481990	24 m
89	AF-EVO-2-089	90,5	93	14,5	7612207482072	22 m
102	AF-EVO-2-102	105	108	14,5	7612207482096	18 m
108	AF-EVO-2-108	109,5	113	14,5	7612207482164	18 m
110	AF-EVO-2-110	112	116	15	7612207495072	16 m
114	AF-EVO-2-114	116	120	15	7612207482171	16 m
125	AF-EVO-2-125	127	131	15	7612207482232	12 m
133	AF-EVO-2-133	135	139	15,5	7612207482249	12 m
140	AF-EVO-2-140	142	146	15,5	7612207482256	8 m
160	AF-EVO-2-160	162	166	16	7612207482331	8 m

Other information

Thickness tolerance

AF-EVO-1, AF-EVO-2: ± 1.0 mm
 AF-EVO-3, AF-EVO-4: ± 1.5 mm
 AF-EVO-5: ± 2.5 mm
 AF-EVO-6: ± 3.0 mm

Length tolerance

± 1.5 %

Tube – standard. Black. 2.0m length

AF-EVO-3

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
10	AF-EVO-3-010	11	12,5	12,5	7612207482348	156 m
12	AF-EVO-3-012	13	14,5	13	7612207482355	144 m
15	AF-EVO-3-015	16	17,5	14	7612207482362	108 m
18	AF-EVO-3-018	19	20,5	14	7612207482461	96 m
22	AF-EVO-3-022	23	24,5	14,5	7612207482485	84 m

Tube – standard. Black. 2.0m length

AF-EVO-3

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
28	AF-EVO-3-028	29	30,5	15,5	7612207482508	64 m
35	AF-EVO-3-035	36	38	16	7612207482546	46 m
42	AF-EVO-3-042	43,5	45,5	16,5	7612207482560	40 m
48	AF-EVO-3-048	49,5	51,5	16,5	7612207482621	32 m
54	AF-EVO-3-054	55	57	17	7612207482676	28 m
60	AF-EVO-3-060	61,5	63,5	17	7612207482706	24 m
64	AF-EVO-3-064	65	67,5	17	7612207495089	20 m
70	AF-EVO-3-070	71	73,5	17,5	7612207495096	18 m
76	AF-EVO-3-076	77	79,5	17,5	7612207482720	16 m
89	AF-EVO-3-089	90,5	93	18	7612207482744	16 m
108	AF-EVO-3-108	109,5	113	18	7612207482768	12 m
110	AF-EVO-3-110	112	116	18	7612207495102	12 m
114	AF-EVO-3-114	116	120	18,5	7612207482775	12 m
125	AF-EVO-3-125	127	131	18,5	7612207495119	12 m
133	AF-EVO-3-133	135	139	18,5	7612207482782	8 m
140	AF-EVO-3-140	162	166	19	7612207495126	8 m
160	AF-EVO-3-160	162	166	19	7612207482829	6 m

Other information

Thickness tolerance

AF-EVO-1, AF-EVO-2: ± 1.0 mm
 AF-EVO-3, AF-EVO-4: ± 1.5 mm
 AF-EVO-5: ± 2.5 mm
 AF-EVO-6: ± 3.0 mm

Length tolerance

± 1.5 %

Tube – standard. Black. 2.0m length

AF-EVO-4

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
6	AF-EVO-4-006	7	8,5	15,5	7612207492897	120 m
10	AF-EVO-4-010	11	12,5	15,5	7612207482881	110 m
12	AF-EVO-4-012	13	14,5	16	7612207482898	100 m
15	AF-EVO-4-015	16	17,5	17	7612207481617	88 m
18	AF-EVO-4-018	19	20,5	17,5	7612207481631	70 m
22	AF-EVO-4-022	23	24,5	18	7612207481655	60 m
25	AF-EVO-4-025	26	27,5	18,5	7612207481730	56 m
28	AF-EVO-4-028	29	30,5	19	7612207481747	48 m
30	AF-EVO-4-030	31	33	19	7612207481761	40 m
32	AF-EVO-4-032	33	35	19,5	7612207495133	40 m
35	AF-EVO-4-035	36	38	19,5	7612207481846	36 m
40	AF-EVO-4-040	41	42,5	20,5	7612207495140	32 m
42	AF-EVO-4-042	43,5	45,5	20,5	7612207481860	32 m
45	AF-EVO-4-045	46	47,5	20,5	7612207495157	28 m
48	AF-EVO-4-048	49,5	51,5	21	7612207481884	24 m

Tube – standard. Black. 2.0m length

AF-EVO-4

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
50	AF-EVO-4-050	51	52,5	21	7612207495164	24 m
54	AF-EVO-4-054	55	57	21	7612207482010	24 m
60	AF-EVO-4-060	61,5	63,5	21,5	7612207482034	20 m
64	AF-EVO-4-064	65	67,5	21,5	7612207482102	18 m
70	AF-EVO-4-070	71	73,5	22	7612207482188	16 m
76	AF-EVO-4-076	77	79,5	22	7612207482201	16 m
80	AF-EVO-4-080	81	84	22,5	7612207482270	16 m
89	AF-EVO-4-089	90,5	93	22,5	7612207482386	12 m
102	AF-EVO-4-102	105	108	23	7612207482409	10 m
108	AF-EVO-4-108	109,5	113	23	7612207482416	10 m
110	AF-EVO-4-110	112	116	23	7612207495171	10 m
114	AF-EVO-4-114	116	120	23,5	7612207482515	10 m
125	AF-EVO-4-125	127	131	23,5	7612207482522	8 m
133	AF-EVO-4-133	135	139	24	7612207482577	6 m
140	AF-EVO-4-140	142	146	24,5	7612207482584	6 m
160	AF-EVO-4-160	162	166	25	7612207482591	6 m
168	AF-EVO-4-168	170	174	25	7612207482607	4 m

Other information

Thickness tolerance

AF-EVO-1, AF-EVO-2: ± 1.0 mm
 AF-EVO-3, AF-EVO-4: ± 1.5 mm
 AF-EVO-5: ± 2.5 mm
 AF-EVO-6: ± 3.0 mm

Length tolerance

± 1.5 %

Tube – standard. Black. 2.0m length

AF-EVO-5

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
18	AF-EVO-5-018	19	20,5	25	7612207482638	42 m
22	AF-EVO-5-022	23	24,5	25	7612207482645	36 m
25	AF-EVO-5-025	26	27,5	25	7612207514483	40 m
28	AF-EVO-5-028	29	30,5	25	7612207482652	36 m
30	AF-EVO-5-030	31	33	26	7612207501865	32 m
32	AF-EVO-5-032	32	34	26	7612207514506	24 m
35	AF-EVO-5-035	36	38	27	7612207482690	24 m
42	AF-EVO-5-042	43,5	45,5	27	7612207482799	22 m
48	AF-EVO-5-048	49,5	51,5	27,5	7612207482805	16 m
54	AF-EVO-5-054	55	57	28,5	7612207482812	16 m
60	AF-EVO-5-060	61,5	63,5	29	7612207482843	12 m
64	AF-EVO-5-064	65	67,5	29	7612207495188	12 m
70	AF-EVO-5-070	71	73,5	29,5	7612207494228	12 m
76	AF-EVO-5-076	77	79,5	30	7612207482850	10 m
89	AF-EVO-5-089	90,5	93	30,5	7612207482867	8 m

Tube – standard. Black. 2.0m length

AF-EVO-5

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
108	AF-EVO-5-108	109,5	113	31	7612207482928	6 m
114	AF-EVO-5-114	116	120	31,5	7612207482904	6 m
125	AF-EVO-5-125	127	131	31,5	7612207495195	6 m
140	AF-EVO-5-140	142	146	32	7612207495201	6 m
168	AF-EVO-5-168	170	174	32	7612207495218	4 m

Other information

Thickness tolerance

AF-EVO-1, AF-EVO-2: ± 1.0 mm
 AF-EVO-3, AF-EVO-4: ± 1.5 mm
 AF-EVO-5: ± 2.5 mm
 AF-EVO-6: ± 3.0 mm

Length tolerance

± 1.5 %

Tube – standard. Black. 2.0m length

AF-EVO-6

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
10	AF-EVO-6-010	11	12,5	32	7612207482911	40 m
12	AF-EVO-6-012	13	14,5	32	7612207481563	36 m
15	AF-EVO-6-015	16	17,5	32	7612207481570	32 m
18	AF-EVO-6-018	19	20,5	32	7612207481549	32 m
22	AF-EVO-6-022	23	24,5	33,5	7612207481556	28 m
28	AF-EVO-6-028	29	30,5	35	7612207481662	24 m
35	AF-EVO-6-035	36	38	35	7612207481679	18 m
42	AF-EVO-6-042	43,5	45,5	36,5	7612207481686	16 m
48	AF-EVO-6-048	49,5	51,5	37,5	7612207481693	12 m
54	AF-EVO-6-054	55	57	38	7612207481778	12 m
57	AF-EVO-6-057	58	60	38,5	7612207495225	12 m
60	AF-EVO-6-060	61,5	63,5	39	7612207481785	10 m
64	AF-EVO-6-064	65	67,5	39,5	7612207481891	10 m
70	AF-EVO-6-070	71	73,5	40	7612207481907	8 m
76	AF-EVO-6-076	77	79,5	40,5	7612207481914	8 m
89	AF-EVO-6-089	90,5	93	41,5	7612207482133	6 m
102	AF-EVO-6-102	105	108	42,5	7612207482126	6 m
108	AF-EVO-6-108	109,5	113	42,5	7612207482218	4 m
114	AF-EVO-6-114	116	120	43	7612207482225	4 m
125	AF-EVO-6-125	127	131	44	7612207514490	4 m
133	AF-EVO-6-133	134	139	44	7612207501834	4 m
140	AF-EVO-6-140	142	146	44,5	7612207495232	4 m
160	AF-EVO-6-160	162	166	45	7612207492880	4 m
168	AF-EVO-6-168	170	174	45	7612207501858	4 m

Other information

Thickness tolerance

AF-EVO-1, AF-EVO-2: ± 1.0 mm
 AF-EVO-3, AF-EVO-4: ± 1.5 mm

Tube – standard. Black. 2.0m length

AF-EVO-6

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
		AF-EVO-5: ±2.5mm AF-EVO-6: ±3.0mm				
Length tolerance		± 1.5 %				

Tube – self-seal. Black. 2.0m length

AF-EVO-1

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
12	AF-EVO-1-012-A	12	14,5	7,5	7612207480672	234 m
15	AF-EVO-1-015-A	16	17,5	8	7612207480580	192 m
18	AF-EVO-1-018-A	19	20,5	8	7612207480535	140 m
22	AF-EVO-1-022-A	23	24,5	8,5	7612207480849	132 m
28	AF-EVO-1-028-A	29	30,5	8,5	7612207480696	100 m
30	AF-EVO-1-030-A	31	33	9	7612207480733	96 m
35	AF-EVO-1-035-A	36	38	9	7612207480962	76 m
42	AF-EVO-1-042-A	43,5	45,5	9	7612207480993	60 m
48	AF-EVO-1-048-A	49,5	51,5	9	7612207481037	50 m
54	AF-EVO-1-054-A	55	57	9	7612207495270	48 m
60	AF-EVO-1-060-A	61,5	63,5	9	7612207481082	36 m
76	AF-EVO-1-076-A	77	79,5	9,5	7612207480757	28 m
89	AF-EVO-1-089-A	90,5	93,5	9,5	7612207480818	22 m

Other information

Thickness tolerance	AF-EVO-1, AF-EVO-2: ±1.0 mm AF-EVO-3, AF-EVO-4: ±1.5 mm

Length tolerance	± 1.5 %

Tube – self-seal. Black. 2.0m length

AF-EVO-2

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
12	AF-EVO-2-012-A	12	14,5	11	7612207480771	168 m
15	AF-EVO-2-015-A	16	17,5	11,5	7612207481051	130 m
18	AF-EVO-2-018-A	19	20,5	11,5	7612207481341	120 m
22	AF-EVO-2-022-A	23	24,5	12	7612207481402	100 m
28	AF-EVO-2-028-A	29	30,5	12,5	7612207481358	84 m
30	AF-EVO-2-030-A	31	33	12,5	7612207481372	72 m
35	AF-EVO-2-035-A	36	38	13	7612207481419	62 m
42	AF-EVO-2-042-A	43,5	45,5	13,5	7612207481457	48 m
48	AF-EVO-2-048-A	49,5	51,5	13,5	7612207481501	44 m
54	AF-EVO-2-054-A	55	57	13,5	7612207482317	36 m
60	AF-EVO-2-060-A	61,5	63,5	14	7612207482447	32 m
64	AF-EVO-2-064-A	65	67,5	14	7612207481822	30 m
70	AF-EVO-2-070-A	71	73,5	14	7612207481969	28 m

Tube – self-seal. Black. 2.0m length

AF-EVO-2

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
76	AF-EVO-2-076-A	77	79,5	14	7612207481983	28 m
89	AF-EVO-2-089-A	90,5	93,5	14,5	7612207482089	22 m

Other information

Thickness tolerance

AF-EVO-1, AF-EVO-2: ±1.0 mm
AF-EVO-3, AF-EVO-4: ±1.5 mm

Length tolerance

± 1.5 %

Tube – self-seal. Black. 2.0m length

AF-EVO-3

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
15	AF-EVO-3-015-A	16	17,5	13,5	7612207482379	108 m
18	AF-EVO-3-018-A	19	20,5	14	7612207482478	96 m
22	AF-EVO-3-022-A	23	24,5	14,5	7612207482492	84 m
28	AF-EVO-3-028-A	29	30,5	15,5	7612207482539	64 m
35	AF-EVO-3-035-A	36	38	16	7612207482553	46 m
42	AF-EVO-3-042-A	43,5	45,5	16,5	7612207482614	40 m
48	AF-EVO-3-048-A	49,5	51,5	16,5	7612207482669	32 m
54	AF-EVO-3-054-A	55	57	17	7612207482683	28 m
60	AF-EVO-3-060-A	61,5	63,5	17,5	7612207482713	24 m
76	AF-EVO-3-076-A	77	79,5	17,5	7612207482737	16 m
89	AF-EVO-3-089-A	90,5	93,5	17,5	7612207482751	16 m

Other information

Thickness tolerance

AF-EVO-1, AF-EVO-2: ±1.0 mm
AF-EVO-3, AF-EVO-4: ±1.5 mm

Length tolerance

± 1.5 %

Tube – self-seal. Black. 2.0m length

AF-EVO-4

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
15	AF-EVO-4-015-A	16	17,5	17	7612207481624	88 m
18	AF-EVO-4-018-A	19	20,5	17,5	7612207481648	70 m
22	AF-EVO-4-022-A	23	24,5	18	7612207481723	60 m
28	AF-EVO-4-028-A	29	30,5	19	7612207481754	48 m
35	AF-EVO-4-035-A	36	38	19,5	7612207481853	36 m
42	AF-EVO-4-042-A	43,5	45,5	20,5	7612207481877	32 m
48	AF-EVO-4-048-A	49,5	51,5	21	7612207482003	24 m
54	AF-EVO-4-054-A	55	57	21	7612207482027	24 m
60	AF-EVO-4-060-A	61,5	63,5	21,5	7612207482041	20 m
64	AF-EVO-4-064-A	65	67,5	21,5	7612207482119	18 m
70	AF-EVO-4-070-A	70	73,5	22	7612207482195	16 m
76	AF-EVO-4-076-A	77	79,5	22	7612207482263	16 m

Tube – self-seal. Black. 2.0m length

AF-EVO-4

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
89	AF-EVO-4-089-A	90,5	93,5	22,5	7612207482393	12 m

Other information

Thickness tolerance AF-EVO-1, AF-EVO-2: ±1.0 mm
AF-EVO-3, AF-EVO-4: ±1.5 mm

Length tolerance ± 1.5 %

Coil. Black

AF-EVO-1

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
6	AF-EVO-1-006/E	7	8,5	7	7612207480603	90 m
8	AF-EVO-1-008/E	9	10,5	7	7612207480627	80 m
10	AF-EVO-1-010/E	11	12,5	7,5	7612207480641	60 m
12	AF-EVO-1-012/E	13	14,5	7,5	7612207480665	50 m
15	AF-EVO-1-015/E	16	17,5	8	7612207480573	40 m
18	AF-EVO-1-018/E	19	20,5	8	7612207480528	35 m
22	AF-EVO-1-022/E	23	24,5	8,5	7612207480559	30 m
28	AF-EVO-1-028/E	29	30,5	8,5	7612207480689	28 m

Other information

Thickness tolerance ≤6mm: ±1.0mm
7 - 19mm: ±1,5mm

Length tolerance ± 1.5%

Coil. Black

AF-EVO-2

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
6	AF-EVO-2-006/E	7	8,5	9,5	7612207480917	60 m
8	AF-EVO-2-008/E	9	10,5	10	7612207480931	55 m
10	AF-EVO-2-010/E	11	12,5	11	7612207480955	35 m
12	AF-EVO-2-012/E	13	14,5	11	7612207481020	32 m
15	AF-EVO-2-015/E	16	17,5	11,5	7612207480795	32 m
18	AF-EVO-2-018/E	19	20,5	11,5	7612207481495	30 m
22	AF-EVO-2-022/E	23	24,5	12	7612207481396	26 m
28	AF-EVO-2-028/E	29	30,5	12,5	7612207481518	20 m

Other information

Thickness tolerance ≤6mm: ±1.0mm
7 - 19mm: ±1,5mm

Length tolerance ± 1.5%

Sheet – standard. Black

Item	Insulation thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
AF-EVO-10MM	10	500	2	7612207482430	13 m ²

Sheet – standard. Black

Item	Insulation thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
AF-EVO-13MM	13	500	2	7612207481815	9 m ²
AF-EVO-16MM	16	500	2	7612207482140	8 m ²
AF-EVO-19MM	19	500	2	7612207481327	7 m ²
AF-EVO-25MM	25	500	2	7612207481259	5 m ²
AF-EVO-32MM	32	500	2	7612207481174	4 m ²
AF-EVO-50MM	50	500	2	7612207494068	3 m ²
Other information					
Thickness tolerance		7 -19 mm: ±1.5 mm >19 mm: ±2.0 mm			
Length tolerance		± 1.5 %			
Remarks		One 1m ² sheet can be replaced by two pieces of 0.5 m ² sheet.			

Sheet – self-adhesive. Black

Item	Insulation thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
AF-EVO-10MM/A	10	500	2	7612207481587	13 m ²
AF-EVO-13MM/A	13	500	2	7612207481921	9 m ²
AF-EVO-19MM/A	19	500	2	7612207481334	7 m ²
AF-EVO-25MM/A	25	500	2	7612207481266	5 m ²
AF-EVO-32MM/A	32	500	2	7612207481181	4 m ²
AF-EVO-50MM/A	50	500	2	7612207514513	3 m ²
Other information					
Thickness tolerance		7 -19 mm: ±1.5 mm >19 mm: ±2.0 mm			
Length tolerance		± 1.5 %			
Remarks		One 1m ² sheet can be replaced by two pieces of 0.5 m ² sheet.			

Roll – standard. Black

Item	Insulation thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
AF-EVO-03MM/E	3	1.000	30	7612207482836	30 m ²
AF-EVO-06MM/E	6	1.000	15	7612207482294	15 m ²
AF-EVO-10MM/E	10	1.000	10	7612207481594	10 m ²
AF-EVO-13MM/E	13	1.000	8	7612207481938	8 m ²
AF-EVO-16MM/E	16	1.000	7	7612207482157	7 m ²
AF-EVO-19MM/E	19	1.000	5	7612207528275	5 m ²
AF-EVO-25MM/E	25	1.000	4	7612207481273	4 m ²
AF-EVO-32MM/E	32	1.000	3	7612207481198	3 m ²
Other information					
Thickness tolerance		3mm: ±1.5mm 6mm: ±1.0mm 7 - 19mm: ±1.5mm >19mm: ±2.0mm			
Length tolerance		±1.5%			

Roll – standard self-adhesive. Black

Item	Insulation thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
AF-EVO-03MM/EA	3	1.000	30	7612207482874	30 m ²
AF-EVO-06MM/EA	6	1.000	15	7612207482287	15 m ²
AF-EVO-10MM/EA	10	1.000	10	7612207481709	10 m ²
AF-EVO-13MM/EA	13	1.000	8	7612207481945	8 m ²
AF-EVO-16MM/EA	16	1.000	7	7612207481303	7 m ²
AF-EVO-19MM/EA	19	1.000	5	7612207528268	5 m ²
AF-EVO-25MM/EA	25	1.000	4	7612207481280	4 m ²
AF-EVO-32MM/EA	32	1.000	3	7612207481204	3 m ²

Other information

Thickness tolerance

3mm: ±1.5mm
 6mm: ±1.0mm
 7 - 19mm: ±1.5mm
 >19mm: ±2.0mm

Length tolerance

±1.5%

Tape – insulation. Black

Item	Thickness [mm]	Width [mm]	Length [m]	Content [quantity]
AF-EVO-TAPE-MC	3	50	15	12 roll
AF-EVO-TAPE-MC/6	3	50	15	6 roll

Strips – self-adhesive. Black

Item	Thickness [mm]	Width [mm]	Length [m]	Content [quantity]
AF-EVO-10MM/E-S100	10	100	10	10 roll
AF-EVO-10MM/E-S50	10	50	10	20 roll
AF-EVO-13MM/E-S100	13	100	8	10 roll
AF-EVO-13MM/E-S50	13	50	8	20 roll
AF-EVO-19MM/E-S100	19	100	6	10 roll
AF-EVO-19MM/E-S50	19	50	6	20 roll
AF-EVO-19MM/E-S75	19	75	6	13 roll

Prefabricated part – 90° elbow. Black

AF-EVO-2						AF-EVO-4					
Pipe Ø [mm]	Item	Description	Thickness [mm]	EAN	Content [quantity]	Pipe Ø [mm]	Item	Description	Thickness [mm]	EAN	Content [quantity]
15	AF-EVO-2-015-C90	3 segments	11,5	7612207529319	1 piece	15	AF-EVO-4-015-C90	3 segments	17	7612207529814	1 piece
18	AF-EVO-2-018-C90	3 segments	11,5	7612207529616	1 piece	18	AF-EVO-4-018-C90	3 segments	17,5	7612207529821	1 piece
22	AF-EVO-2-022-C90	3 segments	12	7612207529968	1 piece	22	AF-EVO-4-022-C90	3 segments	18	7612207529760	1 piece
28	AF-EVO-2-028-C90	3 segments	12,5	7612207530155	1 piece	28	AF-EVO-4-028-C90	3 segments	19	7612207529326	1 piece
35	AF-EVO-2-035-C90	3 segments	13	7612207529531	1 piece	35	AF-EVO-4-035-C90	3 segments	19,5	7612207529395	1 piece

Prefabricated part – 90° elbow. Black

AF-EVO-2						AF-EVO-4					
Pipe Ø [mm]	Item	Description	Thickness [mm]	EAN	Content [quantity]	Pipe Ø [mm]	Item	Description	Thickness [mm]	EAN	Content [quantity]
42	AF-EVO-2-042-C90	3 segments	13,5	7612207530162	1 piece	42	AF-EVO-4-042-C90	3 segments	20,5	7612207529777	1 piece
48	AF-EVO-2-048-C90	3 segments	13,5	7612207529548	1 piece	48	AF-EVO-4-048-C90	3 segments	21	7612207529913	1 piece
54	AF-EVO-2-054-C90	3 segments	13,5	7612207529999	1 piece	54	AF-EVO-4-054-C90	3 segments	21	7612207530223	1 piece
60	AF-EVO-2-060-C90	3 segments	14	7612207529555	1 piece	60	AF-EVO-4-060-C90	3 segments	21,5	7612207529449	1 piece
64	AF-EVO-2-064-C90	3 segments	14	7612207529906	1 piece	64	AF-EVO-4-064-C90	3 segments	21,5	7612207529456	1 piece
76	AF-EVO-2-076-C90	3 segments	14	7612207530179	1 piece	76	AF-EVO-4-076-C90	3 segments	22	7612207529838	1 piece
89	AF-EVO-2-089-C90	3 segments	14,5	7612207530186	1 piece	89	AF-EVO-4-089-C90	3 segments	22,5	7612207529579	1 piece
114	AF-EVO-2-114-C90	3 segments	15	7612207529753	1 piece	114	AF-EVO-4-114-C90	3 segments	23,5	7612207529784	1 piece
-	-	-	-	-	-	168	AF-EVO-4-168-C90	3 segments	25	7612207529722	1 piece

Other information

Thickness tolerance

AF-EVO-1, AF-EVO-2: ± 1.0 mm
 AF-EVO-3, AF-EVO-4: ± 1.5 mm
 AF-EVO-5: ± 2.5 mm
 AF-EVO-6: ± 3.0 mm

Remarks

Other items can be produced upon request

Prefabricated part – 90° elbow. Black

AF-EVO-5						AF-EVO-6					
Pipe Ø [mm]	Item	Description	Thickness [mm]	EAN	Content [quantity]	Pipe Ø [mm]	Item	Description	Thickness [mm]	EAN	Content [quantity]
18	AF-EVO-5-018-C90	3 segments	25	7612207529975	1 piece	18	AF-EVO-6-018-C90	3 segments	32	7612207529517	1 piece
22	AF-EVO-5-022-C90	3 segments	25	7612207529296	1 piece	22	AF-EVO-6-022-C90	3 segments	33,5	7612207529524	1 piece
28	AF-EVO-5-028-C90	3 segments	25	7612207530025	1 piece	28	AF-EVO-6-028-C90	3 segments	35	7612207530117	1 piece
35	AF-EVO-5-035-C90	3 segments	27	7612207530032	1 piece	35	AF-EVO-6-035-C90	3 segments	35	7612207529876	1 piece
42	AF-EVO-5-042-C90	3 segments	27	7612207529623	1 piece	42	AF-EVO-6-042-C90	3 segments	36,5	7612207529586	1 piece
48	AF-EVO-5-048-C90	3 segments	27,5	7612207529302	1 piece	48	AF-EVO-6-048-C90	3 segments	37,5	7612207530124	1 piece
54	AF-EVO-5-054-C90	3 segments	28,5	7612207529463	1 piece	54	AF-EVO-6-054-C90	3 segments	38	7612207530131	1 piece

Prefabricated part – 90° elbow. Black

AF-EVO-5						AF-EVO-6					
Pipe Ø [mm]	Item	Description	Thickness [mm]	EAN	Content [quantity]	Pipe Ø [mm]	Item	Description	Thickness [mm]	EAN	Content [quantity]
60	AF-EVO-5-060-C90	3 segments	29	7612207529630	3 piece	60	AF-EVO-6-060-C90	3 segments	39	7612207529791	1 piece
64	AF-EVO-5-064-C90	3 segments	29	7612207529982	1 piece	64	AF-EVO-6-064-C90	3 segments	39,5	7612207529739	1 piece
76	AF-EVO-5-076-C90	3 segments	30	7612207529470	1 piece	76	AF-EVO-6-076-C90	3 segments	40,5	7612207529937	1 piece
89	AF-EVO-5-089-C90	3 segments	30,5	7612207529869	1 piece	89	AF-EVO-6-089-C90	3 segments	41,5	7612207529487	1 piece
114	AF-EVO-5-114-C90	3 segments	31,5	7612207529920	1 piece	140	AF-EVO-6-140-C90	3 segments	44	7612207530148	1 piece
-	-	-	-	-	-	168	AF-EVO-6-168-C90	3 segments	45	7612207529883	1 piece

Other information

Thickness tolerance

AF-EVO-1, AF-EVO-2: ± 1.0 mm
 AF-EVO-3, AF-EVO-4: ± 1.5 mm
 AF-EVO-5: ±2.5mm
 AF-EVO-6: ±3.0mm

Remarks

Other items can be produced upon request

Prefabricated part – t-piece. Black

AF-EVO-2						AF-EVO-4					
Pipe Ø [mm]	Item	Description	Thickness [mm]	EAN	Content [quantity]	Pipe Ø [mm]	Item	Description	Thickness [mm]	EAN	Content [quantity]
15	AF-EVO-2-015-T90	2 segments	11,5	7612207529647	1 piece	15	AF-EVO-4-015-T90	2 segments	17	7612207529890	1 piece
18	AF-EVO-2-018-T90	2 segments	11,5	7612207530049	1 piece	18	AF-EVO-4-018-T90	2 segments	17,5	7612207529685	1 piece
22	AF-EVO-2-022-T90	2 segments	12	7612207530056	1 piece	22	AF-EVO-4-022-T90	2 segments	18	7612207530001	1 piece
28	AF-EVO-2-028-T90	2 segments	12,5	7612207530063	1 piece	28	AF-EVO-4-028-T90	2 segments	19	7612207529494	1 piece
35	AF-EVO-2-035-T90	2 segments	13	7612207529654	1 piece	35	AF-EVO-4-035-T90	2 segments	19,5	7612207529593	1 piece
42	AF-EVO-2-042-T90	2 segments	13,5	7612207529661	1 piece	42	AF-EVO-4-042-T90	2 segments	20	7612207530018	1 piece
48	AF-EVO-2-048-T90	2 segments	13,5	7612207530070	1 piece	48	AF-EVO-4-048-T90	2 segments	21	7612207529609	1 piece
54	AF-EVO-2-054-T90	2 segments	13,5	7612207530087	1 piece	54	AF-EVO-4-054-T90	2 segments	21	7612207529401	1 piece
60	AF-EVO-2-060-T90	2 segments	14	7612207531350	1 piece	60	AF-EVO-4-060-T90	2 segments	21,5	7612207530193	1 piece
64	AF-EVO-2-064-T90	2 segments	14	7612207529678	1 piece	64	AF-EVO-4-064-T90	2 segments	21,5	7612207529418	1 piece

Prefabricated part – t-piece. Black

AF-EVO-2						AF-EVO-4					
Pipe Ø [mm]	Item	Description	Thickness [mm]	EAN	Content [quantity]	Pipe Ø [mm]	Item	Description	Thickness [mm]	EAN	Content [quantity]
76	AF-EVO-2-076-T90	2 segments	14	7612207530094	1 piece	76	AF-EVO-4-076-T90	2 segments	22	7612207529845	1 piece
89	AF-EVO-2-089-T90	2 segments	14,5	7612207530100	1 piece	89	AF-EVO-4-089-T90	2 segments	22,5	7612207529425	1 piece

Prefabricated part – t-piece. Black

AF-EVO-5						AF-EVO-6					
Pipe Ø [mm]	Item	Description	Thickness [mm]	EAN	Content [quantity]	Pipe Ø [mm]	Item	Description	Thickness [mm]	EAN	Content [quantity]
18	AF-EVO-5-018-T90	2 segments	25	7612207529852	1 piece	18	AF-EVO-6-018-T90	2 segments	32	7612207529357	1 piece
22	AF-EVO-5-022-T90	2 segments	25	7612207531374	1 piece	22	AF-EVO-6-022-T90	2 segments	33,5	7612207531411	1 piece
28	AF-EVO-5-028-T90	2 segments	25	7612207529432	1 piece	28	AF-EVO-6-028-T90	2 segments	35	7612207531381	1 piece
35	AF-EVO-5-035-T90	2 segments	27	7612207529333	1 piece	35	AF-EVO-6-035-T90	2 segments	35	7612207529364	1 piece
42	AF-EVO-5-042-T90	2 segments	27	7612207530209	1 piece	42	AF-EVO-6-042-T90	2 segments	36,5	7612207531428	1 piece
48	AF-EVO-5-048-T90	2 segments	27,5	7612207529388	1 piece	48	AF-EVO-6-048-T90	2 segments	37,5	7612207531343	1 piece
54	AF-EVO-5-054-T90	2 segments	28,5	7612207529692	1 piece	54	AF-EVO-6-054-T90	2 segments	38	7612207531367	1 piece
60	AF-EVO-5-060-T90	2 segments	29	7612207529340	1 piece	60	AF-EVO-6-060-T90	2 segments	39	7612207531398	1 piece
64	AF-EVO-5-064-T90	2 segments	29	7612207529708	1 piece	64	AF-EVO-6-064-T90	2 segments	39,5	7612207529371	1 piece
76	AF-EVO-5-076-T90	2 segments	30	7612207529715	1 piece	76	AF-EVO-6-076-T90	2 segments	40,5	7612207531404	1 piece
89	AF-EVO-5-089-T90	2 segments	30,5	7612207530216	1 piece	89	AF-EVO-6-089-T90	2 segments	41,5	7612207529500	1 piece
-	-	-	-	-	-	114	AF-EVO-6-114-T90	2 segments	43	7612207529746	1 piece
-	-	-	-	-	-	140	AF-EVO-6-140-T90	2 segments	44	7612207529951	1 piece

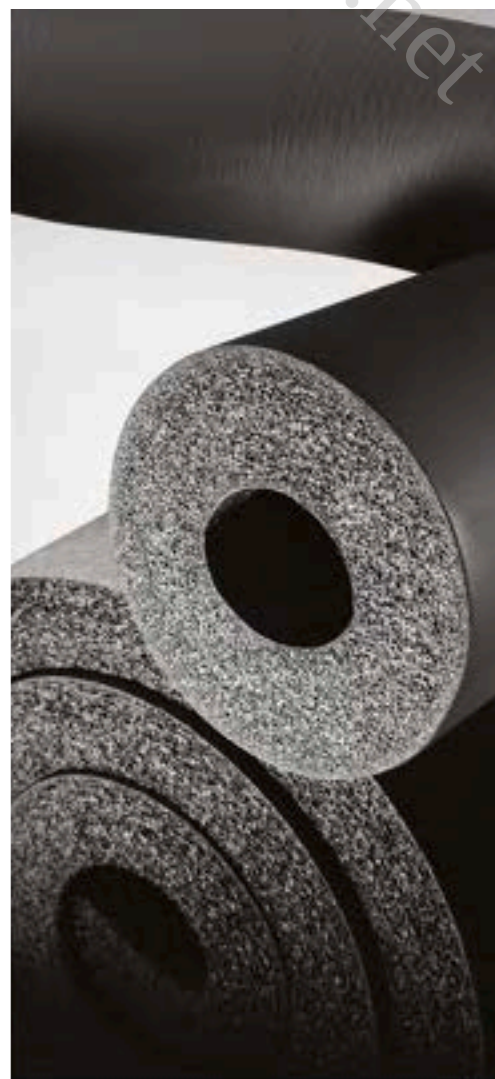
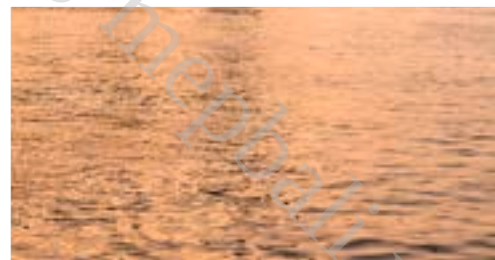
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- // Reliable condensation control and prevention of corrosion under insulation (CUI)
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TECHNICAL DATA - AF/ARMAFLEX

Brief description	Highly flexible, closed-cell insulation material with high water vapour diffusion resistance, low thermal conductivity and built-in Microban antimicrobial protection.
Material type	Flexible elastomeric foam based on synthetic rubber (NBR). Factory-made flexible elastomeric foam (FEF), according to EN 14304.
Additional material information	Self-adhesive coating: pressure-sensitive adhesive coating on modified acrylate basis with mesh structure, covered with polyethylene foil. Traces of silicone may be present on the paper/foil protecting self-adhesive closures.
Product colour range	Black
Applications	Insulation/protection for pipes, air ducts, vessels (incl. elbows, fittings, flanges etc.) of air-conditioning/refrigeration and process equipment to prevent condensation and save energy. Structure-borne noise reduction in service-water and waste-water installations.
Installation	Certified and compatible adhesive for a long-term performing system is ArmaFlex 520. Please refer to the relevant Armacell application manual for advice. For further information please contact our Customer Service Centre.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature	Min. °C ¹	Max. °C ²	EN 14706, EN 14707, EN 14304
	-50	110	
Thermal conductivity			
Declared thermal conductivity	Øm	0°C	EN ISO 13787, EN 12667, EN ISO 8497
	λd ≤ [W/(m·K)]	0,033	
	Range	Tubes (AF-1 - AF-4) as well as sheets and tapes (3 mm - 32 mm)	
	Formula	λd =[33 + 0,1· Øm + 0,0008 · Øm²]/1000	
Declared thermal conductivity	Øm	0°C	EN ISO 13787, EN 12667, EN ISO 8497
	λd ≤ [W/(m·K)]	0,036	
	Range	Tubes (AF-5 - AF-6) and sheets (AF-50MM)	
	Formula	λd = [36 + 0.1 x Øm + 0.0008 · Øm²]/1000	
Fire Performance and Approvals			
Reaction to fire	Tubes: B(L)-s3, d0 Sheets: B-s3, d0 Tapes: B-s3, d0		EN 13501-1, EN ISO 11925-2, EN 13823
Surface flammability	low-flammable - 2010 FTP-Code (MED 96/98/EC, Module D)		IMO 2010 FTP Code, Part 5 ³
FM approved	4924 - Pipe and Duct Insulation		UBC26-3
Passive fire protection			
Fire resistance of elements of construction	EI 30 - EI 90		EN 13501-2, EN 1366-3
UL standards			
UL 94 5VA ⁴	Pass (tubes ≥ 3.0 mm) Pass (sheets ≥ 4.2 mm)		UL 94, IEC 60695-11-10, UL 746B
UL 94 5VB ⁴	Pass (sheets 3 mm < 4.2 mm)		UL 94, IEC 60695-11-10, UL 1191, UL 746B
Fire performance			
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames		

Property	Value / Assessment	Standard / Test method
Resistance to water vapour		
Water vapour diffusion resistance factor	Sheets (3 mm - 32 mm) and tubes (AF-1 to AF-4): $\mu \geq 10,000$ Sheets (>32 mm - 50 mm) and tubes (AF-5 to AF-6): $\mu \geq 7,000$	EN 12086, EN 13469
Physical attributes		
Dimensions and tolerances	in accordance with EN 14304, table 1	EN 822, EN 823, EN 13467
Acoustic performance		
Reduction of structure-borne sound transmission	≤ 28 dB (A)	EN ISO 3822-1
Weather and UV resistance		
UV resistance ⁵	Protection against UV radiation is necessary (see Technical Bulletin no. 142).	
Health and environment		
Antimicrobial behaviour	Built-in Microban active antimicrobial protection: No fungal growth observed	EN ISO 846, VDI 6022
Environmental Product Declaration (EPD)	Type III Environmental Product Declaration (EPD): Declaration number "EPD-ARM-20200219-IBB1-EN", Institut Bauen und Umwelt e.V. (IBU)	ISO 14025, EN 15804+A2
Other technical features		
Shelf life	Self-adhesive tapes, self-adhesive sheets, self-adhesive tubes, strips: 1 year	
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% - 70%) and ambient temperature (0 °C -35 °C).	

¹For use in temperatures beyond the maximum and minimum service temperature range indicated in the technical data table, please contact our Customer Service Centre.

²+85 °C, for products with a self-adhesive layer.

³According to IMO 2010 FTP Code annex 2, clause 2.2 a fire technical test for smoke density and toxicity is not necessary.

⁴Only for products without self-adhesive-layer.

⁵If ArmaFlex is used outdoors or in applications under UV radiation, it should be protected with ArmaFinish Paint, or a covering such as ArmaClad Arma-Chek within 3 days of installation.

Tube – standard. Black. 2.0m length

AF-1

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
6	AF-1-006	7,0	8,5	7,0	7612207397413	360 m
8	AF-1-008	9,0	10,5	7,0	7612207397642	310 m
10	AF-1-010	11,0	12,5	7,5	7612207250084	300 m
12	AF-1-012	13,0	14,5	7,5	7612207250091	234 m
15	AF-1-015	16,0	17,5	8,0	7612207250107	192 m
18	AF-1-018	19,0	20,5	8,0	7612207397475	140 m
22	AF-1-022	23,0	24,5	8,5	7612207250121	132 m
25	AF-1-025	26,0	27,5	8,5	7612207250138	108 m
28	AF-1-028	29,0	30,5	8,5	7612207250145	100 m
30	AF-1-030	31,0	33,0	9,0	7612207250152	96 m
32	AF-1-032	33,0	35,0	9,0	7612207337396	84 m
35	AF-1-035	36,0	38,0	9,0	7612207250169	76 m
42	AF-1-042	43,5	45,5	9,0	7612207250237	60 m
48	AF-1-048	49,5	51,5	9,0	7612207250251	50 m
54	AF-1-054	55,0	57,0	9,0	7612207250268	48 m
60	AF-1-060	61,5	63,5	9,0	7612207249484	36 m
64	AF-1-064	65,0	67,5	9,5	7612207250275	32 m
70	AF-1-070	71,0	73,5	9,5	7612207250282	32 m
76	AF-1-076	77,0	79,5	9,5	7612207250299	28 m
89	AF-1-089	90,5	93,0	9,5	7612207250312	22 m
102	AF-1-102	105,0	108,0	9,5	7612207250329	16 m
108	AF-1-108	109,5	113,0	9,5	7612207250336	16 m
110	AF-1-110	112,0	116,0	9,5	7612207337426	16 m
114	AF-1-114	116,0	120,0	9,5	7612207250343	16 m
125	AF-1-125	127,0	131,0	9,5	7612207250350	12 m
140	AF-1-140	142,0	146,0	10,0	7612207249279	12 m
160	AF-1-160	162,0	166,0	10,0	7612207250404	8 m

Other information

Thickness tolerance

AF-1, AF-2: ± 1.0 mm
 AF-3, AF-4: ± 1.5 mm
 AF-5: ± 2.5 mm
 AF-6: ± 3.0 mm

Length tolerance

± 1.5 %

Tube – standard. Black. 2.0m length

AF-2

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
6	AF-2-006	7,0	8,5	9,5	7612207252064	288 m
8	AF-2-008	9,0	10,5	10,0	7612207252071	240 m
10	AF-2-010	11,0	12,5	11,0	7612207397604	170 m
12	AF-2-012	13,0	14,5	11,0	7612207252095	168 m
15	AF-2-015	16,0	17,5	11,5	7612207397543	130 m

Tube – standard. Black. 2.0m length

AF-2

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
18	AF-2-018	19,0	20,5	11,5	7612207249286	120 m
22	AF-2-022	23,0	24,5	12,0	7612207252118	100 m
25	AF-2-025	26,0	27,5	12,5	7612207252125	88 m
28	AF-2-028	29,0	30,5	12,5	7612207252132	84 m
30	AF-2-030	31,0	33,0	12,5	7612207252149	72 m
32	AF-2-032	33,0	35,0	13,0	7612207337440	64 m
35	AF-2-035	36,0	38,0	13,0	7612207252156	62 m
40	AF-2-040	41,0	42,5	13,5	7612207337457	44 m
42	AF-2-042	43,5	45,5	13,5	7612207252170	48 m
48	AF-2-048	49,5	51,5	13,5	7612207249293	44 m
50	AF-2-050	51,0	52,5	13,5	7612207337464	32 m
54	AF-2-054	55,0	57,0	13,5	7612207252309	36 m
60	AF-2-060	61,5	63,5	14,0	7612207249491	32 m
64	AF-2-064	65,0	67,5	14,0	7612207251517	30 m
70	AF-2-070	71,0	73,5	14,0	7612207251524	28 m
76	AF-2-076	77,0	79,5	14,0	7612207251531	28 m
89	AF-2-089	90,5	93,0	14,5	7612207251555	22 m
102	AF-2-102	105,0	108,0	14,5	7612207251562	18 m
108	AF-2-108	109,0	113,0	14,5	7612207251579	18 m
110	AF-2-110	112,0	116,0	15,0	7612207337471	16 m
114	AF-2-114	116,0	120,0	15,0	7612207251586	16 m
125	AF-2-125	127,0	131,0	15,0	7612207251647	12 m
133	AF-2-133	135,0	139,0	15,5	7612207251654	12 m
140	AF-2-140	142,0	146,0	15,5	7612207251661	8 m
160	AF-2-160	162,0	166,0	16,0	7612207249309	8 m

Other information

Thickness tolerance

AF-1, AF-2: ± 1.0 mm
 AF-3, AF-4: ± 1.5 mm
 AF-5: ± 2.5 mm
 AF-6: ± 3.0 mm

Length tolerance

± 1.5 %

Tube – standard. Black. 2.0m length

AF-3

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
10	AF-3-010	11,0	12,5	12,5	7612207253528	156 m
12	AF-3-012	13,0	14,5	13,0	7612207253535	144 m
15	AF-3-015	16,0	17,5	14,0	7612207253542	108 m
18	AF-3-018	19,0	20,5	14,0	7612207253559	96 m
22	AF-3-022	23,0	24,5	14,5	7612207249507	84 m
28	AF-3-028	29,0	30,5	15,5	7612207249514	64 m
35	AF-3-035	36,0	38,0	16,0	7612207397321	46 m

Tube – standard. Black. 2.0m length

AF-3

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
42	AF-3-042	43,5	45,5	16,5	7612207253795	40 m
48	AF-3-048	49,5	51,5	16,5	7612207253825	32 m
54	AF-3-054	55,0	57,0	17,0	7612207253849	28 m
60	AF-3-060	61,5	63,5	17,0	7612207249316	24 m
64	AF-3-064	65,0	67,5	17,0	7612207251678	20 m
70	AF-3-070	71,0	73,5	17,5	7612207251685	18 m
76	AF-3-076	77,0	79,5	17,5	7612207251692	16 m
89	AF-3-089	90,5	93,0	18,0	7612207251715	16 m
108	AF-3-108	109,5	113,0	18,0	7612207251739	12 m
110	AF-3-110	112,0	116,0	18,0	7612207337525	12 m
114	AF-3-114	116,0	120,0	18,5	7612207251746	12 m
125	AF-3-125	127,0	131,0	18,5	7612207251753	12 m
133	AF-3-133	135,0	139,0	18,5	7612207251760	8 m
140	AF-3-140	142,0	146,0	19,0	7612207249323	8 m
160	AF-3-160	162,0	166,0	19,0	7612207249996	6 m

Other information

Thickness tolerance

AF-1, AF-2: ± 1.0 mm
 AF-3, AF-4: ± 1.5 mm
 AF-5: ± 2.5 mm
 AF-6: ± 3.0 mm

Length tolerance

± 1.5 %

Tube – standard. Black. 2.0m length

AF-4

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
6	AF-4-006	7,0	8,5	15,5	7612207417081	120 m
10	AF-4-010	11,0	12,5	15,5	7612207253962	110 m
12	AF-4-012	13,0	14,5	16,0	7612207253979	100 m
15	AF-4-015	16,0	17,5	17,0	7612207397581	88 m
18	AF-4-018	19,0	20,5	17,5	7612207397635	70 m
22	AF-4-022	23,0	24,5	18,0	7612207249521	60 m
25	AF-4-025	26,0	27,5	18,5	7612207254037	56 m
28	AF-4-028	29,0	30,5	19,0	7612207250008	48 m
30	AF-4-030	31,0	33,0	19,0	7612207254051	40 m
32	AF-4-032	33,0	35,0	19,5	7612207337549	40 m
35	AF-4-035	36,0	38,0	19,5	7612207254068	36 m
40	AF-4-040	41,0	42,5	20,5	7612207337556	32 m
42	AF-4-042	43,5	45,5	20,5	7612207254099	32 m
48	AF-4-048	49,5	51,5	21,0	7612207254129	24 m
50	AF-4-050	51,0	52,5	21,0	7612207337563	24 m
54	AF-4-054	55,0	57,0	21,0	7612207251838	24 m
60	AF-4-060	61,5	63,5	21,5	7612207249330	20 m

Tube – standard. Black. 2.0m length

AF-4

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
64	AF-4-064	65,0	67,5	21,5	7612207251852	18 m
70	AF-4-070	71,0	73,5	22,0	7612207251869	16 m
76	AF-4-076	77,0	79,5	22,0	7612207251876	16 m
89	AF-4-089	90,5	93,0	22,5	7612207251890	12 m
102	AF-4-102	105,0	108,0	23,0	7612207251906	10 m
108	AF-4-108	109,5	113,0	23,0	7612207251913	10 m
110	AF-4-110	112,0	116,0	23,0	7612207337570	10 m
114	AF-4-114	116,0	120,0	23,5	7612207251920	10 m
125	AF-4-125	127,0	131,0	23,5	7612207251937	8 m
133	AF-4-133	135,0	139,0	24,0	7612207251944	6 m
140	AF-4-140	142,0	146,0	24,5	7612207249347	6 m
160	AF-4-160	162,0	166,0	25,0	7612207250015	6 m
168	AF-4-168	170,0	174,0	25,0	7612207289701	4 m

Other information

Thickness tolerance

AF-1, AF-2: ± 1.0 mm
 AF-3, AF-4: ± 1.5 mm
 AF-5: ± 2.5 mm
 AF-6: ± 3.0 mm

Length tolerance

± 1.5 %

Tube – standard. Black. 2.0m length

AF-5

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
18	AF-5-018	19,0	20,5	25,0	7612207252606	42 m
20	AF-5-020	20,0	21,5	25,0	7612207337587	44 m
22	AF-5-022	23,0	24,5	25,0	7612207253016	36 m
25	AF-5-025	26,0	27,5	25,0	7612207338577	40 m
28	AF-5-028	29,0	30,5	25,0	7612207253023	36 m
30	AF-5-030	31,0	33,0	26,0	7612207338584	32 m
32	AF-5-032	33,0	35,0	26,0	7612207337594	24 m
35	AF-5-035	36,0	38,0	27,0	7612207253030	24 m
42	AF-5-042	43,5	45,5	27,0	7612207253047	22 m
48	AF-5-048	49,5	51,5	27,5	7612207253054	16 m
54	AF-5-054	55,0	57,0	28,5	7612207253061	16 m
60	AF-5-060	61,5	63,5	29,0	7612207253078	12 m
64	AF-5-064	65,0	67,5	29,0	7612207253085	12 m
70	AF-5-070	71,0	73,5	29,5	7612207253092	12 m
76	AF-5-076	77,0	79,5	30,0	7612207253108	10 m
89	AF-5-089	90,5	93,0	30,5	7612207253115	8 m
108	AF-5-108	109,5	113,0	31,0	7612207253122	6 m
114	AF-5-114	116,0	120,0	31,5	7612207253139	6 m
125	AF-5-125	127,0	131,0	31,5	7612207338638	6 m

Tube – standard. Black. 2.0m length

AF-5

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
140	AF-5-140	142,0	146,0	32,0	7612207253146	6 m
168	AF-5-168	170,0	174,0	32,0	7612207309652	4 m

Other information

Thickness tolerance

AF-1, AF-2: ± 1.0 mm
 AF-3, AF-4: ± 1.5 mm
 AF-5: ±2.5mm
 AF-6: ±3.0mm

Length tolerance

± 1.5 %

Tube – standard. Black. 2.0m length

AF-6

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
10	AF-6-010	11,0	12,5	32,0	7612207255959	40 m
12	AF-6-012	13,0	14,5	32,0	7612207253184	36 m
15	AF-6-015	16,0	17,5	32,0	7612207253191	32 m
18	AF-6-018	19,0	20,5	32,0	7612207253207	32 m
22	AF-6-022	23,0	24,5	33,5	7612207253214	28 m
28	AF-6-028	29,0	30,5	35,0	7612207253221	24 m
35	AF-6-035	36,0	38,0	35,0	7612207253238	18 m
42	AF-6-042	43,5	45,5	36,5	7612207253245	16 m
48	AF-6-048	49,5	51,5	37,5	7612207253252	12 m
54	AF-6-054	55,0	57,0	38,0	7612207253269	12 m
60	AF-6-060	61,5	63,5	39,0	7612207253283	10 m
64	AF-6-064	65,0	67,5	39,5	7612207253290	10 m
70	AF-6-070	71,0	73,5	40,0	7612207253306	8 m
76	AF-6-076	77,0	79,5	40,5	7612207253313	8 m
89	AF-6-089	90,5	93,0	41,5	7612207253337	6 m
102	AF-6-102	105,0	108,0	42,5	7612207253344	6 m
108	AF-6-108	109,5	113,0	42,5	7612207253351	4 m
114	AF-6-114	116,0	120,0	43,0	7612207253368	4 m
133	AF-6-133	134,0	139,0	44,0	7612207253375	4 m
140	AF-6-140	142,0	146,0	44,5	7612207253382	4 m
160	AF-6-160	162,0	166,0	45,0	7612207253399	4 m
168	AF-6-168	170,0	174,0	45,0	7612207281095	4 m

Other information

Thickness tolerance

AF-1, AF-2: ± 1.0 mm
 AF-3, AF-4: ± 1.5 mm
 AF-5: ±2.5mm
 AF-6: ±3.0mm

Length tolerance

± 1.5 %

Tube – self-seal. Black. 2.0m length

AF-1

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
12	AF-1-012-A	12,0	14,5	7,5	7612207284775	234 m
15	AF-1-015-A	16,0	17,5	8,0	7612207250190	192 m
18	AF-1-018-A	19,0	20,5	8,0	7612207397598	140 m
22	AF-1-022-A	23,0	24,5	8,5	7612207250213	132 m
28	AF-1-028-A	29,0	30,5	8,5	7612207250497	100 m
30	AF-1-030-A	31,0	33,0	9,0	7612207328080	96 m
35	AF-1-035-A	36,0	38,0	9,0	7612207250503	76 m
42	AF-1-042-A	43,5	45,5	9,0	7612207250510	60 m
48	AF-1-048-A	49,5	51,5	9,0	7612207250527	50 m
54	AF-1-054-A	55,0	57,0	9,0	7612207250534	48 m
60	AF-1-060-A	61,5	63,5	9,0	7612207250541	36 m
76	AF-1-076-A	77,0	79,5	9,5	7612207250558	28 m
89	AF-1-089-A	90,5	93,5	9,5	7612207250565	22 m

Other information

Thickness tolerance

AF-1, AF-2: ±1.0 mm
AF-3, AF-4: ±1.5 mm

Length tolerance

± 1.5 %

Remarks

Most items use tangential cut and a small subset use radial cut surface. Contact us for more details.

Tube – self-seal. Black. 2.0m length

AF-2

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
12	AF-2-012-A	12,0	14,5	11,0	7612207276794	168 m
15	AF-2-015-A	16,0	17,5	11,5	7612207397550	130 m
18	AF-2-018-A	19,0	20,5	11,5	7612207252248	120 m
22	AF-2-022-A	23,0	24,5	12,0	7612207252255	100 m
28	AF-2-028-A	29,0	30,5	12,5	7612207252262	84 m
30	AF-2-030-A	31,0	33,0	12,5	7612207276527	72 m
35	AF-2-035-A	36,0	38,0	13,0	7612207252279	62 m
42	AF-2-042-A	43,5	45,5	13,5	7612207252286	48 m
48	AF-2-048-A	49,5	51,5	13,5	7612207252293	44 m
54	AF-2-054-A	55,0	57,0	13,5	7612207252316	36 m
60	AF-2-060-A	61,5	63,5	14,0	7612207252323	32 m
64	AF-2-064-A	65,0	67,5	14,0	7612207296747	30 m
70	AF-2-070-A	71,0	73,5	14,0	7612207278934	28 m
76	AF-2-076-A	77,0	79,5	14,0	7612207252330	28 m
89	AF-2-089-A	90,5	93,5	14,5	7612207252347	22 m

Other information

Thickness tolerance

AF-1, AF-2: ±1.0 mm
AF-3, AF-4: ±1.5 mm

Length tolerance

± 1.5 %

Tube – self-seal. Black. 2.0m length

AF-2

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
Remarks		Most items use tangential cut and a small subset use radial cut surface. Contact us for more details.				

Tube – self-seal. Black. 2.0m length

AF-3

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
15	AF-3-015-A	16,0	17,5	13,5	7612207253740	108 m
18	AF-3-018-A	19,0	20,5	14,0	7612207253757	96 m
22	AF-3-022-A	23,0	24,5	14,5	7612207253764	84 m
28	AF-3-028-A	29,0	30,5	15,5	7612207253771	64 m
35	AF-3-035-A	36,0	38,0	16,0	7612207397512	46 m
42	AF-3-042-A	43,5	45,5	16,5	7612207253801	40 m
48	AF-3-048-A	49,5	51,5	16,5	7612207253832	32 m
54	AF-3-054-A	55,0	57,0	17,0	7612207253856	28 m
60	AF-3-060-A	61,5	63,5	17,5	7612207253863	24 m
76	AF-3-076-A	77,0	79,5	17,5	7612207253870	16 m
89	AF-3-089-A	90,5	93,5	17,5	7612207253887	16 m

Other information

Thickness tolerance AF-1, AF-2: ±1.0 mm
AF-3, AF-4: ±1.5 mm

Length tolerance ± 1.5 %

Remarks Most items use tangential cut and a small subset use radial cut surface. Contact us for more details.

Tube – self-seal. Black. 2.0m length

AF-4

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
15	AF-4-015-A	16,0	17,5	17,0	7612207397611	88 m
18	AF-4-018-A	19,0	20,5	17,5	7612207397659	70 m
22	AF-4-022-A	23,0	24,5	18,0	7612207254020	60 m
28	AF-4-028-A	29,0	30,5	19,0	7612207254044	48 m
35	AF-4-035-A	36,0	38,0	19,5	7612207254075	36 m
42	AF-4-042-A	43,5	45,5	20,5	7612207254105	32 m
48	AF-4-048-A	49,5	51,5	21,0	7612207254136	24 m
54	AF-4-054-A	55,0	57,0	21,0	7612207254143	24 m
60	AF-4-060-A	61,5	63,5	21,5	7612207254150	20 m
64	AF-4-064-A	65,0	67,5	21,5	7612207339284	18 m
70	AF-4-070-A	70,0	73,5	22,0	7612207279115	16 m
76	AF-4-076-A	77,0	79,5	22,0	7612207254167	16 m
89	AF-4-089-A	90,5	93,5	22,5	7612207254174	12 m

Other information

Thickness tolerance AF-1, AF-2: ±1.0 mm
AF-3, AF-4: ±1.5 mm

Tube – self-seal. Black. 2.0m length

AF-4

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
Length tolerance		± 1.5 %				
Remarks		Most items use tangential cut and a small subset use radial cut surface. Contact us for more details.				

Coil. Black

AF-1

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
6	AF-1-006/E	7,0	8,5	7,0	7612207250411	90 m
8	AF-1-008/E	9,0	10,5	7,0	7612207250428	80 m
10	AF-1-010/E	11,0	12,5	7,5	7612207250435	60 m
12	AF-1-012/E	13,0	14,5	7,5	7612207250442	50 m
15	AF-1-015/E	16,0	17,5	8,0	7612207250459	40 m
18	AF-1-018/E	19,0	20,5	8,0	7612207250466	35 m
22	AF-1-022/E	23,0	24,5	8,5	7612207250473	30 m
28	AF-1-028/E	29,0	30,5	8,5	7612207250480	28 m

Other information

Thickness tolerance	≤6mm: ±1.0mm 7 - 19mm: ±1,5mm > 19mm: ±2.0mm

Length tolerance	± 1.5%

Coil. Black

AF-2

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
6	AF-2-006/E	7,0	8,5	9,5	7612207252200	60 m
8	AF-2-008/E	9,0	10,5	10,0	7612207252217	55 m
10	AF-2-010/E	11,0	12,5	11,0	7612207252224	35 m
12	AF-2-012/E	13,0	14,5	11,0	7612207252354	32 m
15	AF-2-015/E	16,0	17,5	11,5	7612207252361	32 m
18	AF-2-018/E	19,0	20,5	11,5	7612207252378	30 m
22	AF-2-022/E	23,0	24,5	12,0	7612207252385	26 m
28	AF-2-028/E	29,0	30,5	12,5	7612207252392	20 m

Other information

Thickness tolerance	≤6mm: ±1.0mm 7 - 19mm: ±1,5mm > 19mm: ±2.0mm

Length tolerance	± 1.5%

Sheet – standard. Black

Item	Insulation thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
AF-10MM	10	500	2	7612207250930	13 m ²
AF-13MM	13	500	2	7612207250947	9 m ²
AF-16MM	16	500	2	7612207250954	8 m ²

Sheet – standard. Black

Item	Insulation thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
AF-19MM	19	500	2	7612207250961	7 m ²
AF-25MM	25	500	2	7612207250978	5 m ²
AF-32MM	32	500	2	7612207250985	4 m ²
AF-50MM	50	500	2	7612207251005	3 m ²
Other information					
Thickness tolerance		7 -19 mm: ±1.5 mm >19 mm: ±2.0 mm			
Length tolerance		± 1.5 %			
Remarks		One 1m ² sheet can be replaced by two pieces of 0.5 m ² sheet.			

Sheet – self-adhesive. Black

Item	Insulation thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
AF-10MM/A	10	500	2	7612207251258	13 m ²
AF-13MM/A	13	500	2	7612207251265	9 m ²
AF-19MM/A	19	500	2	7612207251296	7 m ²
AF-25MM/A	25	500	2	7612207251319	5 m ²
AF-32MM/A	32	500	2	7612207271140	4 m ²
AF-50MM/A	50	500	2	7612207251456	3 m ²
Other information					
Thickness tolerance		7 -19 mm: ±1.5 mm >19 mm: ±2.0 mm			
Length tolerance		± 1.5 %			
Remarks		One 1m ² sheet can be replaced by two pieces of 0.5 m ² sheet.			

Roll - standard. Black

Item	Insulation thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
AF-03MM/E	3	1.000	30	7612207279603	30 m ²
AF-06MM/E	6	1.000	15	7612207279627	15 m ²
AF-10MM/E	10	1.000	10	7612207250831	10 m ²
AF-13MM/E	13	1.000	8	7612207250848	8 m ²
AF-16MM/E	16	1.000	7	7612207250855	7 m ²
AF-19MM/E	19	1.000	6	7612207250862	6 m ²
AF-25MM/E	25	1.000	4	7612207250879	4 m ²
AF-32MM/E	32	1.000	3	7612207250886	3 m ²
AF-50MM/E	50	1.000	5	7612207251012	5 m ²
Other information					
Thickness tolerance		3mm: ±1.0mm 6mm: ±1.0mm 7 - 19mm: ±1.5mm >19mm: ±2.0mm			
Length tolerance		±1.5%			
Remarks		One 1m ² sheet can be replaced by two 0.5 m ² sheets.			

Roll – standard self-adhesive. Black

Item	Insulation thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
AF-03MM/EA	3	1.000	30	7612207279610	30 m ²
AF-06MM/EA	6	1.000	15	7612207279634	15 m ²
AF-10MM/EA	10	1.000	10	7612207251050	10 m ²
AF-13MM/EA	13	1.000	8	7612207251067	8 m ²
AF-16MM/EA	16	1.000	7	7612207251289	7 m ²
AF-19MM/EA	19	1.000	6	7612207251302	6 m ²
AF-25MM/EA	25	1.000	4	7612207251326	4 m ²
AF-32MM/EA	32	1.000	3	7612207271133	3 m ²
AF-50MM/EA	50	1.000	5	7612207319880	5 m ²
Other information					
Thickness tolerance		3mm: ±1.0mm 6mm: ±1.0mm 7 - 19mm: ±1.5mm >19mm: ±2.0mm			
Length tolerance		±1.5%			
Remarks		One 1m ² sheet can be replaced by two 0.5 m ² sheets.			

Tape – insulation. Black

Item	Thickness [mm]	Width [mm]	Length [m]	Content [quantity]
AF-TAPE-MC	3	50	15	12 piece
AF-TAPE-MC/6	3	50	15	6 piece

ArmaFix AF . Pipe support – combi pack. Pipe support and suitable clamp designed for use with AF/ArmaFlex.

AF-2 (insulation thickness: 9.5mm - 16.0mm)						AF-4 (AF-3)* (insulation thickness 15.5 mm - 22.5 mm)					
Pipe Ø [mm]	Also fits pipe OD [mm]	Maximum permissible distance [m]	Item	EAN	Content [quantity]	Pipe Ø [mm]	Also fits pipe OD [mm]	Maximum permissible distance [m]	Item	EAN	Content [quantity]
10	12	2,00	FX-2-10/12K	7612207277241	32 piece	10	12	2,00	FX-4(3)-10/12K	7612207277371	26 piece
15	18	2,00	FX-2-15/18K	7612207277258	24 piece	15	18	2,00	FX-4(3)-15/18K	7612207277388	24 piece
22	25	2,75	FX-2-22/25K	7612207277265	24 piece	22	25	2,75	FX-4(3)-22/25K	7612207277395	12 piece
28	30	3,00	FX-2-28/30K	7612207277272	16 piece	28	30	3,00	FX-4(3)-28/30K	7612207277401	12 piece
35	38	3,50	FX-2-35/38K	7612207277289	12 piece	35	38	3,50	FX-4(3)-35/38K	7612207277418	12 piece
42	45	3,75	FX-2-42/45K	7612207277296	12 piece	42	45	3,75	FX-4(3)-42/45K	7612207277425	12 piece
48		4,25	FX-2-48K	7612207277302	12 piece	48		4,25	FX-4(3)-48K	7612207277432	12 piece
54	57	4,25	FX-2-54/57K	7612207277319	12 piece	54	57	4,25	FX-4(3)-54/57K	7612207277449	16 piece
60	64	4,75	FX-2-60/64K	7612207277326	10 piece	60	64	4,75	FX-4(3)-60/64K	7612207277456	12 piece
70		4,75	FX-2-70K	7612207277333	16 piece	70		4,75	FX-4(3)-70K	7612207277463	12 piece
76	80	5,50	FX-2-76/80K	7612207277340	12 piece	76	80	5,50	FX-4(3)-76/80K	7612207277470	18 piece
89		6,00	FX-2-89K	7612207277357	8 piece	89		6,00	FX-4(3)-89K	7612207277493	14 piece

ArmaFix AF . Pipe support – combi pack. Pipe support and suitable clamp designed for use with AF/ArmaFlex.

AF-2 (insulation thickness: 9.5mm - 16.0mm)						AF-4 (AF-3)* (insulation thickness 15.5 mm - 22.5 mm)					
Pipe Ø [mm]	Also fits pipe OD [mm]	Maximum permissible distance [m]	Item	EAN	Content [quantity]	Pipe Ø [mm]	Also fits pipe OD [mm]	Maximum permissible distance [m]	Item	EAN	Content [quantity]
Other information											
Regulation			Maximum permissible distance according to DIN 1988.								
Remarks			Pipe supports for plastic and stainless-steel pipes available on request. *Suitable for application with tubes of insulation thickness AF-3 and AF-4.								

ArmaFix AF . Pipe support – combi pack. Pipe support and suitable clamp designed for use with AF/ArmaFlex.

AF-6 (insulation thickness: 32.0mm - 45.0mm)					
Pipe Ø [mm]	Also fits pipe OD [mm]	Maximum permissible distance [m]	Item	EAN	Content [quantity]
15	18	2,00	FX-6-15/18K	7612207277487	20 piece
22	25	2,75	FX-6-22/25K	7612207277494	18 piece
28	30	3,00	FX-6-28/30K	7612207277500	12 piece
35	38	3,50	FX-6-35/38K	7612207277517	12 piece
42	45	3,75	FX-6-42/45K	7612207277524	12 piece
48		4,25	FX-6-48K	7612207277531	12 piece
54	57	4,25	FX-6-54/57K	7612207277548	8 piece
60	64	4,75	FX-6-60/64K	7612207277555	10 piece
70		4,75	FX-6-70K	7612207277562	9 piece
76	80	5,50	FX-6-76/80K	7612207277579	6 piece
89		6,00	FX-6-89K	7612207277586	4 piece
Other information					
Regulation		Maximum permissible distance according to DIN 1988.			
Remarks		Pipe supports for plastic and stainless-steel pipes available on request. *Suitable for application with tubes of insulation thickness AF-3 and AF-4.			

ArmaFix AF . Pipe support – donut type

AF-2 (insulation thickness: 9.5mm - 16.0mm)								Related pipe clamp	
Pipe Ø [mm]	Also fits pipe OD [mm]	Maximum permissible distance [m]	Item	Outer diameter range [mm]	Length [mm]	EAN	Content [quantity]	Item	Content [quantity]
10	12	2,00	FX-2-10/12	34 - 36	45	7612207265415	32 piece	-	-
15	18	2,00	FX-2-15/18	40 - 43	45	7612207265422	32 piece	PCX 033/037	25 piece
22	25	2,75	FX-2-22/25	47 - 50	45	7612207265439	32 piece	PCX 042/046	25 piece
28	30	3,00	FX-2-28/30	53 - 56	45	7612207265446	32 piece	PCX 047/052	25 piece
35	38	3,50	FX-2-35/38	61 - 65	50	7612207265453	28 piece	PCX 054/058	25 piece
42	45	3,75	FX-2-42/45	69 - 72	50	7612207265460	28 piece	PCX 063/068	25 piece
48		4,25	FX-2-48	76	55	7612207265477	28 piece	PCX 068/073	10 piece
54	57	4,25	FX-2-54/57	82 - 85	55	7612207265484	28 piece	PCX 072/080	10 piece
60	64	4,75	FX-2-60/64	89 - 92	65	7612207265491	24 piece	PCX 082/085	10 piece
70		4,75	FX-2-70	98	65	7612207265507	24 piece	PCX 092/099	10 piece
76	80	5,50	FX-2-76/80	105 - 109	75	7612207265514	20 piece	PCX 099/103	10 piece
89		6,00	FX-2-89	118	95	7612207265521	16 piece	PCX 112/118	10 piece
102	108	6,00	FX-2-102/108	134 - 141	95	7612207265538	16 piece	PCX 133/137	10 piece

ArmaFix AF . Pipe support – donut type

AF-2 (insulation thickness: 9.5mm - 16.0mm)								Related pipe clamp	
Pipe Ø [mm]	Also fits pipe OD [mm]	Maximum permissible distance [m]	Item	Outer diameter range [mm]	Length [mm]	EAN	Content [quantity]	Item	Content [quantity]
110	114	6,00	FX-2-110/114	140 - 144	115	7612207265545	12 piece	PCX 137/142	10 piece
125		6,00	FX-2-125	158	115	7612207265552	12 piece	PCX 145/152	10 piece
133	140	6,00	FX-2-133/140	165 - 172	115	7612207265569	12 piece	PCX 159/164	10 piece
160		6,00	FX-2-160	193	115	7612207265576	9 piece	PCX 190	10 piece
165	168	6,00	FX-2-165/168	198 - 201	125	7612207265583	9 piece	PCX 199	10 piece
Other information									
Regulation			Maximum permissible distance according to DIN 1988.						
Remarks			Pipe supports for plastic and stainless-steel pipes available on request. Outer diameter is the same as installation diameter. *Suitable for application with tubes of insulation thickness AF-3 and AF-4.						

ArmaFix AF . Pipe support – donut type

AF-4 (AF-3)* (insulation thickness 15.5 mm - 22.5 mm)								Related pipe clamp	
Pipe Ø [mm]	Also fits pipe OD [mm]	Maximum permissible distance [m]	Item	Outer diameter range [mm]	Length [mm]	EAN	Content [quantity]	Item	Content [quantity]
10	12	2,00	FX-4(3)-10/12	46 - 48	55	7612207265590	28 piece	PCX 042/046	25 piece
15	18	2,00	FX-4(3)-15/18	52 - 55	55	7612207265606	28 piece	PCX 042/046	25 piece
22	25	2,75	FX-4(3)-22/25	60 - 64	55	7612207265613	28 piece	PCX 054/058	25 piece
28	30	3,00	FX-4(3)-28/30	66 - 70	55	7612207265620	28 piece	PCX 063/068	25 piece
35	38	3,50	FX-4(3)-35/38	74 - 79	65	7612207265637	24 piece	PCX 068/073	10 piece
42	45	3,75	FX-4(3)-42/45	85 - 88	65	7612207265644	24 piece	PCX 072/080	10 piece
48		4,25	FX-4(3)-48	91	65	7612207265651	24 piece	PCX 082/085	10 piece
54	57	4,25	FX-4(3)-54/57	98 - 101	65	7612207265668	24 piece	PCX 088/092	10 piece
60	64	4,75	FX-4(3)-60/64	105 - 109	75	7612207265675	20 piece	PCX 099/103	10 piece
70		4,75	FX-4(3)-70	116	75	7612207265682	20 piece	PCX 108/112	10 piece
76	80	5,50	FX-4(3)-76/80	122 - 127	85	7612207265699	16 piece	PCX 112/118	10 piece
89		6,00	FX-4(3)-89	136	100	7612207265705	12 piece	PCX 133/137	10 piece
102	108	6,00	FX-4(3)-102/108	149 - 156	100	7612207265712	12 piece	PCX 137/142	10 piece
110	114	6,00	FX-4(3)-110/114	158 - 162	100	7612207265729	12 piece	PCX 145/152	10 piece
125		6,00	FX-4(3)-125	173	115	7612207265736	12 piece	PCX 168/173	10 piece
133	140	6,00	FX-4(3)-133/140	183 - 189	115	7612207265743	12 piece	PCX 190	10 piece
160		6,00	FX-4(3)-160	210	115	7612207265750	6 piece	PCX 206	10 piece
165	168	6,00	FX-4(3)-165/168	216 - 219	125	7612207265767	6 piece	PCX 222	10 piece
204		6,00	FX-4(3)-204	255	170	7612207265774	4 piece	-	-
216	219	6,00	FX-4(3)-216/219	267 - 270	170	7612207265781	4 piece	-	-
254		6,00	FX-4(3)-254	305	170	7612207265798	3 piece	-	-
267	273	6,00	FX-4(3)-267/273	318 - 324	170	7612207265804	3 piece	-	-
306		6,00	FX-4(3)-306	357	215	7612207265811	1 piece	-	-
324		4,50	FX-4(3)-324	375	215	7612207265828	1 piece	-	-
356		4,20	FX-4(3)-356	407	215	7612207265835	6 piece	-	-
406		4,20	FX-4(3)-406	457	215	7612207265842	6 piece	-	-

ArmaFix AF . Pipe support – donut type

AF-4 (AF-3)* (insulation thickness 15.5 mm - 22.5 mm)								Related pipe clamp	
Pipe Ø [mm]	Also fits pipe OD [mm]	Maximum permissible distance [m]	Item	Outer diameter range [mm]	Length [mm]	EAN	Content [quantity]	Item	Content [quantity]
457		3,70	FX-4(3)-457	508	215	7612207265859	4 piece	-	-
508		3,40	FX-4(3)-508	559	215	7612207265866	4 piece	-	-
610		2,90	FX-4(3)-610	661	215	7612207265873	2 piece	-	-
Other information									
Regulation			Maximum permissible distance according to DIN 1988.						
Remarks			Pipe supports for plastic and stainless-steel pipes available on request. Outer diameter is the same as installation diameter. *Suitable for application with tubes of insulation thickness AF-3 and AF-4.						

ArmaFix AF . Pipe support – donut type

AF-6 (insulation thickness: 32.0mm - 45.0mm)								Related pipe clamp	
Pipe Ø [mm]	Also fits pipe OD [mm]	Maximum permissible distance [m]	Item	Outer diameter range [mm]	Length [mm]	EAN	Content [quantity]	Item	Content [quantity]
10	12	2,00	FX-6-10/12	68 - 71	75	7612207390254	20 piece	PCX 063/068	25 piece
15	18	2,00	FX-6-15/18	74 - 77	75	7612207265880	20 piece	PCX 068/073	10 piece
22	25	2,75	FX-6-22/25	80 - 84	75	7612207265897	20 piece	PCX 072/080	10 piece
28	30	3,00	FX-6-28/30	91 - 95	75	7612207265903	20 piece	PCX 082/085	10 piece
35	38	3,50	FX-6-35/38	104 - 109	85	7612207265910	16 piece	PCX 099/103	10 piece
42	45	3,75	FX-6-42/45	113 - 116	85	7612207265927	16 piece	PCX 099/103	10 piece
48		4,25	FX-6-48	119	85	7612207265934	16 piece	PCX 112/118	10 piece
54	57	4,25	FX-6-54/57	126 - 129	85	7612207265941	16 piece	PCX 112/118	10 piece
60	64	4,75	FX-6-60/64	134 - 137	100	7612207265958	12 piece	PCX 133/137	10 piece
70		4,75	FX-6-70	144	100	7612207265965	12 piece	PCX 137/142	10 piece
76	80	5,50	FX-6-76/80	152 - 156	115	7612207265972	12 piece	PCX 137/142	10 piece
89		6,00	FX-6-89	167	125	7612207265989	12 piece	PCX 159/164	10 piece
102	108	6,00	FX-6-102/108	179 - 188	125	7612207265996	12 piece	PCX 190	10 piece
110	114	6,00	FX-6-110/114	188 - 196	145	7612207266009	12 piece	PCX 199	10 piece
125		6,00	FX-6-125	207	145	7612207266016	12 piece	PCX 206	10 piece
133	140	6,00	FX-6-133/140	219 - 225	145	7612207266023	8 piece	PCX 231	10 piece
160		6,00	FX-6-160	248	145	7612207266030	6 piece	PCX 249	10 piece
165	168	6,00	FX-6-165/168	254 - 257	165	7612207266047	5 piece	PCX 259	10 piece
204		6,00	FX-6-204	305	215	7612207266054	3 piece	-	-
216	219	6,00	FX-6-216/219	317 - 320	215	7612207266061	1 piece	-	-
254		6,00	FX-6-254	355	215	7612207266078	1 piece	-	-
267	273	6,00	FX-6-267/273	368 - 374	215	7612207266085	1 piece	-	-
306		6,00	FX-6-306	407	215	7612207266092	6 piece	-	-
324		4,50	FX-6-324	425	215	7612207266108	6 piece	-	-
356		4,20	FX-6-356	457	215	7612207266115	6 piece	-	-
406		4,20	FX-6-406	507	215	7612207266122	2 piece	-	-
457		3,70	FX-6-457	558	215	7612207266139	2 piece	-	-
508		3,40	FX-6-508	609	215	7612207266146	2 piece	-	-

ArmaFix AF . Pipe support – donut type

AF-6 (insulation thickness: 32.0mm - 45.0mm)								Related pipe clamp	
Pipe Ø [mm]	Also fits pipe OD [mm]	Maximum permissible distance [m]	Item	Outer diameter range [mm]	Length [mm]	EAN	Content [quantity]	Item	Content [quantity]
610		2,90	FX-6-610	711	215	7612207266153	2 piece	-	-
Other information									
Regulation			Maximum permissible distance according to DIN 1988.						
Remarks			Pipe supports for plastic and stainless-steel pipes available on request. Outer diameter is the same as installation diameter. *Suitable for application with tubes of insulation thickness AF-3 and AF-4.						

ArmaFix AF . Duct support

Item	Insulation thickness [mm]	Width [mm]	Length [m]	EAN	Content [quantity]
AS-13MM	13	100	2	7612207470154	7 piece
AS-19MM	19	100	2	7612207335873	5 piece
AS-25MM	25	100	2	7612207323818	4 piece
AS-32MM	32	100	2	7612207337839	3 piece
AS-50MM	50	100	2	7612207337846	2 piece



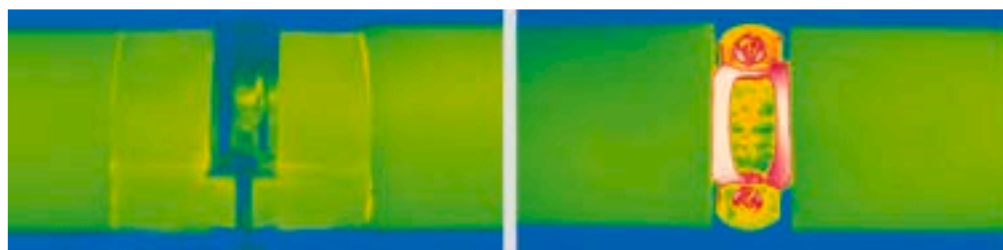
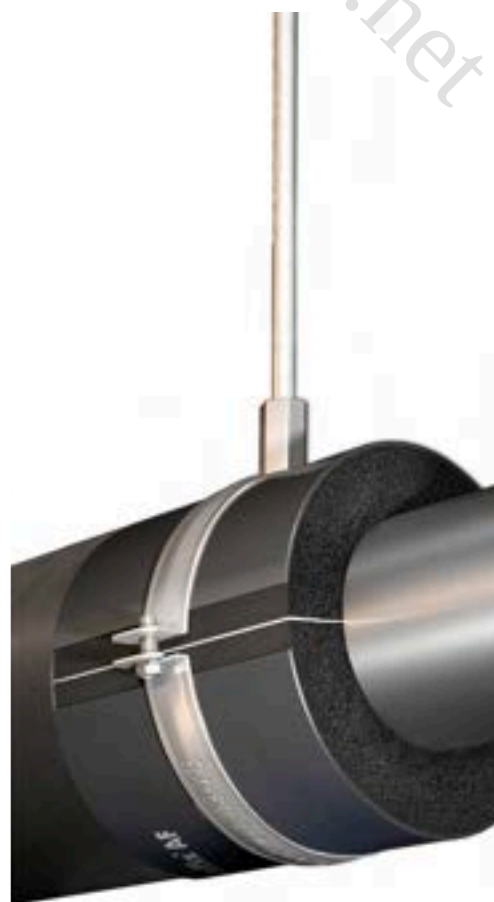
INSTALL IT. TRUST IT.

ArmaFix AF

The cutting-edge pipe support

- // Reliable prevention of thermal bridges
- // Environmentally-friendly, lightweight PET load bearing segments
- // Fast installation thanks to self-adhesive closure
- // Extended warranty with ArmaFlex

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TECHNICAL DATA - ARMAFIX AF

Brief description	Pipe and duct support for refrigeration and air-conditioning installations to prevent condensation at fixing points. Thermally non-interacting single piece, with 2 ArmaForm PET foam sections and with self-adhesive closure. All dimensions are matching the AF/ArmaFlex and AF/ArmaFlex Evo range.
Material type	PET- foam bearing segments, embedded in and glued to AF/ArmaFlex elastomeric foam material. Outside bearing shells made of painted aluminium sheeting 0.8 mm thick, which simultaneously serves as a vapour barrier for the PET bearing segments.
Product colour range	Black grey
Special features	Traces of silicone can be found on the protection paper / foil used to protect self-adhesive closures.
Applications	When used in installations with intermittent temperatures, thermal length extensions may cause inherent pressure in the installation; this needs to be considered in the overall insulation construction.

Property	Value / Assessment			Standard / Test method
Temperature range				
Service temperature	Range	Min. °C ¹	Max. °C	EN 14706, EN 14707, EN 14304
	Full range	-50	110	
Thermal conductivity				
Remarks	Same as AF/ArmaFlex. Same as AF/ArmaFlex Evo.			EN ISO 13787, EN 12667, EN ISO 8497
Fire Performance and Approvals				
Reaction to fire	Euroclass: E (L) Entire System with AF/ArmaFlex: B / B(L)-s3, d0 Entire System with AF/ArmaFlex Evo: B / B(L)-s2, d0			EN 13501-1, EN 13823, EN ISO 11925-2
Surface flammability ²	low-flammable - 2010 FTP-Code (MED 96/98/EC, Module D)			IMO 2010 FTP Code, Part 5
Fire performance				
Practical fire behaviour	Self extinguishing, does not drip, does not spread flames.			
Resistance to water vapour				
Water vapour diffusion resistance factor	Same as AF/ArmaFlex Same as AF/ArmaFlex Evo			EN 12086, EN 13469
Physical attributes				
Density	95 - 105 kg/m³ (pipe bearing segments)			
Acoustic performance				
Reduction of structure-borne sound transmission	in combination with AF/ArmaFlex ≤ 28 dB(A)			EN ISO 3822-1
Health and environment				
Additional features	MCCP-free			
Other technical features				
Shelf life	3 years			
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).			

¹ For temperatures below -50 °C please contact our Customer Service Center to request for the corresponding technical information.² According to IMO 2010 FTP Code annex 2, clause 2.2 a fire technical test for smoke density and toxicity is not necessary.

Pipe support – combi pack. Pipe support and suitable clamp designed for use with AF/ArmaFlex.

AF-2 (insulation thickness: 9.5mm - 16.0mm)						AF-4 (AF-3)* (insulation thickness 15.5 mm - 22.5 mm)					
Pipe Ø [mm]	Also fits pipe OD [mm]	Maximum permissible distance [m]	Item	EAN	Content [quantity]	Pipe Ø [mm]	Also fits pipe OD [mm]	Maximum permissible distance [m]	Item	EAN	Content [quantity]
10	12	2,00	FX-2-10/12K	7612207277241	32 piece	10	12	2,00	FX-4(3)-10/12K	7612207277371	26 piece
15	18	2,00	FX-2-15/18K	7612207277258	24 piece	15	18	2,00	FX-4(3)-15/18K	7612207277388	24 piece
22	25	2,75	FX-2-22/25K	7612207277265	24 piece	22	25	2,75	FX-4(3)-22/25K	7612207277395	12 piece
28	30	3,00	FX-2-28/30K	7612207277272	16 piece	28	30	3,00	FX-4(3)-28/30K	7612207277401	12 piece
35	38	3,50	FX-2-35/38K	7612207277289	12 piece	35	38	3,50	FX-4(3)-35/38K	7612207277418	12 piece
42	45	3,75	FX-2-42/45K	7612207277296	12 piece	42	45	3,75	FX-4(3)-42/45K	7612207277425	12 piece
48		4,25	FX-2-48K	7612207277302	12 piece	48		4,25	FX-4(3)-48K	7612207277432	12 piece
54	57	4,25	FX-2-54/57K	7612207277319	12 piece	54	57	4,25	FX-4(3)-54/57K	7612207277449	16 piece
60	64	4,75	FX-2-60/64K	7612207277326	10 piece	60	64	4,75	FX-4(3)-60/64K	7612207277456	12 piece
70		4,75	FX-2-70K	7612207277333	16 piece	70		4,75	FX-4(3)-70K	7612207277463	12 piece
76	80	5,50	FX-2-76/80K	7612207277340	12 piece	76	80	5,50	FX-4(3)-76/80K	7612207277470	18 piece
89		6,00	FX-2-89K	7612207277357	8 piece	89		6,00	FX-4(3)-89K	7612207277493	14 piece

Other information

Regulation Maximum permissible distance according to DIN 1988.

Remarks Pipe supports for plastic and stainless-steel pipes available on request.
*Suitable for application with tubes of insulation thickness AF-3 and AF-4.

Pipe support – combi pack. Pipe support and suitable clamp designed for use with AF/ArmaFlex.

AF-6 (insulation thickness: 32.0mm - 45.0mm)					
Pipe Ø [mm]	Also fits pipe OD [mm]	Maximum permissible distance [m]	Item	EAN	Content [quantity]
15	18	2,00	FX-6-15/18K	7612207277487	20 piece
22	25	2,75	FX-6-22/25K	7612207277494	18 piece
28	30	3,00	FX-6-28/30K	7612207277500	12 piece
35	38	3,50	FX-6-35/38K	7612207277517	12 piece
42	45	3,75	FX-6-42/45K	7612207277524	12 piece
48		4,25	FX-6-48K	7612207277531	12 piece
54	57	4,25	FX-6-54/57K	7612207277548	8 piece
60	64	4,75	FX-6-60/64K	7612207277555	10 piece
70		4,75	FX-6-70K	7612207277562	9 piece
76	80	5,50	FX-6-76/80K	7612207277579	6 piece
89		6,00	FX-6-89K	7612207277586	4 piece

Other information

Regulation Maximum permissible distance according to DIN 1988.

Remarks Pipe supports for plastic and stainless-steel pipes available on request.
*Suitable for application with tubes of insulation thickness AF-3 and AF-4.

Pipe support – donut type

AF-2 (insulation thickness: 9.5mm - 16.0mm)								Related pipe clamp	
Pipe Ø [mm]	Also fits pipe OD [mm]	Maximum permissible distance [m]	Item	Outer diameter range [mm]	Length [mm]	EAN	Content [quantity]	Item	Content [quantity]
10	12	2,00	FX-2-10/12	34 - 36	45	7612207265415	32 piece	-	-
15	18	2,00	FX-2-15/18	40 - 43	45	7612207265422	32 piece	PCX 033/037	25 piece
22	25	2,75	FX-2-22/25	47 - 50	45	7612207265439	32 piece	PCX 042/046	25 piece
28	30	3,00	FX-2-28/30	53 - 56	45	7612207265446	32 piece	PCX 047/052	25 piece
35	38	3,50	FX-2-35/38	61 - 65	50	7612207265453	28 piece	PCX 054/058	25 piece
42	45	3,75	FX-2-42/45	69 - 72	50	7612207265460	28 piece	PCX 063/068	25 piece
48		4,25	FX-2-48	76	55	7612207265477	28 piece	PCX 068/073	10 piece
54	57	4,25	FX-2-54/57	82 - 85	55	7612207265484	28 piece	PCX 072/080	10 piece
60	64	4,75	FX-2-60/64	89 - 92	65	7612207265491	24 piece	PCX 082/085	10 piece
70		4,75	FX-2-70	98	65	7612207265507	24 piece	PCX 092/099	10 piece
76	80	5,50	FX-2-76/80	105 - 109	75	7612207265514	20 piece	PCX 099/103	10 piece
89		6,00	FX-2-89	118	95	7612207265521	16 piece	PCX 112/118	10 piece
102	108	6,00	FX-2-102/108	134 - 141	95	7612207265538	16 piece	PCX 133/137	10 piece
110	114	6,00	FX-2-110/114	140 - 144	115	7612207265545	12 piece	PCX 137/142	10 piece
125		6,00	FX-2-125	158	115	7612207265552	12 piece	PCX 145/152	10 piece
133	140	6,00	FX-2-133/140	165 - 172	115	7612207265569	12 piece	PCX 159/164	10 piece
160		6,00	FX-2-160	193	115	7612207265576	9 piece	PCX 190	10 piece
165	168	6,00	FX-2-165/168	198 - 201	125	7612207265583	9 piece	PCX 199	10 piece

Other information

Regulation

Maximum permissible distance according to DIN 1988.

Remarks

Pipe supports for plastic and stainless-steel pipes available on request.
 Outer diameter is the same as installation diameter.
 *Suitable for application with tubes of insulation thickness AF-3 and AF-4.

Pipe support – donut type

AF-4 (AF-3)* (insulation thickness 15.5 mm - 22.5 mm)								Related pipe clamp	
Pipe Ø [mm]	Also fits pipe OD [mm]	Maximum permissible distance [m]	Item	Outer diameter range [mm]	Length [mm]	EAN	Content [quantity]	Item	Content [quantity]
10	12	2,00	FX-4(3)-10/12	46 - 48	55	7612207265590	28 piece	PCX 042/046	25 piece
15	18	2,00	FX-4(3)-15/18	52 - 55	55	7612207265606	28 piece	PCX 042/046	25 piece
22	25	2,75	FX-4(3)-22/25	60 - 64	55	7612207265613	28 piece	PCX 054/058	25 piece
28	30	3,00	FX-4(3)-28/30	66 - 70	55	7612207265620	28 piece	PCX 063/068	25 piece
35	38	3,50	FX-4(3)-35/38	74 - 79	65	7612207265637	24 piece	PCX 068/073	10 piece
42	45	3,75	FX-4(3)-42/45	85 - 88	65	7612207265644	24 piece	PCX 072/080	10 piece
48		4,25	FX-4(3)-48	91	65	7612207265651	24 piece	PCX 082/085	10 piece
54	57	4,25	FX-4(3)-54/57	98 - 101	65	7612207265668	24 piece	PCX 088/092	10 piece
60	64	4,75	FX-4(3)-60/64	105 - 109	75	7612207265675	20 piece	PCX 099/103	10 piece
70		4,75	FX-4(3)-70	116	75	7612207265682	20 piece	PCX 108/112	10 piece
76	80	5,50	FX-4(3)-76/80	122 - 127	85	7612207265699	16 piece	PCX 112/118	10 piece
89		6,00	FX-4(3)-89	136	100	7612207265705	12 piece	PCX 133/137	10 piece
102	108	6,00	FX-4(3)-102/108	149 - 156	100	7612207265712	12 piece	PCX 137/142	10 piece

Pipe support – donut type

AF-4 (AF-3)* (insulation thickness 15.5 mm - 22.5 mm)								Related pipe clamp	
Pipe Ø [mm]	Also fits pipe OD [mm]	Maximum permissible distance [m]	Item	Outer diameter range [mm]	Length [mm]	EAN	Content [quantity]	Item	Content [quantity]
110	114	6,00	FX-4(3)-110/114	158 - 162	100	7612207265729	12 piece	PCX 145/152	10 piece
125		6,00	FX-4(3)-125	173	115	7612207265736	12 piece	PCX 168/173	10 piece
133	140	6,00	FX-4(3)-133/140	183 - 189	115	7612207265743	12 piece	PCX 190	10 piece
160		6,00	FX-4(3)-160	210	115	7612207265750	6 piece	PCX 206	10 piece
165	168	6,00	FX-4(3)-165/168	216 - 219	125	7612207265767	6 piece	PCX 222	10 piece
204		6,00	FX-4(3)-204	255	170	7612207265774	4 piece	-	-
216	219	6,00	FX-4(3)-216/219	267 - 270	170	7612207265781	4 piece	-	-
254		6,00	FX-4(3)-254	305	170	7612207265798	3 piece	-	-
267	273	6,00	FX-4(3)-267/273	318 - 324	170	7612207265804	3 piece	-	-
306		6,00	FX-4(3)-306	357	215	7612207265811	1 piece	-	-
324		4,50	FX-4(3)-324	375	215	7612207265828	1 piece	-	-
356		4,20	FX-4(3)-356	407	215	7612207265835	6 piece	-	-
406		4,20	FX-4(3)-406	457	215	7612207265842	6 piece	-	-
457		3,70	FX-4(3)-457	508	215	7612207265859	4 piece	-	-
508		3,40	FX-4(3)-508	559	215	7612207265866	4 piece	-	-
610		2,90	FX-4(3)-610	661	215	7612207265873	2 piece	-	-

Other information

Regulation

Maximum permissible distance according to DIN 1988.

Remarks

Pipe supports for plastic and stainless-steel pipes available on request.
 Outer diameter is the same as installation diameter.
 *Suitable for application with tubes of insulation thickness AF-3 and AF-4.

Pipe support – donut type

AF-6 (insulation thickness: 32.0mm - 45.0mm)								Related pipe clamp	
Pipe Ø [mm]	Also fits pipe OD [mm]	Maximum permissible distance [m]	Item	Outer diameter range [mm]	Length [mm]	EAN	Content [quantity]	Item	Content [quantity]
10	12	2,00	FX-6-10/12	68 - 71	75	7612207390254	20 piece	PCX 063/068	25 piece
15	18	2,00	FX-6-15/18	74 - 77	75	7612207265880	20 piece	PCX 068/073	10 piece
22	25	2,75	FX-6-22/25	80 - 84	75	7612207265897	20 piece	PCX 072/080	10 piece
28	30	3,00	FX-6-28/30	91 - 95	75	7612207265903	20 piece	PCX 082/085	10 piece
35	38	3,50	FX-6-35/38	104 - 109	85	7612207265910	16 piece	PCX 099/103	10 piece
42	45	3,75	FX-6-42/45	113 - 116	85	7612207265927	16 piece	PCX 099/103	10 piece
48		4,25	FX-6-48	119	85	7612207265934	16 piece	PCX 112/118	10 piece
54	57	4,25	FX-6-54/57	126 - 129	85	7612207265941	16 piece	PCX 112/118	10 piece
60	64	4,75	FX-6-60/64	134 - 137	100	7612207265958	12 piece	PCX 133/137	10 piece
70		4,75	FX-6-70	144	100	7612207265965	12 piece	PCX 137/142	10 piece
76	80	5,50	FX-6-76/80	152 - 156	115	7612207265972	12 piece	PCX 137/142	10 piece
89		6,00	FX-6-89	167	125	7612207265989	12 piece	PCX 159/164	10 piece
102	108	6,00	FX-6-102/108	179 - 188	125	7612207265996	12 piece	PCX 190	10 piece
110	114	6,00	FX-6-110/114	188 - 196	145	7612207266009	12 piece	PCX 199	10 piece
125		6,00	FX-6-125	207	145	7612207266016	12 piece	PCX 206	10 piece

Pipe support – donut type

AF-6 (insulation thickness: 32.0mm - 45.0mm)								Related pipe clamp	
Pipe Ø [mm]	Also fits pipe OD [mm]	Maximum permissible distance [m]	Item	Outer diameter range [mm]	Length [mm]	EAN	Content [quantity]	Item	Content [quantity]
133	140	6,00	FX-6-133/140	219 - 225	145	7612207266023	8 piece	PCX 231	10 piece
160		6,00	FX-6-160	248	145	7612207266030	6 piece	PCX 249	10 piece
165	168	6,00	FX-6-165/168	254 - 257	165	7612207266047	5 piece	PCX 259	10 piece
204		6,00	FX-6-204	305	215	7612207266054	3 piece	-	-
216	219	6,00	FX-6-216/219	317 - 320	215	7612207266061	1 piece	-	-
254		6,00	FX-6-254	355	215	7612207266078	1 piece	-	-
267	273	6,00	FX-6-267/273	368 - 374	215	7612207266085	1 piece	-	-
306		6,00	FX-6-306	407	215	7612207266092	6 piece	-	-
324		4,50	FX-6-324	425	215	7612207266108	6 piece	-	-
356		4,20	FX-6-356	457	215	7612207266115	6 piece	-	-
406		4,20	FX-6-406	507	215	7612207266122	2 piece	-	-
457		3,70	FX-6-457	558	215	7612207266139	2 piece	-	-
508		3,40	FX-6-508	609	215	7612207266146	2 piece	-	-
610		2,90	FX-6-610	711	215	7612207266153	2 piece	-	-

Other information

Regulation

Maximum permissible distance according to DIN 1988.

Remarks

Pipe supports for plastic and stainless-steel pipes available on request.
 Outer diameter is the same as installation diameter.
 *Suitable for application with tubes of insulation thickness AF-3 and AF-4.

Duct support

Item	Insulation thickness [mm]	Width [mm]	Length [m]	EAN	Content [quantity]
AS-13MM	13	100	2	7612207470154	7 piece
AS-19MM	19	100	2	7612207335873	5 piece
AS-25MM	25	100	2	7612207323818	4 piece
AS-32MM	32	100	2	7612207337839	3 piece
AS-50MM	50	100	2	7612207337846	2 piece

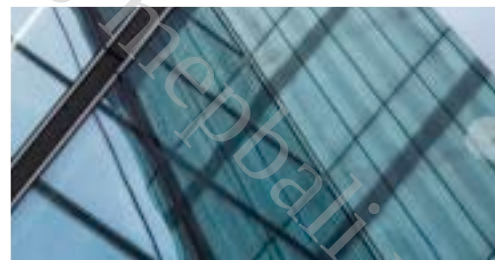
INSTALL IT. TRUST IT.

NH/ArmaFlex Smart

Halogen-free insulation without compromises

- // Increases equipment life cycle
- // High flexibility and ease of installation
- // Reliable condensation control and prevention of corrosion under insulation (CUI)

www.armacell.com



 **armacell**
ArmaFlex®

INSTALL IT. TRUST IT.

NH/ArmaFlex® Smart

We are taking our halogen-free insulation material to the next level. Our NH/ArmaFlex Smart is a highly flexible elastomeric foam, which is faster and easier to install. A unique new technology which will make a real difference for our customers and the industry.

NH/ArmaFlex Smart. Innovation reloaded.



// Resistant to uv-light and ageing

NH/ArmaFlex Smart has excellent UV and ageing resistance. The resistance to light ageing was confirmed in accelerated radiation tests. The halogen-free insulation material has outstanding light stability. Indoors it can be exposed to natural and artificial light without the need for additional cladding.

// Excellent fire behaviour

NH/ArmaFlex Smart releases 50 percent less smoke than conventional flexible elastomeric foam products. In the event of a fire, smoke hinders visibility, makes it difficult to locate escape and rescue routes. Today, therefore, experts attach greater importance to smoke development and smoke density than to heat release.

// Less consequential fire damage

In a fire, NH/ArmaFlex Smart does not release corrosive gases, which in combination with extinguishing water can form aggressive acids. In areas requiring special protection, such as data centres or clean room industries, the consequential fire damage can soon amount to many times the cost of the actual fire damage.

// Reliable thermal and condensation control

Thanks to its low thermal conductivity and high resistance to water vapour diffusion, the closed-cell NH/ArmaFlex Smart ensures reliable condensation control and high energy savings in the long-term. This also minimises the risk of corrosion under the insulation. of 25 mm.

Pascal Beuing

Insulator at Schmengler Dämmtechnik Havixbeck (Germany)

"Wow! That's how flexible a halogen-free insulation tube can be.

The new material feels completely different. The surface is much smoother and the product is altogether more stable. Armacell has reinvented NH/ArmaFlex."

50%
LESS
SMOKE

Halogen-free insulation without compromises.

// Prevents stress corrosion cracking

Stress corrosion cracking can occur on austenitic stainless steels when stresses, moisture and chlorine ions occur simultaneously. As a halogen-free product, NH/ArmaFlex Smart can minimise the risk of stress corrosion cracking.

Armacell has developed the new ArmaFlex 750 adhesive to be used with NH/ArmaFlex Smart.



// System solution for maximum reliability

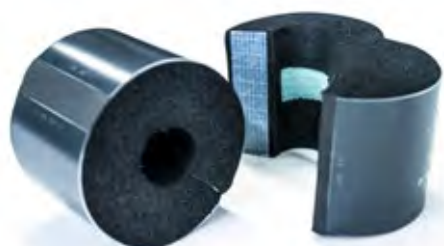
The ArmaFix NH Smart pipe support thermally isolates the pipe and its fixing from each other and, together with the adjoining NH/ArmaFlex Smart insulation, forms an insulation system for refrigeration equipment which is reliable in the long-term.

// High environmental sustainability

NH/ArmaFlex Smart is halogen-free, it contains neither PVC nor chlorinated polyethylene. It is produced without adding brominated flame retardants and is free of chlorinated paraffins. Short-chain chlorinated paraffins are considered hazardous to health and the environment and their production has been discontinued in Europe. NH/ArmaFlex Smart contains neither short-, medium- nor long-chain chlorinated paraffins. The product meets the German Sustainable Building Council's highest quality level for flame-retardant building products.

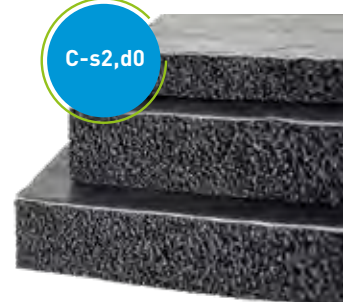
// NH/ArmaFlex Smart C. Flame-retardant sheets

With our new NH/ArmaFlex Smart C, we now offer halogen-free, flame-retardant and low-smoke insulation sheets. Especially engineered for the insulation of airducts and tanks, this pre-covered material provides a high level of protection against mechanical impact and is easy to clean. Unlike traditional insulation materials and jackets, the pre-covered sheets can be applied cost-efficiently in a single step. What's more, the black surface is highly absorptive and thinner insulation thicknesses can be installed to control condensation.



The load-bearing segments are based of environmentally friendly, recycled PET.

C-s2,d0



TECHNICAL DATA - NH/ARMAFLEX SMART

Brief description	NH/ArmaFlex Smart is the new generation halogen-free, flexible closed-cell insulation material with certification for use in any building and construction types.
Material type	Factory-made flexible elastomeric foam based on ethylene propylene diene methylene (EPDM), according to EN 14304.
Additional material information	Self-adhesive coating: pressure-sensitive adhesive coating on modified acrylate basis with mesh structure, covered with polyethylene foil. Traces of silicon can be found on the protection paper/foil used to protect self-adhesive closures.
Product colour range	Black
Special features	Halogen-free (chloride, bromide) acc. to DIN / VDE 0472, part 815.
Applications	Insulation/protection for pipes, air ducts, vessels (including elbows, fittings, flanges, etc.) of air-conditioning/refrigeration, ventilation and process equipment to prevent condensation and save energy.
Installation	ArmaFlex 750 adhesive is a certified and compatible adhesive for a long-term performing system.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature	Min. °C ¹	Max. °C ²	EN 14706, EN 14707, EN 14304
	-50	110	
Thermal conductivity			
Declared thermal conductivity	Øm	+/- 0 °C	EN ISO 13787, EN 12667, EN ISO 8497
	λd ≤ [W/(m·K)]	0,040	
	Formula	[40 + 0,1· Øm + 0,0009 · Øm²]/1000	
Fire Performance and Approvals			
Reaction to fire	Tubes, open tubes: D(L)-s2, d0 Sheets, tape: E		EN 13501-1, EN 13823, EN ISO 11925-2
UL standards			
UL 94 HBF ³	Pass		ISO 9772, UL 94, UL 746B
Fire performance			
Practical fire behaviour	self-extinguishing, does not drip, does not spread flames		
Resistance to water vapour			
Water vapour diffusion resistance factor	μ ≥ 2000		EN 12086, EN 13469
Physical attributes			
Dimensions and tolerances	In accordance with EN 14304, table 1		EN 822, EN 823, EN 13467
Weather and UV resistance			
UV resistance ⁴	High. (see Technical Bulletin no. 142)		
Health and environment			
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
Environmental Product Declaration (EPD)	Type III Environmental Product Declaration (EPD): Declaration number “EPD-ARM-20220037-IBB1-EN”, Institut Bauen und Umwelt e.V. (IBU)		ISO 14025, EN 15804+A2
Green building assessment	Meets the sustainable construction requirements for LEED v4.1, BREEAM international and DGNB.		
Additional features	SCCP, MCCP, LCCP-free		

Property	Value / Assessment	Standard / Test method
Other technical features		
Shelf life	Self-adhesive tapes, self-adhesive sheets: 1 year	
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).	

¹ For temperatures below -50 °C please contact our Customer Service Center to request for the corresponding technical information.

² +85 °C, for products with a self-adhesive layer.

³ Only for products without self-adhesive-layer.

⁴ If ArmaFlex is used outdoors or in applications under UV radiation, it should be protected with ArmaFinish Paint, or a covering such as ArmaClad Arma-Chek within 3 days of installation.

Tube – standard. Black / Anthracite. Length: 2.0m

9 mm				13 mm				19 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]
10	NHS-09X010	7612207488678	192 m	10	NHS-13X010	7612207487985	140 m	15	NHS-19X015	7612207488241	64 m
12	NHS-09X012	7612207488708	172 m	12	NHS-13X012	7612207487992	130 m	18	NHS-19X018	7612207488265	58 m
15	NHS-09X015	7612207488715	144 m	15	NHS-13X015	7612207488029	112 m	22	NHS-19X022	7612207488289	50 m
18	NHS-09X018	7612207488722	130 m	18	NHS-13X018	7612207488012	98 m	28	NHS-19X028	7612207488302	48 m
22	NHS-09X022	7612207488685	108 m	22	NHS-13X022	7612207488043	84 m	35	NHS-19X035	7612207488326	32 m
28	NHS-09X028	7612207488692	82 m	28	NHS-13X028	7612207488067	64 m	42	NHS-19X042	7612207488340	24 m
35	NHS-09X035	7612207488739	60 m	35	NHS-13X035	7612207488104	50 m	48	NHS-19X048	7612207488364	22 m
42	NHS-09X042	7612207488746	50 m	42	NHS-13X042	7612207488128	40 m	54	NHS-19X054	7612207488388	18 m
48	NHS-09X048	7612207487954	42 m	48	NHS-13X048	7612207488142	32 m	60	NHS-19X060	7612207488401	18 m
-	-	-	-	54	NHS-13X054	7612207488166	32 m	76	NHS-19X076	7612207488425	16 m
-	-	-	-	60	NHS-13X060	7612207488180	28 m	89	NHS-19X089	7612207488449	16 m
-	-	-	-	76	NHS-13X076	7612207488203	24 m	114	NHS-19X114	7612207487886	8 m
-	-	-	-	89	NHS-13X089	7612207488210	18 m	-	-	-	-

Other information

Thickness tolerance 9 mm, 13 mm : ±1,5 mm
 19 mm, 25 mm, 32 mm : ±2,5 mm

Length tolerance ±1,5%

Tube – standard. Black / Anthracite. Length: 2.0m

25 mm				32 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]
12	NHS-25X012	7612207488487	50 m	15	NHS-32X015	7612207488753	32 m
15	NHS-25X015	7612207488494	40 m	18	NHS-32X018	7612207488760	30 m
18	NHS-25X018	7612207488500	36 m	22	NHS-32X022	7612207488777	28 m
22	NHS-25X022	7612207488517	36 m	28	NHS-32X028	7612207487916	24 m
28	NHS-25X028	7612207488524	32 m	35	NHS-32X035	7612207487923	18 m
35	NHS-25X035	7612207488531	24 m	42	NHS-32X042	7612207487800	16 m
42	NHS-25X042	7612207488548	20 m	48	NHS-32X048	7612207487817	12 m
48	NHS-25X048	7612207488555	16 m	54	NHS-32X054	7612207487855	12 m
54	NHS-25X054	7612207488562	16 m	60	NHS-32X060	7612207487862	10 m
60	NHS-25X060	7612207488579	16 m	76	NHS-32X076	7612207487879	8 m
76	NHS-25X076	7612207488586	12 m	89	NHS-32X089	7612207487824	6 m
89	NHS-25X089	7612207488593	12 m	108	NHS-32X108	7612207487831	4 m
114	NHS-25X114	7612207487893	6 m	114	NHS-32X114	7612207487848	4 m
125	NHS-25X125	7612207487909	4 m	125	NHS-32X125	7612207487930	4 m

Tube – standard. Black / Anthracite. Length: 2.0m

25 mm				32 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]
-	-	-	-	140	NHS-32X140	7612207487947	4 m
Other information							
Thickness tolerance		9 mm, 13 mm : ±1,5 mm 19 mm, 25 mm, 32 mm : ±2,5 mm					
Length tolerance		±1,5%					

Roll – standard. Black / Anthracite

Item	Insulation thickness [mm]	Length [m]	EAN	Content [metric]
NHS-03-99/E	3	30	7612207488081	30 m ²
NHS-06-99/E	6	15	7612207488654	15 m ²
NHS-10-99/E	10	10	7612207487961	10 m ²
NHS-13-99/E	13	8	7612207488227	8 m ²
NHS-19-99/E	19	6	7612207488463	6 m ²
NHS-25-99/E	25	4	7612207488609	4 m ²
NHS-32-99/E	32	3	7612207488623	3 m ²
Other information				
Thickness tolerance		3 mm - 6 mm : ±1,0 mm 9 mm - 19 mm : ±1,5 mm 25 mm - 32 mm : ±2,0 mm		
Length tolerance		1,5 % - + 5%		

Roll – standard self-adhesive. Black / Anthracite

Item	Insulation thickness [mm]	Length [m]	EAN	Content [metric]
NHS-03-99/EA	3	30	7612207488647	30 m ²
NHS-06-99/EA	6	15	7612207488661	15 m ²
NHS-10-99/EA	10	10	7612207487978	10 m ²
NHS-13-99/EA	13	8	7612207488234	8 m ²
NHS-19-99/EA	19	6	7612207488470	6 m ²
NHS-25-99/EA	25	4	7612207488616	4 m ²
NHS-32-99/EA	32	3	7612207488630	3 m ²
Other information				
Thickness tolerance		3 mm - 6 mm : ±1,0 mm 9 mm - 19 mm : ±1,5 mm 25 mm - 32 mm : ±2,0 mm		
Length tolerance		1,5 % - +5%		

Tape – insulation. Black / Anthracite

Item	Thickness [mm]	Width [mm]	Length [m]	Content [quantity]
NHS-TAPE	3	50	15	12 roll

INSTALL IT. TRUST IT.

NH/ArmaFlex Smart C

Flexible 2-in-1 solution

- // Protected insulation
- // High mechanical resistance
- // Advanced fire behavior

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ArmaFlex®

TECHNICAL DATA - NH/ARMAFLEX SMART C

Brief description	NH/ArmaFlex Smart C is the new generation halogen free, flexible closed-cell insulation material with an additional pre-covering for use in any building and construction types.
Material type	Highly flexible closed-cell elastomeric foam material based on synthetic rubber. Factory-made flexible elastomeric foam (FEF), according to EN 14304. Covering: 25 µm Alufoil glossy (black), 204 g/m ² high performance glass fabric, 18 µm Alufoil glossy.
Additional material information	Self-adhesive coating: pressure-sensitive adhesive coating on modified acrylate basis with mesh structure, covered with polyethylene foil. Traces of silicon can be found on the protection paper/foil used to protect self-adhesive closures.
Product colour range	FEF: black / anthracite Covering: black
Special features	Without halogens (chloride, bromide) according to DIN/VDE 0472, part 815. Fulfils DIN 1988-200.
Applications	Insulation / protection for rectangular air ducts of air-conditioning / refrigeration and ventilation to prevent condensation and save energy.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature	Min. °C ¹	Max. °C ²	EN 14706, EN 14707, EN 14304
	-50	110	
Thermal conductivity			
Declared thermal conductivity	θm	+/- 0 °C	EN ISO 13787, EN 12667, EN ISO 8497
	λd ≤ [W/(m·K)]	0,040	
	Formula	[40 + 0,1· θm + 0,0009 · θm²]/1000	
Fire Performance and Approvals			
Reaction to fire	sheets, tape C-s2, d0		EN 13501-1, EN 13823, EN ISO 11925-2
Fire performance			
Practical fire behaviour	self-extinguishing, does not drip, does not spread flames		
Resistance to water vapour			
Water vapour diffusion resistance factor	μ ≥ 2.000		EN 12086, EN 13469
Physical attributes			
Dimensions and tolerances	In accordance with EN 14304, table 1		EN 822, EN 823, EN 13467
Weather and UV resistance			
UV resistance³	High. (see Technical Bulletin no. 142)		ISO 4982
Health and environment			
Green building assessment	Meets the sustainable construction requirements for DGNB QS4 Platin and BNB QN 2-5.		
Additional features	SCCP, MCCP, LCCP-free		
Other technical features			
Shelf life	Self-adhesive tapes, self-adhesive sheets: 1 year		
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).		

¹For temperatures below -50 °C please contact our Customer Service Center to request for the corresponding technical information.²+85 °C, for products with a self-adhesive layer.³If ArmaFlex is used outdoors or in applications under UV radiation, it should be protected with ArmaFinish Paint, or a covering such as ArmaClad Arma-Chek within 3 days of installation.

Sheet – precovered

Item	Insulation thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
NHSC-13-99	13	1.000	2	7612207526462	24 m ²
NHSC-19-99	19	1.000	2	7612207526417	16 m ²
NHSC-25-99	25	1.000	2	7612207526424	12 m ²
NHSC-32-99	32	1.000	2	7612207526400	10 m ²

Other information

Thickness tolerance 9 -19 ± 1,5 mm
25 - 32 ± 2,0 mm

Length tolerance ± 1,5 %

Width tolerance ± 2,0 %

Sheet – precovered and self-adhesive

Item	Insulation thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
NHSC-13-99/A	13	1.000	2	7612207526486	24 m ²
NHSC-19-99/A	19	1.000	2	7612207526431	16 m ²
NHSC-25-99/A	25	1.000	2	7612207526349	12 m ²
NHSC-32-99/A	32	1.000	2	7612207526455	10 m ²

Other information

Thickness tolerance 9 -19 ± 1,5 mm
25 - 32 ± 2,0 mm

Length tolerance ± 1,5 %

Width tolerance ± 2,0 %

Tape – self-adhesive

Item	Thickness [mm]	Width [mm]	Length [m]	Content [quantity]
NHSC-TAPE-70	0,24	70	25	6 piece



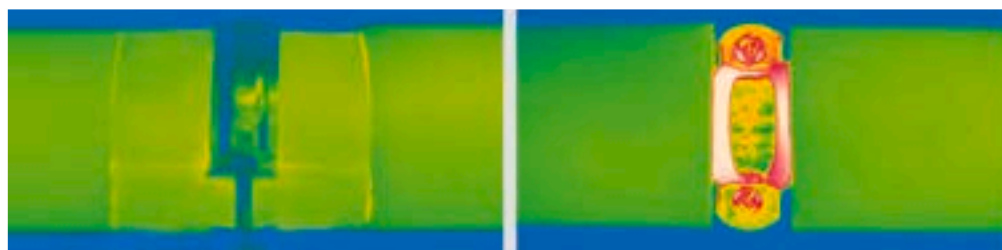
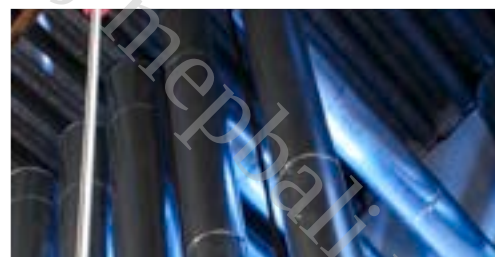
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ArmaFix NH Smart

Enhanced system security in
combination with NH/ArmaFlex Smart

- // Simple joining with double self-adhesive layers
- // Matching clamps for ArmaFix pipe supports
- // Halogen- and PVC-free pipe support to prevent corrosion
- // Energy saving
- // Condensation control

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ArmaFix™

TECHNICAL DATA - ARMAFIX NH SMART

Brief description	Pipe support for refrigeration and air-conditioning installations to prevent condensation at fixing points. Thermally non-interacting single piece, with 2 ArmaFORM PET foam sections and with self-adhesive closure. All dimensions are matching the NH/ArmaFlex Smart range.
Material type	PET-foam bearing segments, embedded in and glued to NH/ArmaFlex Smart elastomeric foam material. Outside bearing shells made of painted aluminium sheeting 0.8mm thick, which simultaneously serves as a vapour barrier for the PET bearing segments.
Product colour range	Black grey
Special features	Traces of silicone can be found on the protection paper / foil used to protect self-adhesive closures.
Applications	When used in installations with intermittent temperatures, thermal length extensions may cause inherent pressure in the installation; this needs to be considered in the overall insulation construction.

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature	Min. °C ¹	Max. °C	EN 14706, EN 14707, EN 14304
	-50	110	
Thermal conductivity			
Remarks	Same as NH/ArmaFlex Smart		EN ISO 13787, EN 12667, EN ISO 8497
Fire Performance and Approvals			
Reaction to fire	Euroclass: E Entire System with NH/ArmaFlex Smart tubes: D(L)-s2, d0		EN 13501-1, EN 13823, EN ISO 11925-2
Fire performance			
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames.		
Resistance to water vapour			
Water vapour diffusion resistance factor	Same as NH/ArmaFlex Smart		EN 12086, EN 13469
Physical attributes			
Density	95 - 105 kg/m³ (pipe bearing segments)		
Health and environment			
Additional features	SCCP, MCCP, LCCP-free		
Other technical features			
Shelf life	3 years		
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).		

¹ For temperatures below -50 °C please contact our Customer Service Center to request for the corresponding technical information.

Pipe support – donut type

13 mm							Related pipe clamp	
Pipe Ø [mm]	Also fits pipe OD [mm]	Maximum permissible distance [m]	Item	Length [mm]	EAN	Content [quantity]	Item	Content [quantity]
10	12	2,0	PHS-13-10/12	50	7612207501629	32 piece	-	-
15	18	2,0	PHS-13-15/18	50	7612207501636	32 piece	PCX 033/037	25 piece
22	25	2,0	PHS-13-22/25	50	7612207501643	32 piece	PCX 042/046	25 piece
28	30	3,0	PHS-13-28/30	50	7612207501650	32 piece	PCX 054/058	25 piece
35	38	3,0	PHS-13-35/38	55	7612207501667	28 piece	PCX 054/058	25 piece
42	45	3,0	PHS-13-42/45	55	7612207501674	28 piece	PCX 063/068	25 piece
48		4,0	PHS-13-48	60	7612207501513	28 piece	PCX 068/073	10 piece
54	57	4,0	PHS-13-54/57	60	7612207501520	28 piece	PCX 068/073	10 piece
60	64	4,0	PHS-13-60/64	70	7612207501537	24 piece	PCX 082/085	10 piece
76	80	5,0	PHS-13-76/80	80	7612207501544	20 piece	PCX 092/099	10 piece
89		6,0	PHS-13-89	100	7612207501551	16 piece	PCX 108/112	10 piece

Pipe support – donut type

19 mm							Related pipe clamp	
Pipe Ø [mm]	Also fits pipe OD [mm]	Maximum permissible distance [m]	Item	Length [mm]	EAN	Content [quantity]	Item	Content [quantity]
10	12	2,0	PHS-19-10/12	60	7612207501506	28 piece	PCX 038/041	25 piece
15	18	2,0	PHS-19-15/18	60	7612207501568	28 piece	PCX 047/052	25 piece
22	25	2,0	PHS-19-22/25	60	7612207501575	28 piece	PCX 054/058	25 piece
28	30	3,0	PHS-19-28/30	60	7612207501582	28 piece	PCX 059/063	25 piece
35	38	3,0	PHS-19-35/38	70	7612207501599	24 piece	PCX 063/068	25 piece
42	45	3,0	PHS-19-42/45	70	7612207501605	24 piece	PCX 068/073	10 piece
48		4,0	PHS-19-48	70	7612207501612	24 piece	PCX 072/080	10 piece
54	57	4,0	PHS-19-54/57	70	7612207501773	24 piece	PCX 082/085	10 piece
60	64	4,0	PHS-19-60/64	80	7612207501780	20 piece	PCX 088/092	10 piece
76	80	5,0	PHS-19-76/80	90	7612207501797	16 piece	PCX 099/103	10 piece
89		5,0	PHS-19-89	105	7612207501803	12 piece	PCX 112/118	10 piece

Pipe support – donut type

25 mm							Related pipe clamp	
Pipe Ø [mm]	Also fits pipe OD [mm]	Maximum permissible distance [m]	Item	Length [mm]	EAN	Content [quantity]	Item	Content [quantity]
15	18	2,0	PHS-25-15/18	60	7612207501827	28 piece	PCX 059/063	25 piece
22	25	2,0	PHS-25-22/25	60	7612207501681	28 piece	PCX 063/068	25 piece
28	30	3,0	PHS-25-28/30	60	7612207501698	28 piece	PCX 068/073	10 piece
42	45	3,0	PHS-25-42/45	70	7612207501711	24 piece	PCX 082/085	10 piece
48		4,0	PHS-25-48	70	7612207501728	24 piece	PCX 088/092	10 piece
54	57	4,0	PHS-25-54/57	70	7612207501735	24 piece	PCX 092/099	10 piece
60	64	4,0	PHS-25-60/64	80	7612207501742	20 piece	PCX 099/103	10 piece
76	80	5,0	PHS-25-76/80	90	7612207501759	16 piece	PCX 112/118	10 piece

Pipe support – donut type

25 mm							Related pipe clamp	
Pipe Ø [mm]	Also fits pipe OD [mm]	Maximum permissible distance [m]	Item	Length [mm]	EAN	Content [quantity]	Item	Content [quantity]
89		6,0	PHS-25-89	100	7612207501766	12 piece	PCX 137/142	10 piece

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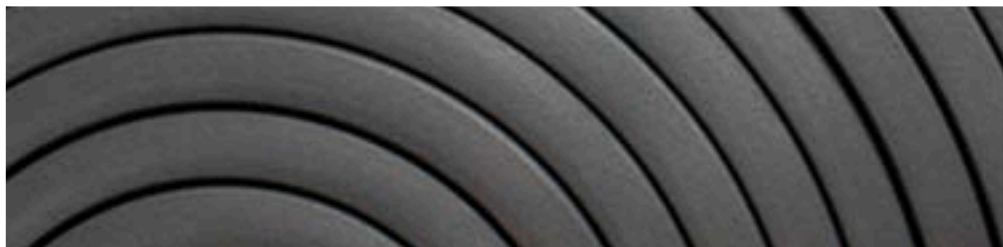
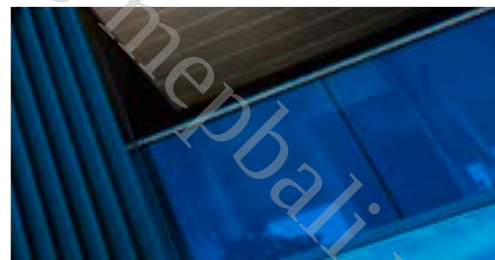
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ArmaFlex ACE Plus

The upgraded flexible insulation solution
for improved fire safety

- // Reliable condensation control
- // Effective reduction of thermal losses
- // Optimal range for easy application on most common pipes & duct sizes
- // Increased system security when installed with ArmaFix and ArmaFlex Adhesives
- // Euroclass B(L)-s2,d0 for the entire tube range
- // Euroclass B-s3,d0 for the entire sheet range

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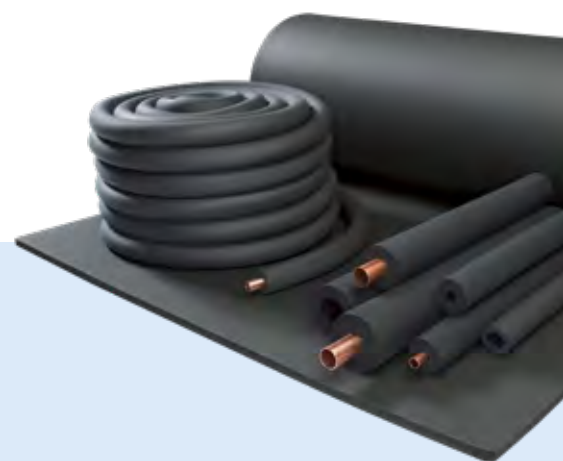
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ArmaFlex ACE Plus

Armacell's ArmaFlex ACE Plus is an insulation material developed on the basis of closed-cell elastomeric foam. It acts as an excellent barrier against condensation due to its high coefficient of resistance to water vapour diffusion. Also, it effectively reduces energy losses from installations and fittings because of its very low thermal conductivity.

Increased fire classification was a top priority during product development which our team of experts successfully met. The material does not participate in the spread of fire. It is also non-drip and self-extinguishing. All this gives ArmaFlex ACE Plus a fire reaction class of B₁-s2,d0 (for tubes) and B-s3,d0 (rolls and tape) according to European standard EN 13501-1.

Thanks to this versatility, this innovative product can be used on air-conditioning systems, refrigeration equipment or ventilation ducts. What's more, the material's flexibility makes it possible to cut easily and conform to preferred shapes.



Our new ArmaFlex ACE Plus insulation range includes tubes (Lap-Seal and Top-Seal) and rolls (standard and self-adhesive). Also, you can use alongside our accessories including self-adhesive tape and ArmaFlex dedicated adhesives.



Technical features

The following technical considerations should be taken into account when specifying thermal insulation products for HVAC-R, process and industrial pipe and ductwork systems.

// Energy saving

Optimal pipe insulation of mechanical equipment, including space heating, domestic hot water or cooling systems - is one of the single most effective measures for improving energy efficiency, prolonging the lifespan of equipment, and reducing associated greenhouse gas emissions.

// Thermal conductivity and condensation control

Thermal conductivity (λ factor), stated in $W/(m \cdot K)$, is the **property of a material's ability to conduct heat**, measured across a $1m^3$ block. For example, a material with a high thermal conductivity such as copper has a value of 386 compared to a low thermal conductivity material such as ArmaFlex ACE Plus at 0.035 at $0^\circ C$ (max. thickness 25mm). Where pipework and services operate at below-ambient temperature water vapour condenses on the surface. If insulation becomes wet it loses thermal performance, leading to colder surface temperatures, condensation and corrosion issues. **Closed-cell ArmaFlex products provide an integral water vapour diffusion barrier** with a μ -value of $\geq 10,000$ (max. thickness 25mm).

// CE marking

CE marking became a mandatory requirement for thermal insulation construction products governed by a European harmonised standard (hEN) in July 2013. **The harmonised standards determine the required characteristics and obligatory properties, including fire behaviour (Euroclasses), dimensions and tolerances, thermal conductivity, dimensional stability and durability characteristics.** Once a product has been tested to meet the required properties, a designation code is printed on the product label to display the specific technical properties required by the hEN. The producer must constantly keep the performance of its products at the declared level and show proof with valid testing certificates e.g. B_L-s2,d0

Euroclass	Contribution to fire
A1	Non Combustible
A2	Limited Combustible No Flashover
B	No Flashover
C	Flashover after 10 minutes
D	Flashover before 10 minutes
E	Flashover before 2 minutes
F	No Performance Determined

// The European reaction to fire classification

Fire safety of construction products and building elements in the EU is determined by Euroclasses according to the EN 13501-1 standard. The uniform classification system is based on the performance of products under different fire conditions: the attack of a small flame, exposure to a fully developed fire and some intermediate level. **The main properties determining the Euroclass for a specific product discloses if and how fast a product contributes to the fire.**



// Local regulations for fire protection

The decisions regarding fire reaction classifications of the building elements used in various parts of a building are made at the local level (by country government bodies). The rules for required Euroclass reaction to the fire of products installed in different places within the building are also published locally.

TECHNICAL DATA - ARMAFLEX ACE PLUS

Brief description	Highly-flexible, closed-cell insulation material with high water vapour diffusion resistance and low thermal conductivity.
Material type	Elastomeric foam based on synthetic rubber. Factory-made flexible elastomeric foam (FEF), according to EN 14304.
Product colour range	Black
Applications	Insulation/protection of pipes, air ducts, vessels (including elbows, fittings, flanges, etc.) of air-conditioning, refrigeration and process equipment to prevent condensation and save energy as well as insulation of pipes in sanitary and heating applications.
Installation	Certified and compatible adhesive for a long-term performing system is ArmaFlex 520. Please refer to the ArmaFlex application manual for advice. For further information please contact our Customer Service Centre.
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			Standard / Test method
Temperature range				
Service temperature	Min. °C ¹	Max. °C		EN 14706, EN 14707, EN 14304
	-50	110		
	Remarks	+85 °C if sheet or tape is glued to the object with its whole surface +85 °C for tapes		
Thermal conductivity				
Declared thermal conductivity	Øm	0°C	40°C	EN ISO 13787, EN 12667, EN ISO 8497
	λd ≤ [W/(m·K)]	0,035	0,040	
	Range	Tubes, ≤ 25 mm, sheets and tapes		
	Formula	[35 + 0,1 · Øm + 0,0008 · Øm²]/1000		
Declared thermal conductivity	Øm	0°C	40°C	EN ISO 13787, EN 12667, EN ISO 8497
	λd ≤ [W/(m·K)]	0,036	0,041	
	Range	Tubes > 25 mm		
Fire Performance and Approvals				
Reaction to fire	Tubes: B(L)-s2, d0 Sheets and Tapes: B-s3,d0			EN 13501-1, EN 13823, EN ISO 11925-2
Fire performance				
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames			
Physical attributes				
Dimensions and tolerances	In accordance with EN 14304, table 1			EN 822, EN 823, EN 13467
Weather and UV resistance				
UV resistance ²	Protection against UV-radiation is necessary. See TB 142			
Health and environment				
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
Antimicrobial behaviour	antimicrobial insulation, resistance against mould and bacteria in accordance with ISO 846			
Green building assessment	Meets the sustainable construction requirements for LEED v4.1, BREEAM international and DGNB.			
Additional features	SCCP, MCCP-free			
Other technical features				
Shelf life	Self-adhesive tapes, self-adhesive sheets: 1 year			

Property	Value / Assessment	Standard / Test method
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).	

¹For temperatures below -50 °C please contact our Customer Service Center to request for the corresponding technical information.

²If ArmaFlex is applied under UV-radiation, the material must be protected within 3 days with paint or a covering.

Tube – standard. Black. Packed in cartons, length: 2 m

6 mm				9 mm				13 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]
6	ACE/ P-06X006	76122075374 20	496 m	6	ACE/ P-09X006	76122075366 69	352 m	6	ACE/ P-13X006	76122075376 04	200 m
8	ACE/ P-06X008	76122073924 70	432 m	8	ACE/ P-09X008	76122075374 82	300 m	10	ACE/ P-13X010	76122073929 51	172 m
10	ACE/ P-06X010	76122073924 87	380 m	10	ACE/ P-09X010	76122073927 15	266 m	12	ACE/ P-13X012	76122075664 99	142 m
12	ACE/ P-06X012	76122073924 94	330 m	12	ACE/ P-09X012	76122073927 22	234 m	15	ACE/ P-13X015	76122073929 75	122 m
15	ACE/ P-06X015	76122073925 00	280 m	15	ACE/ P-09X015	76122073927 39	200 m	18	ACE/ P-13X018	76122073929 82	104 m
18	ACE/ P-06X018	76122075371 61	210 m	18	ACE/ P-09X018	76122073927 46	166 m	20	ACE/ P-13X020	76122073929 99	104 m
22	ACE/ P-06X022	76122073925 31	170 m	20	ACE/ P-09X020	76122073927 53	140 m	22	ACE/ P-13X022	76122073930 02	100 m
28	ACE/ P-06X028	76122075366 45	112 m	22	ACE/ P-09X022	76122073927 60	140 m	25	ACE/ P-13X025	76122073930 19	88 m
35	ACE/ P-06X035	76122075366 52	92 m	25	ACE/ P-09X025	76122073927 77	108 m	28	ACE/ P-13X028	76122073930 26	82 m
-	-	-	-	28	ACE/ P-09X028	76122073927 84	98 m	32	ACE/ P-13X032	76122073930 33	64 m
-	-	-	-	32	ACE/ P-09X032	76122073927 91	80 m	35	ACE/ P-13X035	76122073930 40	60 m
-	-	-	-	35	ACE/ P-09X035	76122073928 07	76 m	40	ACE/ P-13X040	76122075377 03	50 m
-	-	-	-	40	ACE/ P-09X040	76122073928 14	66 m	42	ACE/ P-13X042	76122073919 23	50 m
-	-	-	-	42	ACE/ P-09X042	76122073928 21	64 m	48	ACE/ P-13X048	76122073919 09	42 m
-	-	-	-	48	ACE/ P-09X048	76122073928 38	54 m	50	ACE/ P-13X050	76122075377 10	38 m
-	-	-	-	50	ACE/ P-09X050	76122073928 45	46 m	54	ACE/ P-13X054	76122073919 47	38 m
-	-	-	-	54	ACE/ P-09X054	76122073928 52	52 m	60	ACE/ P-13X060	76122073919 54	32 m
-	-	-	-	60	ACE/ P-09X060	76122073928 69	48 m	64	ACE/ P-13X064	76122073919 61	30 m
-	-	-	-	64	ACE/ P-09X064	76122073928 76	44 m	70	ACE/ P-13X070	76122075377 27	28 m
-	-	-	-	70	ACE/ P-09X070	76122073928 83	32 m	76	ACE/ P-13X076	76122073919 85	28 m
-	-	-	-	76	ACE/ P-09X076	76122073928 90	32 m	80	ACE/ P-13X080	76122073919 92	20 m
-	-	-	-	89	ACE/ P-09X089	76122073929 13	28 m	89	ACE/ P-13X089	76122073920 05	20 m
-	-	-	-	102	ACE/ P-09X102	76122075375 74	26 m	102	ACE/ P-13X102	76122073920 12	20 m
-	-	-	-	108	ACE/ P-09X108	76122073929 37	26 m	108	ACE/ P-13X108	76122073920 29	20 m
-	-	-	-	110	ACE/ P-09X110	76122075357 54	24 m	114	ACE/ P-13X114	76122073920 36	20 m
-	-	-	-	114	ACE/ P-09X114	76122073929 44	24 m	125	ACE/ P-13X125	76122075377 41	18 m
-	-	-	-	125	ACE/ P-09X125	76122075375 81	14 m	133	ACE/ P-13X133	76122073920 50	16 m

Tube – standard. Black. Packed in cartons, length: 2 m

6 mm				9 mm				13 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]
-	-	-	-	140	ACE/ P-09X140	76122075357 61	14 m	140	ACE/ P-13X140	76122073920 67	12 m
-	-	-	-	160	ACE/ P-09X160	76122075375 98	10 m	160	ACE/ P-13X160	76122073920 74	12 m

Other information

Thickness tolerance

6 mm: ±1.0 mm
 9, 13 mm: ±1.5 mm
 19, 25 mm: ±2.5 mm
 32, 40 mm: ±3.0 mm

Length tolerance

± 1.5%

Tube – standard. Black. Packed in cartons, length: 2 m

19 mm				25 mm				32 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]
6	ACE/ P-19X006	76122075358 84	100 m	10	ACE/ P-25X010	76122075360 34	60 m	15	ACE/ P-32X015	76122075361 57	32 m
10	ACE/ P-19X010	76122075359 07	92 m	12	ACE/ P-25X012	76122075368 05	54 m	18	ACE/ P-32X018	76122075364 16	32 m
12	ACE/ P-19X012	76122075359 14	84 m	15	ACE/ P-25X015	76122075370 55	48 m	20	ACE/ P-32X020	76122075361 88	24 m
15	ACE/ P-19X015	76122073920 81	72 m	18	ACE/ P-25X018	76122075370 62	40 m	22	ACE/ P-32X022	76122075364 30	24 m
18	ACE/ P-19X018	76122073920 98	60 m	22	ACE/ P-25X022	76122073926 47	40 m	25	ACE/ P-32X025	76122075364 47	24 m
20	ACE/ P-19X020	76122073921 04	58 m	28	ACE/ P-25X028	76122073922 96	36 m	28	ACE/ P-32X028	76122073907 59	24 m
22	ACE/ P-19X022	76122073921 11	56 m	30	ACE/ P-25X030	76122075368 12	30 m	32	ACE/ P-32X032	76122075362 18	18 m
25	ACE/ P-19X025	76122073921 28	50 m	32	ACE/ P-25X032	76122075358 91	28 m	35	ACE/ P-32X035	76122073907 66	18 m
28	ACE/ P-19X028	76122073921 35	48 m	35	ACE/ P-25X035	76122073923 19	24 m	40	ACE/ P-32X040	76122075364 85	18 m
32	ACE/ P-19X032	76122073921 42	36 m	42	ACE/ P-25X042	76122073923 33	24 m	42	ACE/ P-32X042	76122073910 84	18 m
35	ACE/ P-19X035	76122075369 59	36 m	48	ACE/ P-25X048	76122073923 40	20 m	48	ACE/ P-32X048	76122073910 77	18 m
40	ACE/ P-19X040	76122073921 66	32 m	54	ACE/ P-25X054	76122073923 64	18 m	50	ACE/ P-32X050	76122075362 70	12 m
42	ACE/ P-19X042	76122073921 73	32 m	60	ACE/ P-25X060	76122073923 71	18 m	54	ACE/ P-32X054	76122073910 91	12 m
48	ACE/ P-19X048	76122073921 80	28 m	64	ACE/ P-25X064	76122073923 88	16 m	60	ACE/ P-32X060	76122073925 48	10 m
50	ACE/ P-19X050	76122073921 97	24 m	76	ACE/ P-25X076	76122075360 96	12 m	64	ACE/ P-32X064	76122073912 37	10 m
54	ACE/ P-19X054	76122073922 03	24 m	89	ACE/ P-25X089	76122073924 25	12 m	70	ACE/ P-32X070	76122075370 86	10 m
60	ACE/ P-19X060	76122073922 10	24 m	102	ACE/ P-25X102	76122075361 19	8 m	76	ACE/ P-32X076	76122073925 55	10 m
64	ACE/ P-19X064	76122073922 27	20 m	108	ACE/ P-25X108	76122073924 49	8 m	80	ACE/ P-32X080	76122075371 16	10 m
70	ACE/ P-19X070	76122073922 34	18 m	114	ACE/ P-25X114	76122073924 56	10 m	89	ACE/ P-32X089	76122073925 62	10 m

Tube – standard. Black. Packed in cartons, length: 2 m

19 mm				25 mm				32 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]
76	ACE/ P-19X076	76122073922 41	18 m	140	ACE/ P-25X140	76122073908 41	4 m	102	ACE/ P-32X102	76122075368 67	6 m
80	ACE/ P-19X080	76122073922 58	16 m	-	-	-	-	108	ACE/ P-32X108	76122075357 23	6 m
89	ACE/ P-19X089	76122073922 65	16 m	-	-	-	-	114	ACE/ P-32X114	76122073907 35	8 m
102	ACE/ P-19X102	76122075360 10	16 m	-	-	-	-	125	ACE/ P-32X125	76122075368 74	6 m
108	ACE/ P-19X108	76122073925 79	16 m	-	-	-	-	140	ACE/ P-32X140	76122073907 42	6 m
110	ACE/ P-19X110	76122075370 31	14 m	-	-	-	-	160	ACE/ P-32X160	76122073912 44	4 m
114	ACE/ P-19X114	76122073925 86	14 m	-	-	-	-	-	-	-	-
125	ACE/ P-19X125	76122075367 99	10 m	-	-	-	-	-	-	-	-
133	ACE/ P-19X133	76122073926 09	10 m	-	-	-	-	-	-	-	-
140	ACE/ P-19X140	76122073926 16	10 m	-	-	-	-	-	-	-	-
160	ACE/ P-19X160	76122073926 23	10 m	-	-	-	-	-	-	-	-
168	ACE/ P-19X168	76122075370 48	8 m	-	-	-	-	-	-	-	-

Other information

Thickness tolerance

6 mm: ±1.0 mm
 9, 13 mm: ±1.5 mm
 19, 25 mm: ±2.5 mm
 32, 40 mm: ±3.0mm

Length tolerance

± 1.5%

Tube – standard. Black. Packed in cartons, length: 2 m

40 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]
28	ACE/P-40X028	7612207537321	18 m
35	ACE/P-40X035	7612207537338	16 m
42	ACE/P-40X042	7612207391251	12 m
48	ACE/P-40X048	7612207391442	12 m
54	ACE/P-40X054	7612207390773	10 m
60	ACE/P-40X060	7612207391220	10 m
64	ACE/P-40X064	7612207391404	10 m
76	ACE/P-40X076	7612207391411	8 m
89	ACE/P-40X089	7612207397956	6 m
102	ACE/P-40X102	7612207537383	4 m
108	ACE/P-40X108	7612207393637	4 m
114	ACE/P-40X114	7612207391428	6 m
140	ACE/P-40X140	7612207391107	4 m
160	ACE/P-40X160	7612207536577	4 m

Tube – standard. Black. Packed in cartons, length: 2 m

40 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]
168	ACE/P-40X168	7612207391268	4 m
Other information			
Thickness tolerance	6 mm: ±1.0 mm 9, 13 mm: ±1.5 mm 19, 25 mm: ±2.5 mm 32, 40 mm: ±3.0mm		
Length tolerance	± 1.5%		

Tube – self-seal. Black. length: 2,0 m

9 mm				13 mm				19 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]
12	ACE/P-09X012-A	7612207537222	234 m	12	ACE/P-13X012-A		142 m	15	ACE/P-19X015-A	7612207536768	72 m
15	ACE/P-09X015-A	7612207537239	200 m	15	ACE/P-13X015-A	7612207535785	122 m	18	ACE/P-19X018-A	7612207535921	60 m
18	ACE/P-09X018-A	7612207537253	166 m	18	ACE/P-13X018-A	7612207537666	104 m	22	ACE/P-19X022-A	7612207535938	56 m
22	ACE/P-09X022-A	7612207537260	140 m	22	ACE/P-13X022-A	7612207535815	100 m	28	ACE/P-19X028-A	7612207536942	48 m
28	ACE/P-09X028-A	7612207537277	98 m	28	ACE/P-13X028-A	7612207537680	82 m	35	ACE/P-19X035-A	7612207535952	36 m
35	ACE/P-09X035-A	7612207537543	76 m	35	ACE/P-13X035-A	7612207537697	60 m	42	ACE/P-19X042-A	7612207535969	32 m
42	ACE/P-09X042-A	7612207537550	64 m	42	ACE/P-13X042-A	7612207535853	50 m	48	ACE/P-19X048-A	7612207536980	28 m
48	ACE/P-09X048-A	7612207537567	54 m	48	ACE/P-13X048-A	7612207536744	42 m	54	ACE/P-19X054-A	7612207535983	24 m
54	ACE/P-09X054-A	7612207537284	52 m	54	ACE/P-13X054-A	7612207535860	38 m	60	ACE/P-19X060-A	7612207535990	24 m
60	ACE/P-09X060-A	7612207537291	48 m	60	ACE/P-13X060-A	7612207536751	32 m	76	ACE/P-19X076-A	7612207537017	18 m
-	-	-	-	76	ACE/P-13X076-A	7612207537734	28 m	89	ACE/P-19X089-A	7612207536003	16 m
-	-	-	-	89	ACE/P-13X089-A	7612207535877	20 m	-	-	-	-

Other information			
Thickness tolerance	6 mm: ±1.0 mm 9, 13 mm: ±1.5 mm 19, 25 mm: ±2.5 mm 32 mm: ±3.0mm		
Length tolerance	± 1.5%		

Tube – self-seal. Black. length: 2,0 m

25 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]
18	ACE/P-25X018-A	7612207536041	40 m
22	ACE/P-25X022-A	7612207537079	40 m
28	ACE/P-25X028-A	7612207536058	36 m
35	ACE/P-25X035-A	7612207536065	24 m
42	ACE/P-25X042-A	7612207536348	24 m

Tube – self-seal. Black. length: 2,0 m

25 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]
48	ACE/P-25X048-A	7612207536089	20 m
54	ACE/P-25X054-A	7612207536072	18 m
60	ACE/P-25X060-A	7612207536355	18 m
76	ACE/P-25X076-A	7612207536362	12 m
89	ACE/P-25X089-A	7612207536102	12 m
Other information			
Thickness tolerance		6 mm: ±1.0 mm 9, 13 mm: ±1.5 mm 19, 25 mm: ±2.5 mm 32 mm: ±3.0mm	
Length tolerance		± 1.5%	

Coil. Black

6 mm				9 mm				13 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]
6	ACE/P-06X006/E	7612207537437	95 m	6	ACE/P-09X006/E	7612207537475	70 m	6	ACE/P-13X006/E	7612207537611	45 m
8	ACE/P-06X008/E	7612207537444	85 m	8	ACE/P-09X008/E	7612207537208	60 m	10	ACE/P-13X010/E	7612207537628	35 m
10	ACE/P-06X010/E	7612207537154	75 m	10	ACE/P-09X010/E	7612207537215	50 m	12	ACE/P-13X012/E	7612207535778	32 m
12	ACE/P-06X012/E	7612207536621	65 m	12	ACE/P-09X012/E	7612207536676	45 m	15	ACE/P-13X015/E	7612207536713	28 m
15	ACE/P-06X015/E	7612207537451	55 m	15	ACE/P-09X015/E	7612207536683	40 m	18	ACE/P-13X018/E	7612207537659	27 m
18	ACE/P-06X018/E	7612207537178	45 m	18	ACE/P-09X018/E	7612207537505	38 m	22	ACE/P-13X022/E	7612207535808	26 m
22	ACE/P-06X022/E	7612207536638	40 m	22	ACE/P-09X022/E	7612207537512	30 m	28	ACE/P-13X028/E	7612207535822	20 m
28	ACE/P-06X028/E	7612207537468	30 m	28	ACE/P-09X028/E	7612207537536	26 m	-	-	-	-
Other information											
Thickness tolerance				6 mm: ±1.0mm 9, 13 mm: ±1.5mm							
Length tolerance				±1.5%							

Roll - standard. Black. Packed in cartons, width: 1 m

Item	Insulation thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
ACE/P-06-99-E	6	1.000	15	7612207395471	15 m ²
ACE/P-09-99-E	9	1.000	10	7612207395402	10 m ²
ACE/P-13-99-E	13	1.000	8	7612207395532	8 m ²
ACE/P-19-99-E	19	1.000	6	7612207395396	6 m ²
ACE/P-25-99-E	25	1.000	4	7612207395495	4 m ²
ACE/P-32-99-E	32	1.000	3	7612207395464	3 m ²
ACE/P-40-99-E	40	1.000	7	7612207395501	7 m ²
Other information					

Roll - standard. Black. Packed in cartons, width: 1 m

Item	Insulation thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
Thickness tolerance		6 mm: ± 1.0 mm 7 - 19mm: ± 1.5 mm >19mm: ± 2.0 mm			
Length tolerance		$\pm 1.5\%$			
Width tolerance		$\pm 2.0\%$			

Roll - standard self-adhesive. Black. Packed in cartons, width: 1 m

Item	Insulation thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
ACE/P-06-99-EA	6	1.000	15	7612207395518	15 m ²
ACE/P-09-99-EA	9	1.000	10	7612207395525	10 m ²
ACE/P-13-99-EA	13	1.000	8	7612207395549	8 m ²
ACE/P-19-99-EA	19	1.000	6	7612207395426	6 m ²
ACE/P-25-99-EA	25	1.000	4	7612207395433	4 m ²
ACE/P-32-99-EA	32	1.000	3	7612207395488	3 m ²
ACE/P-40-99-EA	40	1.000	7	7612207395440	7 m ²
Other information					
Thickness tolerance		6 mm: ± 1.0 mm 7-19 mm: ± 1.5 mm >19 mm: ± 2.0 mm			
Length tolerance		$\pm 1.5\%$			
Width tolerance		$\pm 2.0\%$			

Tape - insulation. Black

Item	Description	Thickness [mm]	Width [mm]	Length [m]	Content [quantity]
ACE/P-TAPE	ArmaFlex ACE Plus tape	3	50	15	12 roll

INSTALL IT. TRUST IT.

HT/ArmaFlex

Flexible elastomeric insulation material
specially purposed for high temperature
applications

- // Professional solution for high temperature applications up to +150 °C
- // UL approved
- // System approach with fit-for-purpose ArmaFlex HT625 Adhesive

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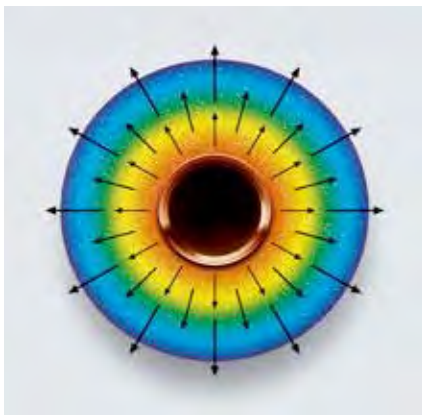
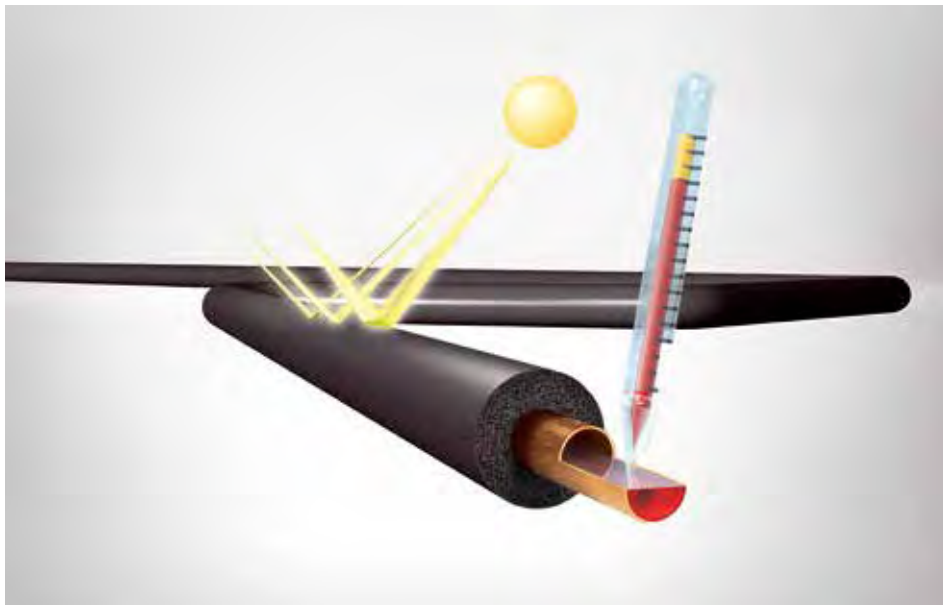


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HT/ArmaFlex

THE EXPERT FOR HIGH TEMPERATURE



HT/ArmaFlex® is a flexible elastomer insulation material with exceptional resistance to UV radiation and high temperatures. Its closed cell structure and low thermal conductivity keep water vapour from diffusing in and reduce energy losses, protecting and optimising the efficiency and life time expectancy of the installation. While remaining flexible at application temperatures of up to 150°C, HT/ArmaFlex® is dust and fibre free and easy to install without special tools. The product does not need additional jacketing, does not degrade in sunlight and withstands incidental oil contact.

Thanks to the thermal properties of the insulation, the heat flow from pipelines insulated with HT/ArmaFlex® is kept at its utmost minimum. The evenly spread, homogenous and longterm stable closed cell structure prevents heat flow on the way of convection, ensuring very low thermal conductivity of the insulation material. This to keep the outer surface temperature at a low level and prevents unnecessary heat losses. Because of the flexibility of HT/ArmaFlex®, the huge temperature gradient of the thickness of insulation does not result in any internal stress.

TECHNICAL DATA - HT/ARMAFLEX

Brief description	HT/ArmaFlex is a highly flexible, closed-cell insulation material with resistance to UV radiation.
Material type	Factory-made flexible elastomeric foam based on ethylene propylene diene methylene (EPDM), according to EN 14304.
Product colour range	Black
Special features	UV resistance testing regarding of these materials showed excellent results. When used on outdoor applications, the materials showed very good durability even under UV exposure. However, due to the unpredictable nature of outdoor conditions in the whole variety of thinkable installations, there might be occasional weathering influences on the consistence of the material, which cannot be tested in advance. Therefore, installations in extreme environments (regions of extreme weather conditions like high mountains etc.) cannot be recommended. In case of doubt, please contact our Customer Service.
Applications	Thermal insulation of pipes, vessels and ducts in solar collectors (including outdoors), motor vehicles, hot gas lines, steam lines and dual temperature lines.
Installation	Please refer to the ArmaFlex application manual and more information is available in Armacell's Technical Bulletin No. 71. Use ArmaFlex HT625 adhesive for a reliable and seamless installation.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Property	Value / Assessment			Standard / Test method
Temperature range				
Service temperature ^{1,2}	Range	Min. °C	Max. °C ³	EN 14706, EN 14707, EN 14304
	Full range	-50	150	
Thermal conductivity				
Declared thermal conductivity	Øm	40°C		EN ISO 13787, EN 12667, EN ISO 8497
	λd ≤ [W/(m·K)]	0,042		
	Range	Tubes		
	Formula	λ = [36.92 + 0.125 · Øm + 0.0008 · {Øm-30}²] / 1000		
Declared thermal conductivity	Øm	40°C		EN ISO 8497, EN ISO 13787, EN 12667
	λd ≤ [W/(m·K)]	0,045		
	Range	Sheets / Tapes		
	Formula	λ = [39.92 + 0.125 · Øm + 0.0008 · {Øm-30}²] / 1000		
Fire Performance and Approvals				
Reaction to fire	D(L)-s3,d0 (tubes) D-s3,d0 (sheets, tape)			EN 13501-1, EN ISO 11925-2, EN 13823
UL standards				
UL 94 V-0 ⁴	Pass			IEC 60695-11-10
Fire performance				
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames.			
Others	Class 1			BS 476 Part 7
Resistance to water vapour				
Water vapour diffusion resistance factor	≥ 4.000 (tubes) ≥ 3.000 (sheets, tapes)			EN 12086, EN 13469
Physical attributes				
Dimensions and tolerances	In accordance with EN 14304, table 1.			EN 822, EN 823, EN 13467
Weather and UV resistance				
UV resistance ⁵	Very good			EN ISO 4892-2

Property	Value / Assessment	Standard / Test method
Health and environment		
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
Environmental Product Declaration (EPD)	Type III Environmental Product Declaration (EPD): Declaration number "EPD-ARM-20200222-IBA1-EN", Institut Bauen und Umwelt e.V. (IBU)	
Green building assessment	Meets the sustainable construction requirements for LEED v4.1, BREEAM international, WELL v2 and DGNB.	
Additional features	SCCP, MCCP-free	
Other technical features		
AGI designation code	Tubes: 36.12.05.09.02 Sheets: 36.07.05.09.02	
Shelf life ⁶	Tape, self-adhesive: 1 year	
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0°C to 35°C).	

¹For temperatures above +125 °C or below -50 °C, please contact our Customer Service Centre to request for the corresponding technical information.

²At high service temperatures, a certain hardening process may start on the inner surface of the material. Investigations have shown that these changes have no impact on the good physical and fire protection properties of the material, provided the material is installed in a correct way with all its joints properly sealed. For specific applications please consult our technical service.

³+85 °C, for products with a self-adhesive layer.

⁴Only for products without self-adhesive-layer.

⁵Extended exposure to certain conditions could result in aesthetic changes to insulation material. This includes examples such as minor discolouration, surface cracks or hardening of inner surface material due to extended exposure to high service line temperatures. These physical changes do not affect the technical performance of the insulation material, such as thermal conductivity and behaviour in case of a fire. For further information, please contact our Technical Service department.

⁶Shelf life (maximum storage time) is limited to ensure that only currently manufactured products are installed on projects. This limitation is restricted solely to storage of the product and does not affect the lifetime of product after it has been installed.

Tube – standard. 2m Length.

10 mm						13 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
10	HT-10X010	11	14	7612207121032	192 m	10	HT-13X010	11	14	7612207121261	140 m
12	HT-10X012	13	16	7612207121056	172 m	12	HT-13X012	13	16	7612207121278	130 m
15	HT-10X015	16	19	7612207121070	144 m	15	HT-13X015	16	19	7612207121285	112 m
18	HT-10X018	19	22	7612207121087	130 m	18	HT-13X018	19	22	7612207121292	98 m
22	HT-10X022	23	26	7612207121100	108 m	22	HT-13X022	23	26	7612207121322	84 m
28	HT-10X028	29	32	7612207121131	82 m	28	HT-13X028	29	32	7612207121353	64 m
35	HT-10X035	36	39	7612207121155	60 m	35	HT-13X035	36	39	7612207121377	50 m
42	HT-10X042	43	46	7612207121162	50 m	42	HT-13X042	43	46	7612207121391	40 m
-	-	-	-	-	-	48	HT-13X048	49	52	7612207121414	32 m
-	-	-	-	-	-	54	HT-13X054	55	58	7612207121438	32 m
-	-	-	-	-	-	60	HT-13X060	61	64	7612207121452	28 m
-	-	-	-	-	-	76	HT-13X076	77	80	7612207121476	24 m
-	-	-	-	-	-	89	HT-13X089	90	93	7612207121490	18 m

Other information

Thickness tolerance

10 - 13 mm ± 1,5 mm
19 - 25 mm ± 2,5 mm

Length tolerance

± 1,5 %

Tube – standard. 2m Length.

19 mm						25 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
12	HT-19X012	13	16	7612207121520	80 m	15	HT-25X015	16	19	7612207121735	40 m
15	HT-19X015	16	19	7612207121537	64 m	18	HT-25X018	19	22	7612207121742	36 m
18	HT-19X018	19	22	7612207121551	58 m	22	HT-25X022	23	26	7612207121759	36 m
22	HT-19X022	23	26	7612207121575	50 m	28	HT-25X028	29	32	7612207121773	32 m
28	HT-19X028	29	32	7612207121605	48 m	35	HT-25X035	36	39	7612207121780	24 m
35	HT-19X035	36	39	7612207121612	32 m	42	HT-25X042	43	46	7612207121797	20 m
42	HT-19X042	43	46	7612207121629	24 m	48	HT-25X048	49	52	7612207121803	16 m

Tube – standard. 2m Length.

19 mm						25 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
48	HT-19X048	49	52	7612207121636	22 m	54	HT-25X054	55	58	7612207121810	16 m
54	HT-19X054	55	58	7612207121643	18 m	60	HT-25X060	61	64	7612207121834	16 m
60	HT-19X060	61	64	7612207121667	16 m	76	HT-25X076	77	80	7612207121841	12 m
64	HT-19X064	65	68	7612207469158	16 m	89	HT-25X089	90	93	7612207121858	12 m
76	HT-19X076	77	80	7612207121681	18 m	-	-	-	-	-	-
89	HT-19X089	90	93	7612207121698	16 m	-	-	-	-	-	-

Other information

Thickness tolerance 10 - 13 mm ± 1,5 mm
19 - 25 mm ± 2,5 mm

Length tolerance ± 1,5 %

Roll - standard

Item	Thickness [mm]	Width [m]	Length [m]	EAN	Content [metric]
HT-10-99/E	10	1	10	7612207121247	10 m ²
HT-13-99/E	13	1	8	7612207121506	8 m ²
HT-19-99/E	19	1	6	7612207121704	6 m ²
HT-25-99/E	25	1	4	7612207121865	4 m ²
HT-32-99/E	32	1	3	7612207121872	3 m ²

Other information

Thickness tolerance 10 - 19 mm ± 1,5 mm
25 - 32 mm ± 2,0 mm

Length tolerance + 5 % - 1,5 %

Coil

13 mm					19 mm				
Pipe Ø [mm]	Item	Length [m]	EAN	Content [metric]	Pipe Ø [mm]	Item	Length [m]	EAN	Content [metric]
15	HT-13X015/E	26	7612207235753	26 m	15	HT-19X015/E	16	7612207235784	16 m
18	HT-13X018/E	22	7612207235760	22 m	18	HT-19X018/E	14	7612207235791	14 m
22	HT-13X022/E	18	7612207235777	18 m	22	HT-19X022/E	12	7612207235807	12 m

Other information

Thickness tolerance 10 - 13 mm ± 1,5 mm
19 - 25 mm ± 2,5 mm

Length tolerance ± 1,5 %

Tape – insulation

Item	Thickness [mm]	Width [mm]	Length [m]	Content [quantity]
HT-TAPE	3	50	15	12 roll



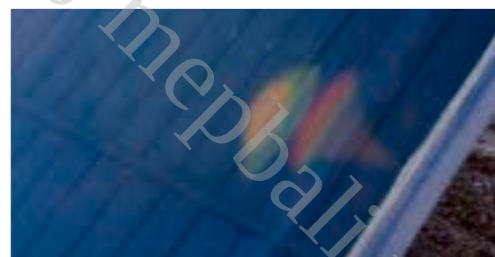
INSTALL IT. TRUST IT.

HT/ArmaFlex S

Pre-covered, flexible elastomeric insulation material with exceptional resistance to UV radiation, specifically designed for outdoor applications

- // Exceptional UV/weathering resistance
- // Built to endure: Strong and durable performance for outdoor installations
- // Wide operating temperature range (-50 °C / +150 °C)

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ArmaFlex®

TECHNICAL DATA - HT/ARMAFLEX S

Brief description	Highly flexible, closed cell insulation material based on extruded elastomer foam, covered with a polyolefin-copolymer coating. Specially designed for outdoor and high temperature applications up to +150°C.
Material type	Factory-made flexible elastomeric foam based on ethylene propylene diene methylene (EPDM), according to EN 14304.
Product colour range	Black foam with black covering Black foam with white covering
Special features	UV resistance testing regarding of these materials showed excellent results. When used on outdoor applications, the materials showed very good durability even under UV exposure. However, due to the unpredictable nature of outdoor conditions in the whole variety of thinkable installations, there might be occasional weathering influences on the consistence of the material, which cannot be tested in advance. Therefore, installations in extreme environments (regions of extreme weather conditions like high mountains etc.) cannot be recommended. In case of doubt, please contact our Customer Service.
Applications	Thermal insulation for pipework in e.g. solar collectors including outdoor installation, motor vehicles, hot gas and steam lines as well as dual temperature lines.
Installation	Use ArmaFlex HT625 adhesive for a reliable and seamless installation.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Property	Value / Assessment			Standard / Test method
Temperature range				
Service temperature ^{1,2}	Range	Min. °C	Max. °C	EN 14706, EN 14707, EN 14304
	Full range	-50	150	
	Remarks	+85 °C for tapes		
Thermal conductivity				
Declared thermal conductivity	Øm	40°C		EN ISO 13787, EN 12667, EN ISO 8497
	λd ≤ [W/(m·K)]	0,042		
	Range	Tubes		
	Formula	λ = [36.92 + 0.125 · Øm + 0.0008 · (Øm-30)²] / 1000]		
Fire Performance and Approvals				
Reaction to fire	E(L)			EN 13501-1, EN ISO 11925-2
Fire performance				
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames.			
Resistance to water vapour				
Water vapour diffusion resistance factor	μ ≥ 4.000.			EN 13469
Physical attributes				
Dimensions and tolerances	In accordance with EN 14304, table 1.			EN 822, EN 823, EN 13467
Weather and UV resistance				
UV resistance	Excellent			EN ISO 4892-2
Health and environment				
Additional features	SCCP, MCCP-free			

¹For temperatures above +125 °C or below -50 °C, please contact our Customer Service Centre to request for the corresponding technical information.

²At high service temperatures, a certain hardening process may start on the inner surface of the material. Investigations have shown that these changes have no impact on the good physical and fire protection properties of the material, provided the material is installed in a correct way with all its joints properly sealed. For specific applications please consult our technical service.

Tube – precovered. White. 2m Length.

13 mm						20 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
12	HT-13X012-SWH	13	16	7612207302943	130 m	12	HT-20X012-SWH	13	16	7612207288681	70 m
15	HT-13X015-SWH	16	19	7612207302950	112 m	15	HT-20X015-SWH	16	19	7612207258226	64 m
18	HT-13X018-SWH	19	22	7612207302967	98 m	18	HT-20X018-SWH	19	22	7612207258233	58 m
22	HT-13X022-SWH	23	26	7612207302974	84 m	22	HT-20X022-SWH	23	26	7612207258240	50 m
28	HT-13X028-SWH	29	32	7612207302981	64 m	28	HT-20X028-SWH	29	32	7612207258257	40 m
-	-	-	-	-	-	35	HT-20X035-SWH	36	39	7612207258264	32 m
-	-	-	-	-	-	42	HT-20X042-SWH	43	46	7612207290462	24 m

Other information

Thickness tolerance

10 - 13 mm ±1,5 mm
19 - 25 mm ±2,5 mm
32 mm ±3,0 mm

Length tolerance

±1,5 %

Tube – precovered. White. 2m Length.

32 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
15	HT-32X015-SWH	16	19	7612207350043	36 m
18	HT-32X018-SWH	19	22	7612207350050	30 m
22	HT-32X022-SWH	23	26	7612207350067	28 m
28	HT-32X028-SWH	29	32	7612207350074	24 m
35	HT-32X035-SWH	36	39	7612207350081	22 m
42	HT-32X042-SWH	43	46	7612207350098	18 m
48	HT-32X048-SWH	49	52	7612207350104	16 m
54	HT-32X054-SWH	55	58	7612207350111	16 m
64	HT-32X064-SWH	65	68	7612207350128	12 m

Other information

Thickness tolerance

10 - 13 mm ±1,5 mm
19 - 25 mm ±2,5 mm
32 mm ±3,0 mm

Length tolerance

±1,5 %

Tube – coated. Black. 2m Length.

13 mm						20 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
15	HT-13X015-SBK	16	19	7612207307672	112 m	15	HT-20X015-SBK	16	19	7612207290868	64 m

Tube – coated. Black. 2m Length.

13 mm						20 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
18	HT-13X018-SBK	19	22	7612207307689	98 m	18	HT-20X018-SBK	19	22	7612207290875	58 m
22	HT-13X022-SBK	23	26	7612207307696	84 m	22	HT-20X022-SBK	23	26	7612207290882	50 m
28	HT-13X028-SBK	29	32	7612207307702	64 m	28	HT-20X028-SBK	29	32	7612207290899	40 m
-	-	-	-	-	-	35	HT-20X035-SBK	36	39	7612207290905	32 m
-	-	-	-	-	-	42	HT-20X042-SBK	43	46	7612207290912	24 m

Other information

Thickness tolerance

10 - 13 mm ± 1,5 mm
19 - 25 mm ± 2,5 mm
32 mm ± 3,0 mm

Length tolerance

±1,5 %

Tube – coated. Black. 2m Length.

32 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
18	HT-32X018-SBK	19	22	7612207349962	30 m
22	HT-32X022-SBK	23	26	7612207349979	28 m
28	HT-32X028-SBK	29	32	7612207349986	24 m
35	HT-32X035-SBK	36	39	7612207349993	22 m
42	HT-32X042-SBK	43	46	7612207350005	18 m

Other information

Thickness tolerance

10 - 13 mm ± 1,5 mm
19 - 25 mm ± 2,5 mm
32 mm ± 3,0 mm

Length tolerance

±1,5 %

Tape – PVC. White

Item	Description	Thickness [mm]	Width [mm]	Length [m]	Content [quantity]
TAPE-PE-FE902	HT/ArmaFlex S tape. Polyolefin UV-resistant carrier with adhesive on one side, self-seal.	0,23	50	25	30 roll

Tape – PVC. Black

Item	Description	Thickness [mm]	Width [mm]	Length [m]	Content [quantity]
TAPE-PE-FE904	HT/ArmaFlex S tape. Polyolefin UV-resistant carrier with adhesive on one side, self-seal.	0,23	50	25	30 roll

INSULATION JUST GOT BETTER

ArmaGel HT

Flexible aerogel blanket for high-temperature applications

- // ASTM C1728 compliant
- // Hot conditions up to 650 °C (1200 °F)
- // More choice: 5, 10, 15 and 20mm thicknesses
- // Up to five times better thermal performance than competing insulation materials
- // Mitigates the risk of corrosion under insulation (CUI)

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ArmaGel®

INSULATION JUST GOT BETTER

ArmaGel HT

Welcome to the next generation of aerogel blanket technology. Flexible and bendable. Environmentally safe. Designed for incombustibility. Superior thermal performance. Hot conditions up to 650 °C (1200 °F) is no sweat. ArmaGel HT is the reliable solution for high-temperature applications.

High-temperature



Flexible



Hydrophobic



[Learn more.](#)

AEROGEL

Used by NASA to bring home a piece of a comet because it's strong enough to stop a bullet in its track, aerogel offers an uncanny array of physical properties - thermal, acoustical - and so holds incredible potential for insulation uses. As the name suggests, aerogel is a solid derived from gel in which the liquid component of the gel has been replaced with air making it dry and porous. In fact, over 90 percent of the volume is empty space making aerogel the world's lightest solid material. It's also 1,000 times less dense than glass, making it the world's lowest density solid material.

UP TO
80%

THINNER
than competing
insulation products

UP TO
5 ×

SUPERIOR THERMAL
PERFORMANCE
than competing
insulation products

4

THICKNESSES
FOR THE
BEST FIT



YOUR BENEFITS

// Increase coverage

New sizes and more choice. 10mm thickness available today. 5, 15 and 20mm coming soon. A thicker layer gives more insulation coverage per man hour than traditional aerogel insulation.

// Reduce labour cost

Cuts easily and conforms to preferred shapes, with less wastage, making it the right fit for installers.

// Reduce downtime

Product removal is made simple, reducing both downtime and the need to purchase replacement insulation during regular maintenance cycles.

// Superior thermal performance

Offering up to 5 times superior thermal performance versus like-for-like competing insulation products.

// Hydrophobic and breathable

Repels liquid water, but allows vapour to escape, helping to keep equipment drier for longer.

// Ultra-thin and ultra-light

Equal thermal performance at a fraction of the thickness. Improved handling and easier transportation.

// Versatile

More flexibility than traditional aerogel insulation materials.

// Environmentally safe

Dispose of in accordance with local regulations.

// CUI defence

Hydrophobicity and breathability enhance protection against corrosion under insulation (CUI).

Brief description	ArmaGel HT is a flexible aerogel blanket suitable for elevated temperature applications with maximum operating temperatures up to 650°C (1200°F). ArmaGel HT is compliant to ASTM C1728, Type III, Grade 1A.
Material type	Aerogel blanket.
Product colour range	Grey
Special features	ArmaGel HT is resistant to elevated operating temperatures up to 650 °C (1200 °F). The product is suitable for use in multi-layer applications including ArmaSound Industrial Systems.
Product range	Sheets in rolls, 5, 10, 15 and 20 mm (0.2, 0.4, 0.6, 0.8 in) thickness and width of 1.5 m (59 in). For further details, please refer to the product range tables at the end of this document.
Applications	Thermal insulation/protection of pipes, vessels and ducts (including elbows, fittings, flanges etc.) in offshore, onshore, industrial (typically oil and gas) and process equipment facilities. ArmaGel HT is also used as a component of ArmaSound Industrial Systems to provide acoustic insulation on industrial pipework and vessels, ensuring reduction of sound transmission.
Installation	For industrial applications it is recommended to consult the relevant Armacell application manual(s). For further information please contact our Technical Services.

Property	Value / Assessment									Standard / Test method
Temperature range										
Service temperature ^{1,2,3,4}	Max. °C					Max. °F				ASTM C411, ASTM C447
	650					1.200				
Thermal conductivity										
Declared thermal conductivity	Øm	24°C [75°F]	38°C [100°F]	93°C [200°F]	149 °C [300°F]	204°C [400°F]	260°C [500°F]	316°C [600°F]	371°C [700°F]	ASTM C177
	λd ≤ [W/ [m·K]]	0,021	0,022	0,023	0,025	0,029	0,032	0,036	0,043	
	k ≤ [Btu·in/ [h·ft²·°F]]	0,14	0,15	0,16	0,18	0,20	0,22	0,25	0,30	
Temperature resistance										
Hot surface performance ¹	Pass									ASTM C411
Linear shrinkage under soaking heat	<2% in width and length									ASTM C356
Fire Performance and Approvals										
Reaction to fire	B-s1,d0									EN 13501-1 ¹
Surface burning characteristics	≤ 5 flame spread index ≤ 10 smoke development									ASTM E84
Resistance to water vapour										
Water vapour sorption	≤ 5% by weight									ASTM C1104
Resistance to water										
Hydrophobic	Yes									
Water absorption	Pass									ASTM C1763
Corrosion mitigation										
Corrosiveness to steel	Passed, Mass Loss Corrosion Rate (MLCR) not exceeding that of 5 ppm chloride solution on carbon steel coupon A									ASTM C1617, Procedure A
Stress corrosion cracking	Pass									ASTM C692, ASTM C795
Physical attributes										
Nominal density	180 kg/m³ [11 lb/ft³]									ASTM C303

Property	Value / Assessment	Standard / Test method
Mechanical properties		
Compressive strength ⁵	≥ 3 psi/ 20.7 kPa at 10% compression	ASTM C165
Flexibility of insulation blankets	Flexible	ASTM C1101
Weather and UV resistance		
Weather resistance	In all industrial applications the outer layer of the material must be protected with an adequate covering like metal jacketing or preformed UV-cured GRP (Glass-Reinforced Plastic) cladding. Please contact Technical Services for guidance on the temperature limitations and specific construction considerations which need to be made for each jacketing system.	
Health and environment		
Fungal growth	No growth	ASTM C1338
Health aspects	Neutral	
Other technical features		
Shelf life	Material shall be stored indoors, in clean and dry conditions, away from direct sunlight.	
Storage ⁶	Max. 3 years	

¹For operating temperatures above 400 °C (752 °F) a metallic foil barrier with 0.05 mm (0.002 inch) thickness must be additionally installed. For details please contact Technical Services.

²For live line installations, refer to the ArmaGel HT and HTL application manual.

³For design/installation above 80 mm thickness, contact Armacell technical services.

⁴ArmaGel HT is designed for application where the operating temperatures are above ambient. In the event that the operating temperatures are below ambient please consult our technical services for further information and support.

⁵Test performed with a preload of 13.8 kPa (2 psi).

⁶Shelf life (maximum storage time) is limited to ensure that only currently manufactured products are installed on projects. This limitation is restricted solely to storage of the product and does not affect the lifetime of product after it has been installed.

Roll - jumbo

Item	Thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
AGH-05-00/150P	5	1,5	80	7612207554502	120 m ²
AGH-10-00/150P	10	1,5	40	7612207462708	60 m ²
AGH-15-00/150P	15	1,5	26	7612207463385	39 m ²
AGH-20-00/150P	20	1,5	20	7612207462685	30 m ²

Other information

Thickness tolerance

5 mm (0.2 in) nominal thickness: ± 1 mm
 10 mm (0.4 in) nominal thickness: ± 2.5 mm
 15 mm (0.6 in) nominal thickness: ± 3 mm
 20 mm (0.8 in) nominal thickness: ± 4 mm

Length tolerance

$\pm 5\%$

Width tolerance

$\pm 3\%$

Roll - standard

Item	Thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
AGH-05-00/150S	5	1,5	16	7612207454093	24 m ²
AGH-10-00/150S	10	1,5	8	7612207452488	12 m ²
AGH-15-00/150S	15	1,5	6	7612207460230	9 m ²
AGH-20-00/150S	20	1,5	4	7612207454116	6 m ²

Other information

Thickness tolerance

5 mm (0.2 in) nominal thickness: ± 1 mm
 10 mm (0.4 in) nominal thickness: ± 2.5 mm
 15 mm (0.6 in) nominal thickness: ± 3 mm
 20 mm (0.8 in) nominal thickness: ± 4 mm

Length tolerance

$\pm 5\%$

Width tolerance

$\pm 3\%$

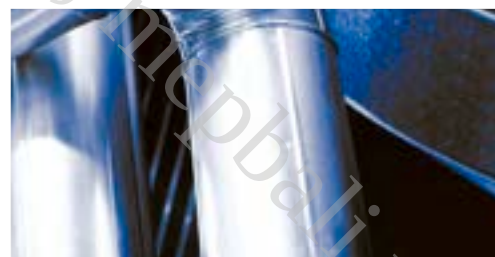
INSULATION JUST GOT BETTER

ArmaGel HTL

Flexible aerogel blanket for high-temperature applications

- // ASTM C1728 Compliant
- // Non-combustible in accordance with ISO EN 1182 (A1)
- // Excellent protection against corrosion under insulation (CUI)
- // Hydrophobic and breathable
- // More choice: 5, 10 and 20 mm thicknesses

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ArmaGel®

TECHNICAL DATA - ARMAGEL HTL

Brief description	ArmaGel HTL is a flexible aerogel insulation blanket suitable for high-temperature insulation applications up to 650°C (1200°F). ArmaGel HTL is compliant with ASTM C1728, Type V, Grade 1A.
Material type	Aerogel blanket.
Product colour range	Light grey
Special features	ArmaGel HTL is a highly flexible aerogel insulation blanket. It is hydrophobic and breathable providing the best-in-class corrosion under insulation (CUI) protection.
Product range	Sheets in rolls, 5, 10 and 20 mm (0.2, 0.4 and 0.8 in) thickness and width of 1.5 m (59 in). For further details, please refer to the product range tables at the end of this document.
Applications	Thermal insulation/protection of pipes, vessels, equipment, fittings and etc. in industrial and process facilities.
Installation	For industrial applications it is recommended to consult the relevant Armacell application manual(s). For further information please contact our Technical Services.

Property	Value / Assessment					Standard / Test method
Temperature range						
Service temperature ¹	Max. °C		Max. °F			ASTM C447, ASTM C411
	650		1.200			
Thermal conductivity						
Declared thermal conductivity	Øm	24°C (75°F)	100°C (212°F)	200°C (392°F)	300°C (572°F)	ASTM C177
	λd ≤ [W/(m·K)]	0,029	0,039	0,049	0,061	
	k ≤ [Btu·in/(h·ft²·°F)]	0,20	0,27	0,34	0,42	
Fire Performance and Approvals						
Reaction to fire	A1 Non-combustible					EN 13501-1, ISO 1182
Surface burning characteristics	Flame spread index ≤ 5 Smoke developed index ≤ 10					ASTM E84
Fire performance						
Toxicity	Passed					KS F 2271
Resistance to water						
Hydrophobic	Yes					
Water absorption	≤ 8% by weight					ASTM C1763
Corrosion mitigation						
Stress corrosion cracking	Passed					ASTM C692
Physical attributes						
Nominal density	150 kg/m³ [9.5 lb/ft³]					ASTM C303, KS L 9102
Weather and UV resistance						
Weather resistance	In all industrial applications the outer layer of the material must be protected with an adequate covering like metal jacketing or preformed UV-cured GRP (Glass-Reinforced Plastic) cladding. Please contact Technical Services for guidance on the temperature limitations and specific construction considerations which need to be made for each jacketing system.					
Health and environment						
Fungal growth	No growth / Rating 0					ASTM C1338, ASTM G21
Health aspects	Neutral					
Other technical features						
Shelf life ²	Max. 3 years					

Property	Value / Assessment	Standard / Test method
Storage	Material shall be stored indoors, in clean and dry conditions, away from direct sunlight.	

¹For use in temperatures beyond the published value, please contact Technical Services.

²Shelf life (maximum storage time) is limited to ensure that only currently manufactured products are installed on projects. This limitation is restricted solely to storage of the product and does not affect the lifetime of product after it has been installed.

Roll - jumbo

Item	Thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
AGL-05-00/150J	5	1,5	80	7612207554526	120 m ²
AGL-10-00/150J	10	1,5	48	7612207510300	72 m ²
AGL-20-00/150J	20	1,5	24	7612207510379	36 m ²

Other information

Thickness tolerance

5 mm (0.2 in) nominal thickness: ± 1 mm
 10 mm (0.4 in) nominal thickness: ± 2.5 mm
 20 mm (0.8 in) nominal thickness: ± 4 mm

Length tolerance

± 5 %

Width tolerance

± 3 %

Roll - standard

Item	Thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
AGL-05-00/150S	5	1,5	16	7612207510331	24 m ²
AGL-10-00/150S	10	1,5	8	7612207510348	12 m ²
AGL-20-00/150S	20	1,5	4	7612207510294	6 m ²

Other information

Thickness tolerance

5 mm (0.2 in) nominal thickness: ± 1 mm
 10 mm (0.4 in) nominal thickness: ± 2.5 mm
 20 mm (0.8 in) nominal thickness: ± 4 mm

Length tolerance

± 5 %

Width tolerance

± 3 %



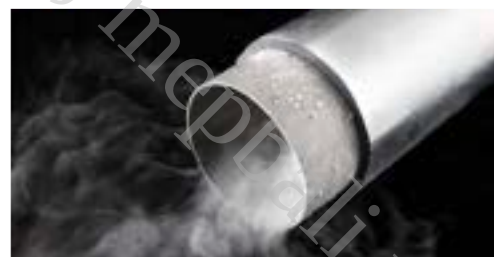
INSULATION JUST GOT COOLER

ArmaGel DT

Flexible aerogel insulation blanket for
cryogenic and dual-temperature
applications

- // ASTM C1728 Compliant
- // More choice: 5, 10, 15 and 20 mm thicknesses
- // Integrated zero-perm vapour barrier
- // Flexible at cryogenic temperatures

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ArmaGel®

INSULATION JUST GOT COOLER

ArmaGel DT

Aerogel is a remarkable material. Although it is the world's lightest solid material, it is strong enough to stop a bullet in its track, and NASA used it to bring home a piece of comet. Armacell for its part is utilising aerogel technology to produce its ArmaGel blanket product range.

CRYOGENIC
CONDITIONS
DOWN TO
-180 / -196 °C

Welcome to the next generation of aerogel insulation technology.

ASTM C1728 compliant. Flexible and bendable. Superior thermal performance. Protection against corrosion under insulation. ArmaGel DT is the reliable solution for cryogenic and dual-temperature applications and is compatible with the Armacell Energy existing product range, giving you the best of both worlds.



Cryogenic



Dual-Temperature



Hydrophobic

**Note:**

ArmaGel DT is compliant with ASTM C1728 Type IV, Grade 1A with minimum use temperature of -196 °C. For operating temperatures below -180 °C, special attention must be given to the system design and craftsmanship during installation to ensure that the material does not come in contact with liquid oxygen. For further information and support, please contact Technical Services.



YOUR BENEFITS

// Increase coverage

New sizes and more choice. 5, 10, 15, and 20 mm thicknesses available today. A thicker layer gives more insulation coverage per man hour than conventional aerogel insulation.

// Faster installation rates

Cuts easily and conforms to preferred shapes, with less wastage, making it the right fit for installers.

// Increase labour productivity

Product removal is made simple, reducing both downtime and the need to purchase replacement insulation during regular maintenance cycles.

// Superior thermal performance

Offering up to 2 times superior thermal performance versus like-for-like competing insulation products.

// Hydrophobic & CUI mitigation

Repels liquid water helping to keep equipment drier for longer and mitigate corrosion under insulation (CUI).

// Ultra-thin

Equal thermal performance at a fraction of the thickness. Improved handling and easier transportation.

// Versatile

More flexibility than conventional aerogel insulation materials.

// Environmentally safe

Dispose of in accordance with local regulations.

// Less waste

ArmaGel DT comes in sheet form. It is flexible and more forgiving. It does not crack and can be fabricated to fit any pipe size with minimum waste.

// Acoustic performance

ArmaGel DT offers superior acoustic insertion loss at reduced thickness and weight compared to conventional acoustic insulation systems.

4

THICKNESSES FOR
THE BEST FIT

UP TO

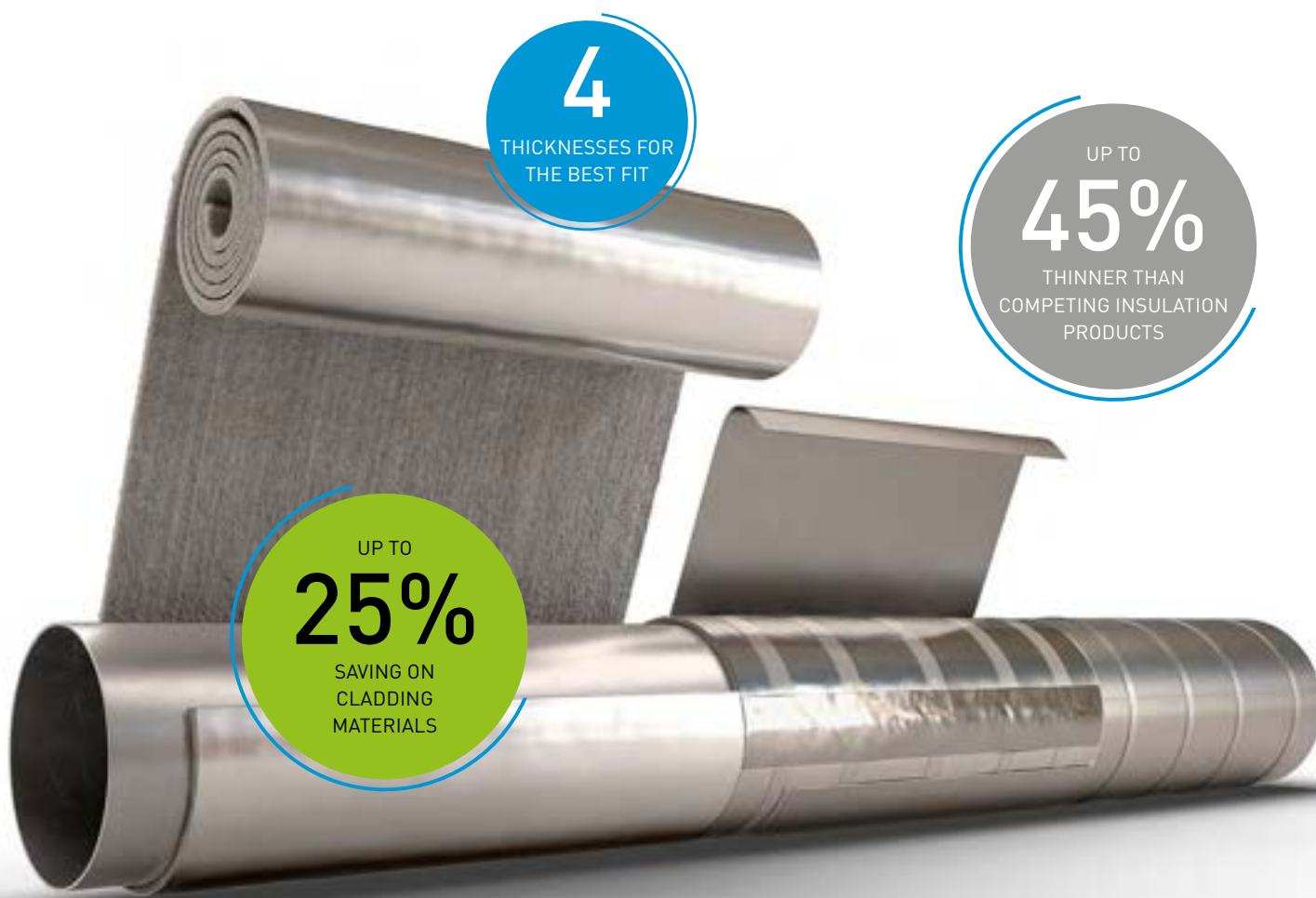
45%

THINNER THAN
COMPETING INSULATION
PRODUCTS

UP TO

25%

SAVING ON
CLADDING
MATERIALS



Brief description	ArmaGel DT is a flexible aerogel insulation blanket with factory-applied aluminium foil, suitable for applications in cryogenic and dual-temperature range. ArmaGel DT is compliant with ASTM C1728 Type IV, Grade 1A.
Product colour range	Grey
Special features	The product is suitable for use in multi-layer applications including ArmaSound Industrial Systems.
Product range	Sheets in rolls, 5, 10, 15 and 20 mm (0.2, 0.4, 0.6, 0.8 in) thickness and width of 1.5 m (59 in). For further details, please refer to the product range tables at the end of this document.
Applications	Thermal insulation/protection of pipes, vessels and ducts (including elbows, fittings, flanges etc.) in cryogenic, onshore, offshore, industrial and process equipment facilities. ArmaGel DT is also used as a component of ArmaSound Industrial Systems to provide acoustic insulation on industrial pipework and vessels, ensuring reduction of sound transmission.
Installation	For industrial applications it is recommended to consult the relevant Armacell application manual(s). For further information please contact our Technical Services.

Approvals, certifications and compliances	- Compliant with Module B of Directive 2014/90/EU. - Certified by Bureau Veritas.				

Property	Value / Assessment									Standard / Test method
Temperature range										
Service temperature ¹	Min. °C		Min. °F		Max. °C		Max. °F		ASTM C411	
	-196		-292		250		482			
Thermal conductivity										
Declared thermal conductivity ²	Øm	-129°C [-200°F]	-73.3°C [-100°F]	-17.8°C [0°F]	23.9°C [75°F]	37.8°C [100°F]	93.3°C [200°F]	149°C [300°F]	204°C [400°F]	ASTM C177
	λd ≤ [W/ (m·K)]	0,015	0,017	0,020	0,021	0,022	0,023	0,025	0,029	
	k ≤ [Btu-in/ (h·ft²·°F)]	0,10	0,12	0,14	0,14	0,15	0,16	0,17	0,20	
Temperature resistance										
Linear shrinkage under soaking heat	< 2% in width and length									ASTM C356
Fire Performance and Approvals										
Surface burning characteristics	≤ 25 flame spread index ≤ 50 smoke development									ASTM E84
Surface flammability	Compliant to IMO Part 5									IMO 2010 FTP Code, Part 5
Smoke generation and toxicity test	Compliant to IMO Part 2									IMO 2010 FTP Code, Part 2
Resistance to water vapour										
Water vapour sorption	≤ 5% by weight									ASTM C1104
Water vapour permeance of integrated vapour barrier	0.00 perm									ASTM E96
Resistance to water										
Hydrophobic	Yes									
Water absorption	≤ 8%									ASTM C1763
Corrosion mitigation										
Corrosiveness to steel	Passed, Mass Loss Corrosion Rate (MLCR) not exceeding that of 5 ppm chloride solution on carbon steel coupon									ASTM C1617, Procedure A
Stress corrosion cracking	Passed									ASTM C692, ASTM C795

Property	Value / Assessment	Standard / Test method
Physical attributes		
Nominal density	185 kg/m³ (11.5 lb/ft³)	ASTM C303
Mechanical properties		
Compressive strength³	≥ 5 psi/ 34.5 kPa at 10% compression	ASTM C165
Flexibility of insulation blankets	Flexible	ASTM C1101
Weather and UV resistance		
Weather resistance	In all industrial applications the outer layer of the material must be protected with an adequate covering like metal jacketing or preformed UV-cured GRP (Glass-Reinforced Plastic) cladding. Please contact Technical Services for guidance on the temperature limitations and specific construction considerations which need to be made for each jacketing system.	
Health and environment		
Fungal growth	No growth	ASTM C1338
Health aspects	Neutral	
Other technical features		
Shelf life⁴	Max. 3 years	
Storage	Material shall be stored indoors, in clean and dry conditions, away from direct sunlight.	

¹For operating temperatures below -180°C, special attention must be given to the system design and craftsmanship during installation to ensure that the material does not come in contact with liquid oxygen. For further information and support, please contact Technical Services.

²Measured under a load of 1.5 kPa (0.22 psi).

³Test performed with a preload of 13.8 kPa (2 psi).

⁴Shelf life (maximum storage time) is limited to ensure that only currently manufactured products are installed on projects. This limitation is restricted solely to storage of the product and does not affect the lifetime of product after it has been installed.

Roll – standard precovered

Item	Thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
AGD-05-00/150S	5	1,5	13	7612207477436	19.5 m ²
AGD-10-00/150S	10	1,5	8	7612207477450	12 m ²
AGD-15-00/150S	15	1,5	5,2	7612207477474	7.8 m ²
AGD-20-00/150S	20	1,5	4	7612207477504	6 m ²

Other information

Thickness tolerance

5 mm (0.2 in) nominal thickness: ± 1 mm
 10 mm (0.4 in) nominal thickness: ± 2.5 mm
 15 mm (0.6 in) nominal thickness: ± 3 mm
 20 mm (0.8 in) nominal thickness: ± 4 mm

Length tolerance ± 5%

Width tolerance ± 3%

Roll – jumbo precovered

Item	Thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
AGD-10-00/150P	10	1,5	40	7612207477467	60 m ²
AGD-15-00/150P	15	1,5	26	7612207477429	39 m ²
AGD-20-00/150P	20	1,5	20	7612207477498	30 m ²

Other information

Thickness tolerance

5 mm (0.2 in) nominal thickness: ± 1 mm
 10 mm (0.4 in) nominal thickness: ± 2.5 mm
 15 mm (0.6 in) nominal thickness: ± 3 mm
 20 mm (0.8 in) nominal thickness: ± 4 mm

Length tolerance ± 5%

Width tolerance ± 3%



INSULATION JUST GOT BETTER

ArmaGel Rail

Double-side laminated flexible aerogel
insulation blanket

- // Approved in accordance with EN45545 HL3
- // Reduced space requirements to achieve exceptional thermal insulation properties in hot and cold climates
- // Improved sound absorption properties

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TECHNICAL DATA - ARMAGEL RAIL

Brief description	ArmaGel Rail is a double side laminated flexible aerogel insulation blanket suitable for rail applications.
Material type	Aerogel insulation blanket with integrated zero-perm vapour barrier.
Additional material information	ArmaGel Rail is intended for use as an efficient thermal insulation to maintain comfortable ambient temperatures inside the train in all conditions. The product is suitable for use in multi-layer applications with other products.
Product colour range	Silver
Product range	Sheets in rolls, 5, 10, 15 and 20 mm (0.2, 0.4, 0.6, 0.8 in) thickness and width of 1.5 m (59 in). For further details, please refer to the product range tables at the end of this document.
Applications	ArmaGel Rail can be used in HVAC systems, walls, ceilings, floor and door applications for efficient thermal insulation at very low thickness.
Remarks	Please consult our Technical Services for further information and support.

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature ¹	Max. °C	Max. °F	
	110	230	
Thermal conductivity			
Declared thermal conductivity ²	Øm	24°C, 75°F	ASTM C177
	λd ≤ [W/(m·K)]	0,021	
	k ≤ [Btu·in/(h·ft²·°F)]	0,14	
Transportation			
Reaction to fire - hazard level	HL3, R1 HL3, R7 HL3, R17		EN 45545-2
Resistance to water			
Hydrophobic	Yes		
Water absorption	Maximum 8%		ASTM C1763
Physical attributes			
Density	Nominal 190 kg/m³ (11.86 lb/ft³)		ASTM C303
Health and environment			
Health aspects	Neutral		
Other technical features			
Shelf life ³	Max. 3 years		
Storage	Material shall be stored indoors, in clean and dry conditions, away from direct sunlight.		

¹For use in temperatures beyond the maximum and minimum service temperature range indicated in the technical data table, please contact our Customer Service Centre.

²For use in temperatures beyond the published value, please contact Technical Services.

³Shelf life (maximum storage time) is limited to ensure that only currently manufactured products are installed on projects. This limitation is restricted solely to storage of the product and does not affect the lifetime of product after it has been installed.

Roll – jumbo precovered

Item	Thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
AGR-05-00/150P	5	1,5	80		120 m ²
AGR-10-00/150P	10	1,5	40	7612207483055	60 m ²
AGR-15-00/150P	15	1,5	26	7612207509854	39 m ²
AGR-20-00/150P	20	1,5	20	7612207548839	30 m ²

Other information**Thickness tolerance**

5 mm (0.20 in) nominal thickness: 4.0 - 6.0 mm
 10 mm (0.39 in) nominal thickness: 7.5 - 12.5 mm
 15 mm (0.59 in) nominal thickness: 12.0 - 18.0 mm
 20 mm (0.79 in) nominal thickness: 16.0 - 24.0 mm

Length tolerance

± 5%

Width tolerance

± 3%

Remarks

5mm /15mm / 20mm thick blankets are available on request

Accessories

Item	Description	Content [quantity]
ACH-PSATAPES-30	AL tape in width: 30mm, length: 25m, thickness: 0.08	10 roll

Other information

Aluminium self-adhesive tape



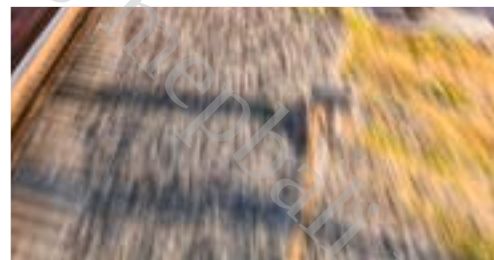
INSTALL IT. TRAVEL SAFELY.

ArmaFlex Rail SD

First FEF insulation that meets HL2
according EN45545-2

- // High performance insulation meeting the highest standards in rail applications
- // Easy to apply
- // Stops water vapour transmission
- // Build-in with Microban technology
- // Fibre and dust free

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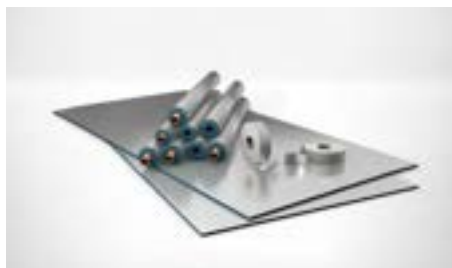
ArmaFlex Rail

// ArmaFlex Rail SD



- Extremely low smoke density and superior fire behaviour
- Built-in Microban® antimicrobial protection reduces mould and bacteria growth
- Complies with most international railway standards for insulation materials
 - EN 45545 – HL2, R1
 - NFPA 130
 - DIN 5510-2
 - GOST 12.1.044-89
 - United Nations ECE R-118 p. 6-8

// ArmaFlex Rail SD-C



- With Microban® antimicrobial product protection
- Excellent mechanical protection and high degree of stability under exposure to ultraviolet light
- Wash-down waterproof and easy to clean
- Meets highest hazard level requirements
 - EN 45545 – HL3, R1

// ArmaFlex Rail ZH-C



- Halogen-free insulation reduces toxicity and corrosive effects on people and equipment
- Resistant to UV, salt water and chemicals
- Wash-down waterproof and easy to clean
- The revolutionary insulation product has a factory-applied, silver-metallic look, reinforced coating for increased hygienic requirements
 - EN 45545 – HL3, R1

// ArmaFlex Rail ZH



- The protective halogen-free insulation to reduce corrosive effects and smoke toxicity in a fire
- Low smoke density, superior fire behaviour
- Fibre- and dust-free material provides low thermal conductivity
- High-tech insulation with built-in fire protection for railway vehicles
 - EN 45545 – HL2, R1



EN 45545

HAZARD LEVEL OF A VEHICLE

Fire safety requirements are part of the European Directive on the interoperability of the trans-European high-speed rail system. The seven-parts standard EN 45545 ,Railway applications - Fire protection on railway vehicles' has been developed to harmonize classifications and fire testing.

EN 45545 introduces a new concept – the hazard level of a vehicle (HL). This is obtained by combining the operation and design categories of the vehicle.

EN 45545-2 classifies all material on board in groups which have to fulfil specific requirement sets which often includes several test methods. The most important fire tests used in EN 45545-2 are the flame propagation, the cone calorimeter and the smoke and toxicity tests. For requirement set R1 they are all based on radiant panels with heat fluxes 50 kW/m².

	N: Standard vehicles	A: Vehicles of automatic train, no emergency trained staff on board	D: Double decked vehicles	S: Sleeping / couchette vehicles	
1: No underground lines.	HL1	HL1	HL1	HL2	
2: Regular use of underground sections and tunnels. Fast evacuation possible.	HL2	HL2	HL2	HL2	
3: Regular use of underground sections and tunnels. Slow evacuation possible.	HL2	HL2	HL2	HL3	HL1 e.g. tramway
4: Regular use of underground sections and tunnels (incl. Euro-Tunnel). No evacuation possible.	HL3	HL3	HL3	HL3	HL2 e.g. TGV, TER, RER, subway
					HL3 e.g. subway, metro, couchette wagon

NATIONAL STANDARDS REPLACED BY EN 45545-2

Country	Standard	European Standard	Testing Standard
Great Britain	BS 476-6/7	EN 45545-2	Spread of flame ISO 5658-2
France	NF 16 101 NF 16 102	Railway application	Heat release, smoke production and mass loss rate ISO 5660
Germany	DIN 5510	Fire protection on railway vehicles	Smoke optical density and toxicity EN ISO 5659-2
Italy	UNI CEI 11170		
Poland	PN-K-02511	Requirements for fire behaviour of materials and components	

TECHNICAL DATA - ARMAFLEX RAIL SD

Brief description	Highly flexible, closed-cell insulation foam with improved fire retardant properties, low smoke generation and in-built Microban antimicrobial protection for railway vehicles.
Additional material information	The pressure-sensitive adhesive coating is based on modified acrylate basis with mesh structure and covered with polyethylene foil. Traces of silicon can be found on the protection paper/foil used to protect self-adhesive closures.
Product colour range	Dark blue
Applications	Insulation/protection for air ducts, pipes, vessels, equipments (including elbows, fittings, flanges, etc.) of air-conditioning/refrigeration and plumbing systems to prevent condensation and save energy in rail cars. Also, the product can be placed in different areas of the train such as thermal insulation for walls, ceiling, partitions, etc.
Remarks	ArmaFlex Rail SD is not designed for transparent insulation applications (exposed to sun light) and is not UV stable. In this case, we recommend the use of ArmaFlex Rail SD-C.

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature	Min. °C	Max. °C¹	EN 14304, EN 14706, EN 14707
	-50	110	
Thermal conductivity			
Declared thermal conductivity	Øm	0°C	EN 12667, EN ISO 8497, EN ISO 13787
	λd ≤ [W/(m·K)]	0,04	
	Formula	[40 + 0,1· Øm + 0,0009 · Øm²]/1000	
Transportation			
Burning behaviour of materials for use in motor vehicles	Burning behaviour for the use in motor vehicles (ECE Regulations) Passed Annex 6,7,8,9		ECE R-118
NFPA 130 American fire test to railway components	3-13 mm ls≤ 25 Ds[4,0] ≤100		ASTM E162, ASTM E662
Fire performance			
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames		
Resistance to water vapour			
Water vapour diffusion resistance factor	μ ≥ 5.000.		EN 13469, EN 12086
Physical attributes			
Dimensions and tolerances	In accordance with EN 14304, table 1;		EN 13467, EN 822, EN 823
Weather and UV resistance			
UV resistance	Protection against UV-radiation is necessary, see TB 142		
Health and environment			
Fungal growth	No fungal growth according to tests		ASTM G21
Additional features	SCCP, MCCP-free		
Other technical features			
Shelf life	Self-adhesive tapes, self-adhesive sheets: 1 year		
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).		

¹+85 °C, for products with a self-adhesive layer.

Tube – standard. Blue. Length: 2.0m

9 mm						13 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
12	RA-09X012	13	16	7612207361049	192 m	12	RA-13X012	13	16	7612207393668	130 m
15	RA-09X015	16	19	7612207361056	164 m	15	RA-13X015	16	19	7612207393651	112 m
18	RA-09X018	19	22	7612207361063	150 m	18	RA-13X018	19	22	7612207390810	98 m
22	RA-09X022	23	26	7612207361070	122 m	22	RA-13X022	23	26	7612207393644	88 m
28	RA-09X028	29	32	7612207361087	90 m	28	RA-13X028	29	32	7612207390827	64 m
35	RA-09X035	36	39	7612207361094	68 m	35	RA-13X035	36	39	7612207393675	56 m
42	RA-09X042	43	46	7612207361100	56 m	42	RA-13X042	43	46	7612207390834	48 m

Other information

Thickness tolerance	9 - 13 mm ± 1.5 mm 19 mm ± 2.5 mm
Length tolerance	± 1.5 %
Reaction to fire	Hazard level 2, R1 according to EN 45545-2

Tube – standard. Blue. Length: 2.0m

19 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
15	RA-19X015	16	19	7612207455564	64 m
18	RA-19X018	19	22	7612207455632	58 m
22	RA-19X022	23	26	7612207455571	56 m
28	RA-19X028	29	32	7612207455670	40 m
35	RA-19X035	36	39	7612207455649	40 m
42	RA-19X042	43	46	7612207455588	24 m
48	RA-19X048	49	52	7612207460506	24 m
54	RA-19X054	55	58	7612207523256	24 m
60	RA-19X060	61	64	7612207523263	16 m
64	RA-19X064	65	68	7612207523270	16 m

Other information

Thickness tolerance	9 - 13 mm ± 1.5 mm 19 mm ± 2.5 mm
Length tolerance	± 1.5 %
Reaction to fire	Hazard level 2, R1 according to EN 45545-2

Roll - standard. Blue

Item	Thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
RA-03-99/E	3	1.000	30	7612207361001	30 m ²
RA-06-99/E	6	1.000	15	7612207361025	15 m ²
RA-09-99/E	9	1.000	10	7612207361117	10 m ²

Roll - standard. Blue

Item	Thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
RA-13-99/E	13	1.000	8	7612207361131	8 m ²
RA-19-99/E	19	1.000	5	7612207361155	5 m ²
RA-25-99/E	25	1.000	4	7612207379785	4 m ²
Other information					
Thickness tolerance		3 - 6 mm ± 1.0 mm 9 - 19 mm ± 1.5 mm 25 mm ± 2.0 mm			
Length tolerance		+ 5% - 1,5 %			
Reaction to fire		Hazard level 2, R1 according to EN 45545-2 3 mm sheets: HL3, R1			

Roll - standard self-adhesive. Blue

Item	Thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
RA-03-99/EA	3	1.000	30	7612207361018	30 m ²
RA-06-99/EA	6	1.000	15	7612207361032	15 m ²
RA-09-99/EA	9	1.000	10	7612207361124	10 m ²
RA-13-99/EA	13	1.000	8	7612207361148	8 m ²
RA-19-99/EA	19	1.000	5	7612207361162	5 m ²
RA-25-99/EA	25	1.000	4	7612207379792	4 m ²
Other information					
Thickness tolerance		3 - 6 mm ± 1.0 mm 9 - 19 mm ± 1.5 mm 25 mm ± 2.0 mm			
Length tolerance		+ 5% - 1,5 %			
Reaction to fire		Hazard level 2, R1 according to EN 45545-2 3 mm sheets: HL3, R1			

Tape - self-adhesive

Item	Thickness [mm]	Width [mm]	Length [m]	Content [quantity]
RA-TAPE	3	50	15	12 roll



INSTALL IT. TRAVEL SAFELY.

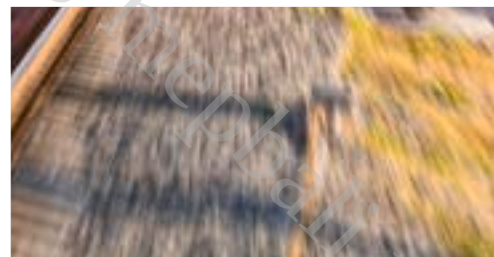
ArmaFlex

Rail SD-C

First FEF insulation that meets HL3 according EN 45545-2

- // Multilayer mechanical protection
- // UV resistant and washable
- // 2-in-1 solution
- // Effectively prevents moisture penetration
- // Reduced risk of mold growth for an improved indoor air quality

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TECHNICAL DATA - ARMAFLEX RAIL SD-C

Brief description	Highly flexible, closed-cell pre-covered insulation foam with improved fire-retardant properties, low smoke generation and in-built Microban antimicrobial protection for railway vehicles.
Material type	Flexible elastomeric foam based rubber manufactured with ArmaPrene patented technology, US patent no. 8 163 811, EU patent no. 2 261 305.
Additional material information	The pressure-sensitive adhesive coating is based on modified acrylate basis with mesh structure and covered with polyethylene foil. Traces of silicon can be found on the protection paper/foil used to protect self-adhesive closures.
Product colour range	Blue with silver metallic covering
Special features	The covering offers excellent durability, even under UV exposure when used for outdoor applications.
Applications	Insulation/protection for air ducts, pipes, vessels, equipments (including elbows, fittings, flanges, etc.) of air-conditioning/refrigeration and plumbing systems to prevent condensation and save energy in rail cars. Also, the product can be placed in different areas of the train such as thermal insulation for walls, ceiling, partitions, etc. The insulation system is designed for easy cleaning.

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature	Min. °C	Max. °C ¹	EN 14304, EN 14706, EN 14707
	-50	110	
Thermal conductivity			
Declared thermal conductivity	Øm	0°C	EN ISO 13787, EN 12667, EN ISO 8497
	λd ≤ [W/(m·K)]	0,04	
	Formula	[40 + 0,1· Øm + 0,0009 · Øm²]/1000	
Transportation			
NFPA 130 American fire test to railway components	3-25 mm: l(s)≤ 25 ; Ds[4,0] ≤100		ASTM E162, ASTM E662
Fire performance			
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames		
Resistance to water vapour			
Water vapour diffusion resistance factor	μ ≥ 10.000		EN 12086, EN 13469
Physical attributes			
Dimensions and tolerances	In accordance with EN 14304, table 1		EN 13467, EN 822, EN 823
Health and environment			
Additional features	SCCP, MCCP-free		
Other technical features			
Shelf life	Self-adhesive tapes, self-adhesive sheets and tubes: 1 year		
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).		

¹+85 °C, for products with a self-adhesive layer.

Tube – precovered. Blue with silver metallic covering. Length: 1.0m

9 mm

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
12	SDC-09X012	13	16	7612207389142	96 m
15	SDC-09X015	16	19	7612207389128	82 m
18	SDC-09X018	19	22	7612207389159	75 m
22	SDC-09X022	23	26	7612207389166	61 m
28	SDC-09X028	29	32	7612207389173	45 m
35	SDC-09X035	36	39	7612207389135	34 m
42	SDC-09X042	43	46	7612207389180	26 m

Other information

Thickness tolerance 9 mm ± 1.5 mm

Length tolerance ± 1.5 %

Reaction to fire Hazard level 3, R1 according to EN 45545-2

Sheet – self-adhesive. Blue with silver metallic covering. Length: 2.0m. Width: 1.0m

Item	Thickness [mm]	Width [m]	Length [m]	EAN	Content [metric]
SDC-06MM/A	6	1	2	7612207386752	50 m ²
SDC-09MM/A	9	1	2	7612207386769	34 m ²
SDC-13MM/A	13	1	2	7612207386660	24 m ²
SDC-19MM/A	19	1	2	7612207386677	16 m ²

Other information

Thickness tolerance
6 mm ± 1.0 mm
9-19 mm ± 1.5 mm
25 mm ± 2.0 mm

Length tolerance ± 1.5 %

Reaction to fire Hazard level 3, R1 according to EN 45545-2

Accessories

Item	Description	Content [quantity]
ACH-PSATAPES-30	AL tape in width: 30mm, length: 25m, thickness: 0.08	10 roll

Other information

Aluminium self-adhesive tape.



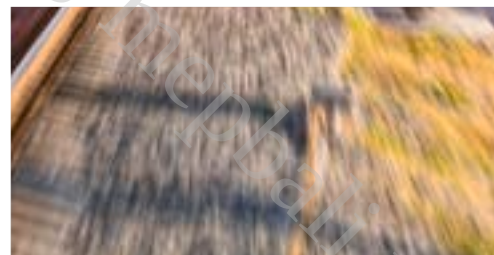
INSTALL IT. TRAVEL SAFELY.

ArmaFlex Rail ZH

First halogen free FEF insulation that
meets HL2 according EN45545-2

- // Protect assets and people
- // Halogen-free
- // Free of dust and fibres
- // Easy to install

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TECHNICAL DATA - ARMAFLEX RAIL ZH

Brief description	Halogen free, flexible closed-cell insulation foam with improved fire-retardant properties and low smoke generation for railway vehicles.
Material type	Flexible elastomeric foam based on synthetic rubber (NBR).
Product colour range	Black grey
Special features	The pressure-sensitive adhesive coating is based on modified acrylate basis with mesh structure and covered with polyethylene foil. Traces of silicone can be found on the protection paper / foil used to protect self-adhesive closures. Halogen-free (chloride, bromide) acc. to DIN / VDE 0472, part 815.
Applications	Insulation/protection for air ducts, pipes, vessels, equipment (including elbows, fittings, flanges, etc.) of air-conditioning/refrigeration and plumbing systems to prevent condensation and save energy in rail cars. Also, the product can be placed in different areas of the train such as thermal insulation for walls, ceiling, partitions, etc.
Remarks	ArmaFlex Rail ZH is not designed for transparent insulation applications (exposed to sun light) and is not UV stable. In this case, we recommend the use of ArmaFlex Rail ZH-C.

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature ¹	Min. °C	Max. °C (intermittent)	EN 14706, EN 14707, EN 14304
	-50	110	
Thermal conductivity			
Declared thermal conductivity	Θm	0°C	EN ISO 13787, EN 12667, EN ISO 8497
	λd ≤ [W/(m·K)]	0,04	
	Formula	[40 + 0,1· Θm + 0,0009 · Θm²]/1000	
Fire performance			
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames		
Resistance to water vapour			
Water vapour diffusion resistance factor	μ ≥ 1.000.		EN 12086, EN 13469
Weather and UV resistance			
UV resistance	Protection against UV-radiation is necessary, see TB 142		
Health and environment			
Additional features	SCCP, MCCP, LCCP-free		
Other technical features			
Shelf life	Self-adhesive tapes, self-adhesive sheets: 1 year		
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).		

¹+85 °C, for products with a self-adhesive layer.

Tube – standard. Length: 2.0m

9 mm

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
12	ZH-09X012	13	16	7612207380583	192 m
15	ZH-09X015	16	19	7612207380590	164 m
18	ZH-09X018	19	22	7612207380613	150 m
22	ZH-09X022	23	26	7612207380538	122 m
28	ZH-09X028	29	32	7612207380545	90 m
35	ZH-09X035	36	39	7612207380552	68 m
42	ZH-09X042	43	46	7612207380569	56 m

Other information

Thickness tolerance 9 mm ± 1.5 mm

Length tolerance ± 1.5 %

Reaction to fire Hazard level 2, R1 according to EN 45545-2

Roll – standard. Grey

Item	Thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
ZH-03-99/E	3	1.000	30	7612207379938	30 m ²
ZH-06-99/E	6	1.000	15	7612207380606	15 m ²
ZH-10-99/E	10	1.000	10	7612207390285	10 m ²
ZH-13-99/E	13	1.000	8	7612207378986	8 m ²

Other information

Thickness tolerance 3 - 6 mm ± 1.0 mm
10 - 13 mm ± 1.5 mm

Length tolerance + 5% - 1,5 %

Reaction to fire Hazard level 2, R1 according to EN 45545-2

Roll – standard self-adhesive. Grey

Item	Thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
ZH-03-99/EA	3	1.000	30	7612207379945	30 m ²
ZH-06-99/EA	6	1.000	15	7612207380576	15 m ²
ZH-10-99/EA	10	1.000	10	7612207390582	10 m ²
ZH-13-99/EA	13	1.000	8	7612207380514	8 m ²

Other information

Thickness tolerance 3 - 6 mm ± 1.0 mm
10 - 13 mm ± 1.5 mm

Length tolerance + 5% - 1,5 %

Reaction to fire Hazard level 2, R1 according to EN 45545-2

Tape – insulation. Grey

Item	Thickness [mm]	Width [mm]	Length [m]	Content [quantity]
ZH-TAPE	3	50	15	12 roll

Other information

Reaction to fire Hazard level 2, R1 according to EN 45545-2



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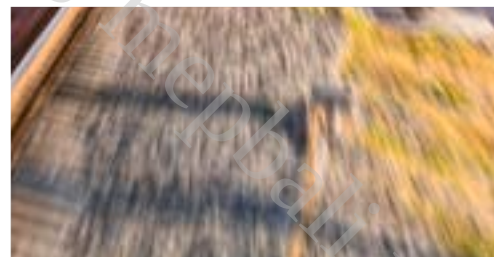
ArmaFlex

Rail ZH-C

First halogen-free FEF insulation that meets HL3 according to EN45545-2

- // Protect assets and people
- // Halogen free
- // Free of dust and fibres
- // Easy to install

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TECHNICAL DATA - ARMAFLEX RAIL ZH-C

Brief description	Halogen free, flexible closed-cell pre-covered insulation foam with improved fire-retardant properties and low smoke generation for railway vehicles.
Additional material information	The pressure-sensitive adhesive coating is based on modified acrylate basis with mesh structure and covered with polyethylene foil. Traces of silicon can be found on the protection paper/foil used to protect self-adhesive closures. The insulation system is designed for easy cleaning.
Product colour range	Black foam with silver covering
Special features	Without halogens (chloride, bromide) according to DIN/VDE 0472, part 815. Fulfils DIN 1988-200.
Applications	Insulation/protection for air ducts, pipes, vessels, equipments (including elbows, fittings, flanges, etc.) of air-conditioning/refrigeration and plumbing systems to prevent condensation and save energy in rail cars. Also, the product can be placed in different areas of the train such as thermal insulation for walls, ceiling, partitions, etc. The insulation system is designed for easy cleaning.

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature	Min. °C	Max. °C ¹	EN 14706, EN 14707, EN 14304
	-50	110	
Thermal conductivity			
Declared thermal conductivity	θ _m	0 °C	EN ISO 13787, EN 12667, EN ISO 8497
	λ _d ≤ [W/(m·K)]	0,04	
	Formula	[40 + 0,1· θ _m + 0,0009 · θ _m ²]/1000	
Fire performance			
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames		
Resistance to water vapour			
Water vapour diffusion resistance factor	μ ≥ 10.000.		EN 12086, EN 13469
Other technical features			
Shelf life	Self-adhesive tapes, self-adhesive sheets and tubes: 1 year		
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).		

¹ +85 °C, for products with a self-adhesive layer.

Tube – precovered. Black foam with silver covering. 1.0 m Length**9 mm**

Pipe Ø [mm]	Item	EAN	Content [metric]
12	ZHC-09X012	7612207389210	96 m
15	ZHC-09X015	7612207389197	82 m
18	ZHC-09X018	7612207389227	75 m
22	ZHC-09X022	7612207389203	61 m
28	ZHC-09X028	7612207389234	45 m
35	ZHC-09X035	7612207389241	34 m
42	ZHC-09X042	7612207389258	26 m

Other information

Thickness tolerance	9 mm ± 1.5 mm

Length tolerance	± 1.5 %

Reaction to fire	Hazard level 3, R1 according to EN 45545-2

Sheet – self-adhesive. Black foam with silver covering

Item	Thickness [mm]	Width [m]	Length [m]	EAN	Content [metric]
ZHC-06MM/A	6	1	2	7612207386691	50 m ²
ZHC-10MM/A	10	1	2	7612207390599	34 m ²
ZHC-13MM/A	13	1	2	7612207386745	24 m ²
ZHC-19MM/A	19	1	2	7612207386653	16 m ²
ZHC-25MM/A	25	1	2	7612207386714	12 m ²

Other information

Thickness tolerance	6 mm ± 1.0 mm 9-19 mm ± 1.5 mm 25 mm ± 2.0 mm

Length tolerance	1.5 %

Reaction to fire	Hazard level 3, R1 according to EN 45545-2

Accessories

Item	Description	Content [quantity]
ACH-PSATAPES-30	AL tape in width: 30mm, length: 25m, thickness: 0.08	10 roll

Other information

Aluminium self-adhesive tape.

INSTALL IT. TRUST IT.

ArmaFlex Duct Plus

The fibre-free insulation for easy and durable protection of air ducts

- // Euroclass B-s3,d0
- // Fibre-free
- // Prevents condensation
- // Structure-borne noise control

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TECHNICAL DATA - ARMAFLEX DUCT PLUS

Brief description	ArmaFlex Duct Plus is a highly flexible closed-cell insulation material with low thermal conductivity, which is especially designed and produced for the thermal insulation of air-conditioning ducts. ArmaFlex Duct Plus insulation reduces heat losses and the closed-cell structure prevents water vapor transmission, thus avoiding the risk of corrosion.
Material type	Highly flexible closed-cell elastomeric foam material based on synthetic rubber. Factory made flexible elastomeric foam (FEF) according to EN14304.
Additional material information	Self-adhesive coating: pressure-sensitive adhesive coating on modified acrylate basis with mesh structure, covered with polyethylene foil. Traces of silicon can be found on the protection paper/foil used to protect self-adhesive closures.
Product colour range	Black
Special features	High flexible closed-cell insulation material especially designed for HVAC/R applications.
Applications	Insulation of rectangular and cylindrical air ducts to optimally prevent heat losses, prevent condensation and save energy.
Installation	Certified and compatible adhesive for a long-term performing system is ArmaFlex 520.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Property	Value / Assessment			Standard / Test method
Temperature range				
Service temperature	Min. °C ¹	Max. °C ²		EN 14706, EN 14707, EN 14304
	-50	110		
Thermal conductivity				
Declared thermal conductivity	Øm	+/- 0 °C	40°C	EN ISO 13787, EN 12667, EN ISO 8497
	λd ≤ [W/(m·K)]	0,036	0,041	
	Range	Sheets 9 -32mm		
	Formula	[36 + 0,1· Øm + 0,0008 · Øm²]/1000		
Fire Performance and Approvals				
Reaction to fire	Sheets: B-s3, d0			EN 13501-1, EN 13823, EN ISO 11925-2
Fire performance				
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames			
Resistance to water vapour				
Water vapour diffusion resistance factor	μ ≥ 7000			EN 12086
Physical attributes				
Dimensions and tolerances	In accordance with EN 14304, table 1			EN 822, EN 823, EN 13467
Weather and UV resistance				
UV resistance ³	Protection against UV radiation is necessary (see Technical Bulletin no. 142)			
Health and environment				
Volatile organic compounds (VOC) content	Fulfills all VOC requirements (French, Italian, Belgian, German AgBB, Blauer Engel and Eurifins Indoor air Comfort GOLD).			ISO 16000 Parts 3, 6 & 9
Health aspects	Dust- and fibre-free.			
Additional features	MCCP-free			
Other technical features				
Shelf life	Self-adhesive tapes, self-adhesive sheets: 1 year			

Property	Value / Assessment	Standard / Test method
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).	

¹For temperatures below -50 °C please contact our Customer Service Center to request for the corresponding technical information.

²+85 °C, for products with a self-adhesive layer.

³If ArmaFlex is used outdoors or in applications under UV radiation, it should be protected with ArmaFinish Paint, or a covering such as ArmaClad Arma-Chek within 3 days of installation.

Roll - standard. Black

Item	Insulation thickness [mm]	Width [m]	Length [m]	EAN	Content [metric]
ADU-09MM/E-P	9	1,5	20	7612207352016	30 m ²
ADU-13MM/E-P	13	1,5	16	7612207352054	24 m ²
ADU-19MM/E-P	19	1,5	12	7612207352139	18 m ²
ADU-25MM/E-P	25	1,5	8	7612207352177	12 m ²
ADU-32MM/E-P	32	1,5	6	7612207352214	9 m ²
Other information					
Thickness tolerance		≤ 6 mm: ±1,0 mm 7 -19 mm: ±1,5 mm > 19 mm: ±2,0 mm			
Length tolerance		+/- 1.5 %			

Roll - standard self-adhesive. Black

Item	Insulation thickness [mm]	Width [m]	Length [m]	EAN	Content [metric]
ADU-09MM/EA-P	9	1,5	20	7612207352023	30 m ²
ADU-13MM/EA-P	13	1,5	16	7612207352061	24 m ²
ADU-19MM/EA-P	19	1,5	12	7612207352146	18 m ²
ADU-25MM/EA-P	25	1,5	8	7612207352184	12 m ²
ADU-32MM/EA-P	43	1,5	6	7612207352221	9 m ²
Other information					
Thickness tolerance		≤ 6 mm: ±1,0 mm 7 -19 mm: ±1,5 mm > 19 mm: ±2,0 mm			
Length tolerance		+/- 1,5 %			

INSTALL IT. TRUST IT.

ArmaFlex Duct Plus AL

Insulation for air duct applications with
silver finish

- // Fibre-free
- // Closed-cell structure to prevent water vapour transmission
- // Prevents condensation
- // Structure-borne noise control

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TECHNICAL DATA - ARMAFLEX DUCT PLUS AL

Brief description	ArmaFlex Duct Plus AL is a closed-cell insulation material with a silver finish. The low thermal conductivity is especially designed and produced for the thermal insulation of air-conditioning ducts. ArmaFlex Duct Plus AL insulation reduces heat losses and the closed-cell structure prevents water vapor transmission, thus avoiding the risk of corrosion.
Material type	Highly flexible closed-cell elastomeric foam material based on synthetic rubber. Factory made flexible elastomeric foam (FEF) according to EN14304. Covering: 12 µm laminate of aluminium, double coated glass scrim 5 x 5 mm and 22 g/m ² LDPE coating.
Additional material information	Self-adhesive coating: pressure-sensitive adhesive coating on modified acrylate basis with mesh structure, covered with polyethylene foil. Traces of silicon can be found on the protection paper/foil used to protect self-adhesive closures.
Product colour range	Silver (Covering)
Special features	High flexible closed-cell insulation material especially designed for HVAC/R applications.
Applications	Insulation of rectangular and cylindrical air ducts to optimally prevent heat losses, prevent condensation and save energy.
Installation	Certified and compatible adhesive for a long-term performing system is ArmaFlex 520.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Property	Value / Assessment			Standard / Test method
Temperature range				
Service temperature	Min. °C ¹	Max. °C ²		EN 14706, EN 14707, EN 14304
	-50	110		
Thermal conductivity				
Declared thermal conductivity	θm	+/- 0 °C	40°C	EN ISO 13787, EN 12667, EN ISO 8497
	λd ≤ [W/(m·K)]	0,036	0,041	
	Range	Sheets 9 -40 mm		
	Formula	[36 + 0,1· θm + 0,0008 · θm²]/1000		
Fire Performance and Approvals				
Reaction to fire	sheets B-s3, d0			EN 13501-1, EN 13823, EN ISO 11925-2
Fire performance				
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames			
Resistance to water vapour				
Water vapour diffusion resistance factor	μ ≥ 10000			EN 12086
Physical attributes				
Dimensions and tolerances	In accordance with EN 14304, table 1			EN 822, EN 823, EN 13467
Weather and UV resistance				
UV resistance	Excellent. (see Technical Bulletin no. 142)			
Health and environment				
Health aspects	Dust- and fibre-free.			
Additional features	MCCP-free			
Other technical features				
Shelf life	Self-adhesive tapes, self-adhesive sheets: 1 year			
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature [0 °C – 35 °C].			

¹For temperatures below -50 °C please contact our Customer Service Center to request for the corresponding technical information.²+85 °C, for products with a self-adhesive layer.

Roll – standard precovered. Silver (Covering)

Item	Insulation thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
ADU-09MM-1/E-P-L	9	1,0	20	7612207464771	20 m ²
ADU-13MM-1/E-P-L	13	1,0	16	7612207464740	16 m ²
ADU-19MM-1/E-P-L	19	1,0	12	7612207464757	12 m ²
ADU-25MM-1/E-P-L	25	1,0	8	7612207464801	8 m ²
ADU-32MM-1/E-P-L	32	1,0	6	7612207464818	6 m ²
ADU-40MM-1/E-P-L	40	1,0	6	7612207464832	6 m ²
Other information					
Thickness tolerance		≤ 6 mm: ±1,0 mm 7 -19 mm: ±1,5 mm > 19 mm: ±2,0 mm			
Length tolerance		+/- 1,5 %			

Roll – standard precovered self-adhesive. Silver (Covering)

Item	Insulation thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
ADU-09MM-1/EA-P-L	9	1,0	20	7612207464849	20 m ²
ADU-13MM-1/EA-P-L	13	1,0	16	7612207464764	16 m ²
ADU-19MM-1/EA-P-L	19	1,0	12	7612207464856	12 m ²
ADU-25MM-1/EA-P-L	25	1,0	8	7612207464863	8 m ²
ADU-32MM-1/EA-P-L	32	1,0	6	7612207464795	6 m ²
ADU-40MM-1/EA-P-L	40	1,0	6	7612207464788	6 m ²
Other information					
Thickness tolerance		≤ 6 mm: ±1,0 mm 7 -19 mm: ±1,5 mm > 19 mm: ±2,0 mm			
Length tolerance		+/- 1,5 %			

Accessories

Item	Description	Content [quantity]
ACH-PSATAPES-30	AL tape in width: 30mm, length: 25m, thickness: 0.08	10 roll



INSTALL IT. TRUST IT.

ArmaFlex Duct

The fibre-free insulation for easy and durable protection of air ducts

- // Fibre/dust-free
- // Closed-cell structure to prevent water vapour transmission
- // Prevents condensation
- // Structure-borne noise control

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TECHNICAL DATA - ARMAFLEX DUCT

Brief description	ArmaFlex Duct is a highly flexible closed-cell insulation material with low thermal conductivity, which is especially designed and produced for the thermal insulation of air-conditioning ducts. ArmaFlex Duct insulation reduces heat losses and the closed-cell structure prevents water vapor transmission, thus avoiding the risk of corrosion.
Additional material information	Self-adhesive coating: pressure-sensitive adhesive coating on modified acrylate basis with mesh structure, covered with polyethylene foil. Traces of silicon can be found on the protection paper/foil used to protect self-adhesive closures.
Product colour range	Black
Applications	Insulation of rectangular and cylindrical air ducts to optimally prevent heat losses, prevent condensation and save energy.
Installation	Certified and compatible adhesive for a long-term performing system is ArmaFlex 520.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature	Min. °C ¹	Max. °C ²	EN 14706, EN 14707, EN 14304
	-50	110	
Thermal conductivity			
Declared thermal conductivity	Øm	+/- 0 °C	EN ISO 13787, EN 12667, EN ISO 8497
	λd ≤ [W/(m·K)]	0,036	
	Range	Sheets 9 - 25 mm	
	Formula	[36 + 0,1· Øm + 0,0008 · Øm²]/1000	
Declared thermal conductivity	Øm	+/- 0 °C	EN ISO 8497, EN ISO 13787, EN 12667
	λd ≤ [W/(m·K)]	0,038	
	Range	Sheets 32 - 40 mm	
	Formula	[38 + 0,1· Øm + 0,0008 · Øm²]/1000	
Fire Performance and Approvals			
Reaction to fire	sheets D-s3, d0		EN 13501-1, EN 13823, EN ISO 11925-2
Fire performance			
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames		
Resistance to water vapour			
Water vapour diffusion resistance factor	μ ≥ 7000		EN 12086
Physical attributes			
Dimensions and tolerances	In accordance with EN 14304, table 1		EN 822, EN 823, EN 13467
Weather and UV resistance			
UV resistance ³	Protection against UV radiation is necessary (see Technical Bulletin no. 142)		
Health and environment			
Health aspects	Dust- and fibre-free.		
Additional features	MCCP-free		
Other technical features			
Shelf life	Self-adhesive tapes, self-adhesive sheets: 1 year		

Property	Value / Assessment	Standard / Test method
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).	

¹For temperatures below -50 °C please contact our Customer Service Center to request for the corresponding technical information.

²+85 °C, for products with a self-adhesive layer.

³If ArmaFlex is used outdoors or in applications under UV radiation, it should be protected with ArmaFinish Paint, or a covering such as ArmaClad Arma-Chek within 3 days of installation.

Roll - standard. Black. Width: 1.5m

Item	Insulation thickness [mm]	Width [m]	Length [m]	EAN	Content [metric]
ADU-09MM/E	9,0	1,5	20	7612207355383	30 m ²
ADU-13MM/E	13,0	1,5	16	7612207355390	24 m ²
ADU-19MM/E	19,0	1,5	12	7612207355406	18 m ²
ADU-25MM/E	25,0	1,5	8	7612207355413	12 m ²

Other information

Thickness tolerance

≤ 6 mm: ±1,0 mm
 7 -19 mm: ±1,5 mm
 > 19 mm: ±2,0 mm

Length tolerance

+/- 1,5 %

Roll - standard self-adhesive. Black. Width: 1.5m

Item	Insulation thickness [mm]	Width [m]	Length [m]	EAN	Content [metric]
ADU-09MM/EA	9,0	1,5	20	7612207357264	30 m ²
ADU-13MM/EA	13,0	1,5	16	7612207357271	24 m ²
ADU-19MM/EA	19,0	1,5	12	7612207357288	18 m ²
ADU-25MM/EA	25,0	1,5	8	7612207357295	12 m ²
ADU-32MM/EA	32,0	1,5	6	7612207357301	9 m ²

Other information

Thickness tolerance

≤ 6 mm: ±1,0 mm
 7 -19 mm: ±1,5 mm
 > 19 mm: ±2,0 mm

Length tolerance

+/- 1,5 %

INSTALL IT. TRUST IT.

ArmaFlex Duct AL

Insulation for air duct applications with
silver finish

- // Structure-borne noise control
- // Optimal surface design for a lasting aesthetic impression
- // Washable surface to support hygiene maintenance
- // Sheet size specifically engineered for duct segments

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ArmaFlex®

TECHNICAL DATA - ARMAFLEX DUCT AL

Brief description	ArmaFlex Duct AL is a closed-cell insulation material with a silver finish. The low thermal conductivity is especially designed and produced for the thermal insulation of air-conditioning ducts. ArmaFlex Duct AL insulation reduces heat losses and the closed-cell structure prevents water vapor transmission, thus avoiding the risk of corrosion.
Material type	Highly flexible closed-cell elastomeric foam material based on synthetic rubber. Factory made flexible elastomeric foam (FEF) according to EN14304. Covering: 12 µm laminate of aluminium, double coated glass scrim 5 x 5 mm and 22 g/m ² LDPE coating.
Additional material information	Self-adhesive coating: pressure-sensitive adhesive coating on modified acrylate basis with mesh structure, covered with polyethylene foil. Traces of silicon can be found on the protection paper/foil used to protect self-adhesive closures.
Product colour range	Silver (Covering)
Special features	Highly flexible closed-cell insulation material especially designed for the insulation of air conditioning ducts.
Applications	Insulation of rectangular and cylindrical air ducts to optimally prevent heat losses, prevent condensation and save energy.
Installation	Certified and compatible adhesive for a long-term performing system is ArmaFlex 520.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Property	Value / Assessment			Standard / Test method
Temperature range				
Service temperature	Min. °C ¹	Max. °C ²		EN 14706, EN 14707, EN 14304
	-50	110		
Thermal conductivity				
Declared thermal conductivity	θm	+/- 0 °C	40°C	EN ISO 13787, EN 12667, EN ISO 8497
	λd ≤ [W/(m·K)]	0,036	0,041	
	Range	Sheets 9 - 25 mm		
	Formula	[36 + 0,1· θm + 0,0008 · θm²]/1000		
Declared thermal conductivity	θm	+/- 0 °C	40°C	
	λd ≤ [W/(m·K)]	0,038	0,043	
	Range	Sheets 32 - 40 mm		
	Formula	[38 + 0,1· θm + 0,0008 · θm²]/1000		
Fire Performance and Approvals				
Reaction to fire	Euroclass E			EN 13501-1, EN 13823, EN ISO 11925-2
Fire performance				
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames			
Resistance to water vapour				
Water vapour diffusion resistance factor	μ ≥ 7000			EN 12086
Physical attributes				
Dimensions and tolerances	In accordance with EN 14304, table 1			EN 822, EN 823, EN 13467
Weather and UV resistance				
UV resistance	Excellent. (see Technical Bulletin no. 142)			
Health and environment				
Health aspects	Dust- and fibre-free.			
Additional features	MCCP-free			

Property	Value / Assessment	Standard / Test method
Other technical features		
Shelf life	Self-adhesive tapes, self-adhesive sheets: 1 year	
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).	

¹For temperatures below -50 °C please contact our Customer Service Center to request for the corresponding technical information.

²+85 °C, for products with a self-adhesive layer.

Roll – standard precovered. Silver (Covering)

Item	Insulation thickness [mm]	Width [m]	Length [m]	EAN	Content [metric]
ADU-09MM/E-L	9,0	1,5	20	7612207357165	30 m ²
ADU-13MM/E-L	13,0	1,5	16	7612207357189	24 m ²
ADU-19MM-1/E-L	19,0	1,5	12	7612207378573	12 m ²
ADU-19MM/E-L	19,0	1,5	8	7612207357202	18 m ²
ADU-25MM/E-L	25,0	1,5	8	7612207357226	12 m ²
ADU-32MM/E-L	32,0	1,5	6	7612207357240	9 m ²
Other information					
Thickness tolerance		≤ 6 mm: ±1,0 mm 7 -19 mm: ±1,5 mm > 19 mm: ±2,0 mm			
Length tolerance		+/- 1,5 %			

Roll – standard precovered self-adhesive. Silver (Covering)

Item	Insulation thickness [mm]	Width [m]	Length [m]	EAN	Content [metric]
ADU-06MM-1/EA-L	6	1,0	20	7612207385045	30 m ²
ADU-09MM-1/EA-L	9,0	1,0	20	7612207378528	20 m ²
ADU-09MM/EA-L	9,0	1,5	20	7612207357172	30 m ²
ADU-13MM-1/EA-L	13,0	1,0	16	7612207378542	16 m ²
ADU-13MM/EA-L	13,0	1,5	16	7612207357196	24 m ²
ADU-19MM-1/EA-L	19,0	1,0	12	7612207378580	12 m ²
ADU-19MM/EA-L	19,0	1,5	12	7612207357219	18 m ²
ADU-25MM-1/EA-L	25,0	1,0	8	7612207378467	8 m ²
ADU-25MM/EA-L	25,0	1,5	8	7612207357233	12 m ²
ADU-32MM-1/EA-L	32,0	1,0	6	7612207378597	6 m ²
ADU-32MM/EA-L	32,0	1,5	6	7612207357257	9 m ²
ADU-40MM-1/EA-L	40,0	1,0	6	7612207378603	6 m ²
Other information					
Thickness tolerance		≤ 6 mm: ±1,0 mm 7 -19 mm: ±1,5 mm > 19 mm: ±2,0 mm			
Length tolerance		+/- 1,5 %			

Accessories

Item	Description	Content [quantity]
ACH-PSATAPES-30	AL tape in width: 30mm, length: 25m, thickness: 0.08	10 roll



INSTALL IT. TRUST IT.

SH/ArmaFlex

SH/ArmaFlex is specially tailored to meet the energy regulations to effectively ensure fast return on investments in heating and plumbing applications

- // Complete system solution
- // Built-in with Microban for a better indoor air quality
- // Fast return on investment
- // Outstanding energy saving
- // Range meets energy regulations
- // FM Approved

www.armacell.com



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ArmaFlex®

INSTALL IT. TRUST IT.

SH/ArmaFlex

ACTIVE MICROBAN® ANTIMICROBIAL PROTECTION

When microbes come in contact with the insulation surface, MICROBAN® protection penetrates the cell wall of the microorganism, disabling its ability to function, grow and reproduce. Because the protection is built in during the manufacturing process, it will not wash off or wear away. This gives products with MICROBAN® technology an added level of protection against mould and mildew, thus positively contributing to the indoor air quality of the surrounding ambients. Insulation material equipped with MICROBAN® is therefore the ideal long-term solution for sanitary and heating systems in public buildings such as schools, hospitals, elderly homes, offices and airports.

// Energy Savings

Since the European Energy Performance of Buildings Directive (EPBD), the requirements of energy efficiency for both new and refurbished buildings increased. With this, the energy consumption levels became more visible and transparent to owners, tenants and users through a building certification, as an indispensable part of the building documentation. Correct insulation of heating and sanitary pipes is critical for the optimum energy performance of a building - which is ensured by the use of the SH/ArmaFlex range.

// Complete System

Armacell offers a complete carefully considered and coordinated system solution for any professional insulation challenge: SH/ArmaFlex standard, self-adhesive and endless tubes and sheets, tape and accessories. ArmaFix X pipe supports to avoid thermal bridging, ArmaFlex Protect fire barrier as well as ArmaProtect 1000 firestop filler. The wide range of specially developed accessories such as the new generation of adhesives and the ArmaFlex Toolbox for applying ArmaFlex insulation materials make installation even easier.



INVESTMENT PAYBACK

The static amortisation of the initial costs by using SH/ArmaFlex 25 mm is less than one year.

- compared to initial situation of noninsulated pipes
- domestic hot water and heating (70/55 °C)
- pipe lines located in unheated area
- fuel costs 0,55 € / liter

Payback time in less than 6 months!

PROTECTION THAT LIVES ON
MICROBAN®



TECHNICAL DATA - SH/ARMAFLEX

Brief description	Highly flexible closed-cell extruded insulation material with low thermal conductivity to minimise energy losses on heating and plumbing installations.
Material type	Elastomeric foam based on synthetic rubber. Factory-made flexible elastomeric foam (FEF), according to EN 14304.
Additional material information	Self-adhesive coating: pressure-sensitive adhesive coating on modified acrylate basis with mesh structure, covered with polyethylene foil. Traces of silicon can be found on the protection paper/foil used to protect self-adhesive closures.
Product colour range	Grey
Special features	SH/Armaflex is a closed-cell insulation material for heating and plumbing systems. Its water vapour diffusion resistance value is sufficient to comply with the condensation control requirements for these applications and especially for cold water pipelines.
Applications	Insulation/protection of pipes (heating, domestic hot and cold water, sewage water, drain water) and other heating and plumbing installations to optimally prevent heat losses and save energy.
Installation	Certified and compatible adhesive for a long-term performing system is ArmaFlex 520.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature ¹	Max. °C ²		EN 14706, EN 14707, EN 14304
	110		
	Remarks	Minimum service temperature: As is usual in plumbing and heating installations.	
Thermal conductivity			
Declared thermal conductivity	Øm	40 °C	EN ISO 13787, EN 12667, EN ISO 8497
	λd ≤ [W/(m·K)]	0,036	
	Range	Tubes of thickness: 9 mm-11 mm	
	Formula	λd = [36 + 0,1· Øm + 0,0008 · (Øm-40)²]/1000	
Declared thermal conductivity	Øm	40 °C	EN ISO 13787, EN 12667, EN ISO 8497
	λd ≤ [W/(m·K)]	0,040	
	Range	All other tubes, sheets and tape	
	Formula	λd = [38 + 0,1· Øm + 0,0008 · (Øm-40)²]/1000	
Fire Performance and Approvals			
Reaction to fire	Tubes: up to 45 mm B(L)-s3, d0 Tubes: > 45 mm C(L)-s3, d0 Sheets: 10 mm C-s3, d0 Sheets: 20 mm D-s3, d0 Tapes: B-s3, d0		EN 13501-1, EN ISO 11925-2, EN 13823
FM approved	4924 - Pipe and Duct Insulation		UBC26-3
Passive fire protection			
Fire resistance of elements of construction	EI 30 - EI 90		EN 13501-2, EN 1366-3
Fire performance			
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames		
Physical attributes			
Dimensions and tolerances	in accordance with EN 14304, table 1		EN 822, EN 823, EN 13467

Property	Value / Assessment	Standard / Test method
Acoustic performance		
Reduction of structure-borne sound transmission	≤ 27 dB (A)	EN ISO 3822-1
Weather and UV resistance		
UV resistance ³	Protection against UV radiation is necessary (see Technical Bulletin no. 142).	
Health and environment		
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
Antimicrobial behaviour	Built-in Microban active antimicrobial protection: No fungal growth observed.	EN ISO 846, VDI 6022
Environmental aspects	Meets the requirements for sustainable construction in combination with ArmaFlex EC0550 adhesive such as LEED.	
Environmental Product Declaration (EPD)	Type III Environmental Product Declaration (EPD): Declaration number "EPD-ARM-20200221-IBB1-EN", Institut Bauen und Umwelt e.V. (IBU)	ISO 14025, EN 15804+A2
Green building assessment	Meets the sustainable construction requirements for LEED v4.1, BREEAM international, WELL v2 and DGNB.	
Additional features	SCCP, MCCP-free	
Other technical features		
Shelf life	Self-adhesive tapes, self-adhesive tubes: 1 year	
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% - 70%) and ambient temperature (0 °C -35 °C).	

¹For use in temperatures beyond the published value, please contact Technical Services.

²+85 °C, for products with a self-adhesive layer.

³If ArmaFlex is used outdoors or in applications under UV radiation, it should be protected with a covering such as ArmaClad Arma-Chek within 3 days of installation.

Tube – standard. Grey. 2.0 m Length.

9 mm						10 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
64	SH-09X064	65	68	7612207134681	36 m	12	SH-10X012	13	16	7612207246070	180 m
76	SH-09X076	77	90	7612207134704	28 m	15	SH-10X015	16	19	7612207246087	150 m
89	SH-09X089	90	93	7612207134711	24 m	18	SH-10X018	19	22	7612207246117	130 m
108	SH-09X108	109	114	7612207134728	20 m	20	SH-10X020	21	24	7612207279450	100 m
114	SH-09X114	115	120	7612207134735	20 m	22	SH-10X022	23	26	7612207246148	100 m
-	-	-	-	-	-	25	SH-10X025	26	29	7612207279474	80 m
-	-	-	-	-	-	28	SH-10X028	29	32	7612207246179	80 m
-	-	-	-	-	-	32	SH-10X032	33	36	7612207279498	70 m
-	-	-	-	-	-	35	SH-10X035	36	39	7612207246193	70 m
-	-	-	-	-	-	42	SH-10X042	43	46	7612207246216	60 m
-	-	-	-	-	-	48	SH-10X048	49	52	7612207277173	50 m
-	-	-	-	-	-	54	SH-10X054	55	58	7612207277180	44 m
-	-	-	-	-	-	60	SH-10X060	61	64	7612207277203	40 m

Other information

Thickness tolerance

9 - 13 mm ± 1,5 mm
 19 - 30 mm ± 2,5 mm
 < 32 mm ± 3 mm

Length tolerance

± 1,5 %

Tube – standard. Grey. 2.0 m Length.

13 mm						19 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
76	SH-13X076	77	80	7612207133622	24 m	15	SH-19X015	16	19	7612207133684	72 m
89	SH-13X089	90	93	7612207133639	18 m	18	SH-19X018	19	22	7612207133714	66 m
114	SH-13X114	115	120	7612207133653	12 m	20	SH-19X020	21	24	7612207278941	60 m
-	-	-	-	-	-	22	SH-19X022	23	26	7612207133738	60 m
-	-	-	-	-	-	25	SH-19X025	26	29	7612207278965	50 m
-	-	-	-	-	-	28	SH-19X028	29	32	7612207133769	48 m
-	-	-	-	-	-	32	SH-19X032	33	36	7612207279054	32 m

Tube – standard. Grey. 2.0 m Length.

13 mm						19 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
-	-	-	-	-	-	35	SH-19X035	36	39	7612207133790	40 m
-	-	-	-	-	-	42	SH-19X042	43	46	7612207133820	32 m
-	-	-	-	-	-	48	SH-19X048	49	52	7612207133851	30 m
-	-	-	-	-	-	54	SH-19X054	55	58	7612207133882	26 m
-	-	-	-	-	-	60	SH-19X060	61	64	7612207133912	24 m
-	-	-	-	-	-	76	SH-19X076	77	80	7612207133936	18 m
-	-	-	-	-	-	89	SH-19X089	90	93	7612207133943	16 m

Other information

Thickness tolerance

9 - 13 mm ± 1,5 mm
19 - 30 mm ± 2,5 mm
< 32 mm ± 3 mm

Length tolerance

± 1,5 %

Tube – standard. Grey. 2.0 m Length.

24 mm						30 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
15	SH-24X015	16	19	7612207135039	36 m	40	SH-30X040	41	44	7612207386981	18 m
18	SH-24X018	19	22	7612207135053	36 m	48	SH-30X048	49	52	7612207326451	18 m
20	SH-24X020	21	24	7612207279078	36 m	60	SH-30X060	61	64	7612207326437	12 m
22	SH-24X022	23	26	7612207135077	36 m	64	SH-30X064	65	68	7612207386998	12 m
25	SH-24X025	26	29	7612207279092	32 m	76	SH-30X076	77	80	7612207326420	10 m
28	SH-24X028	29	32	7612207135091	32 m	89	SH-30X089	90	93	7612207326413	8 m
32	SH-24X032	33	36	7612207350647	24 m	110	SH-30X110	111	114	7612207350784	8 m
42	SH-24X042	43	46	7612207135114	24 m	114	SH-30X114	115	118	7612207326406	8 m
48	SH-24X048	49	52	7612207135145	24 m	-	-	-	-	-	-

Other information

Thickness tolerance

9 - 13 mm ± 1,5 mm
19 - 30 mm ± 2,5 mm
< 32 mm ± 3 mm

Length tolerance

± 1,5 %

Tube – standard. Grey. 2.0 m Length.

32 mm						34 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
54	SH-32X054	55	58	7612207188943	12 m	60	SH-34X060	61	64	7612207188967	10 m
Other information											
Thickness tolerance		9 - 13 mm ± 1,5 mm 19 - 30 mm ± 2,5 mm < 32 mm ± 3 mm									
Length tolerance		± 1,5 %									

Tube – standard. Grey. 2.0 m Length.

36 mm						44 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
28	SH-36X028	29	32	7612207135206	18 m	76	SH-44X076	77	80	7612207188981	8 m
35	SH-36X035	36	39	7612207135213	16 m	-	-	-	-	-	-
110	SH-36X110	111	115	7612207350807	6 m	-	-	-	-	-	-
114	SH-36X114	115	120	7612207134278	6 m	-	-	-	-	-	-
140	SH-36X140	141	146	7612207134285	4 m	-	-	-	-	-	-
160	SH-36X160	161	166	7612207188936	4 m	-	-	-	-	-	-
168	SH-36X168	169	174	7612207134292	4 m	-	-	-	-	-	-
Other information											
Thickness tolerance		9 - 13 mm ± 1,5 mm 19 - 30 mm ± 2,5 mm < 32 mm ± 3 mm									
Length tolerance		± 1,5 %									

Tube – standard. Grey. 2.0 m Length.

46 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
42	SH-46X042	43	46	7612207135305	8 m
48	SH-46X048	49	52	7612207135312	8 m
Other information					
Thickness tolerance		9 - 13 mm ± 1,5 mm 19 - 30 mm ± 2,5 mm < 32 mm ± 3 mm			
Length tolerance		± 1,5 %			

10 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
15	SH-10X015/E	16	19	7612207246094	35 m
18	SH-10X018/E	19	22	7612207246124	30 m
22	SH-10X022/E	23	26	7612207246155	25 m
28	SH-10X028/E	29	32	7612207246223	20 m
Other information					
Thickness tolerance		9 - 13 mm ± 1,5 mm 19 - 30 mm ± 2,5 mm < 32 mm ± 3 mm			
Length tolerance		± 1,5 %			

10 mm						19 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
12	SH-10X012-A	13	16	7612207300567	180 m	15	SH-19X015-A	16	19	7612207304237	72 m
15	SH-10X015-A	16	19	7612207300574	150 m	18	SH-19X018-A	19	22	7612207304244	66 m
18	SH-10X018-A	19	22	7612207300581	130 m	20	SH-19X020-A	21	24	7612207304251	60 m
20	SH-10X020-A	21	24	7612207304350	100 m	22	SH-19X022-A	23	26	7612207304268	60 m
22	SH-10X022-A	23	26	7612207300598	100 m	25	SH-19X025-A	26	29	7612207304275	50 m
25	SH-10X025-A	26	29	7612207304367	80 m	28	SH-19X028-A	29	32	7612207304282	48 m
28	SH-10X028-A	29	32	7612207300550	80 m	32	SH-19X032-A	33	36	7612207304398	32 m
32	SH-10X032-A	33	36	7612207304374	70 m	35	SH-19X035-A	36	39	7612207304299	40 m
35	SH-10X035-A	36	39	7612207300222	70 m	42	SH-19X042-A	43	46	7612207301861	32 m
42	SH-10X042-A	43	46	7612207300451	60 m	48	SH-19X048-A	49	52	7612207304312	30 m
48	SH-10X048-A	49	52	7612207300475	50 m	54	SH-19X054-A	55	58	7612207304329	26 m
54	SH-10X054-A	55	58	7612207300543	44 m	60	SH-19X060-A	61	64	7612207304336	24 m
60	SH-10X060-A	61	64	7612207300536	40 m	-	-	-	-	-	-

Thickness tolerance	9 - 13 mm ± 1,5 mm 19 - 30 mm ± 2,5 mm < 32 mm ± 3 mm
Length tolerance	± 1,5 %

Tube – self-seal. Grey. 2.0 m Length.

24 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
15	SH-24X015-A	16	19	7612207304411	36 m
18	SH-24X018-A	19	22	7612207304428	36 m
20	SH-24X020-A	21	24	7612207304435	36 m
22	SH-24X022-A	23	26	7612207304442	36 m
25	SH-24X025-A	26	29	7612207304459	32 m
28	SH-24X028-A	29	32	7612207304466	32 m
32	SH-24X032-A	33	36	7612207350654	24 m
42	SH-24X042-A	43	46	7612207304473	24 m
48	SH-24X048-A	49	52	7612207304480	24 m
Other information					
Thickness tolerance		9 - 13 mm $\pm$ 1,5 mm 19 - 30 mm $\pm$ 2,5 mm < 32 mm $\pm$ 3 mm			
Length tolerance		$\pm$ 1,5 %			

Sheet – standard. Grey

Item	Thickness [mm]	Length [m]	EAN	Content [metric]
SH-10-99	10	2	7612207279993	13 m ²
SH-20-99	20	2	7612207133172	7 m ²
Other information				
Thickness tolerance		10 $\pm$ 1,5 mm 20 $\pm$ 2 mm		
Length tolerance		$\pm$ 1,5 %		
Width tolerance		$\pm$ 2 %		

SH/Armaflex Tapes

Item	Content [quantity]
SH-TAPE	12 roll
SH-TAPE/6	6 roll

Tape – PVC

Item	EAN	Content [quantity]
SH-TAPE/PVC	7612207119459	72 roll



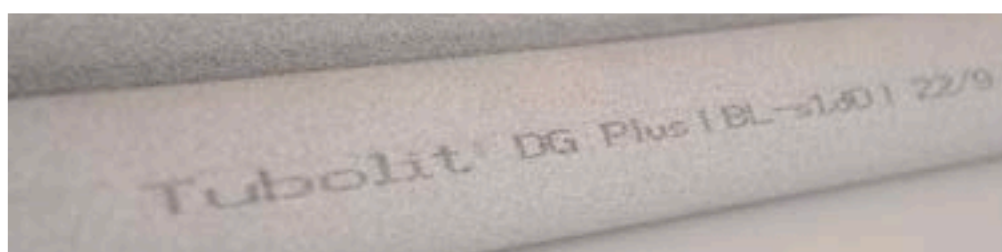
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THE RANGE.

Tubolit DG Plus

The flexible low smoke PE insulation material to save energy and improve acoustic comfort for heating and plumbing

- // Best choice B(L)-s1, d0 low smoke solution
- // Best in class PEF insulation with 0,038 W/(m•K) at 40°C
- // Compliant with European energy regulation
- // Effective energy saving in warm application
- // New recipe fully recyclable and containing up to 50% recycled material

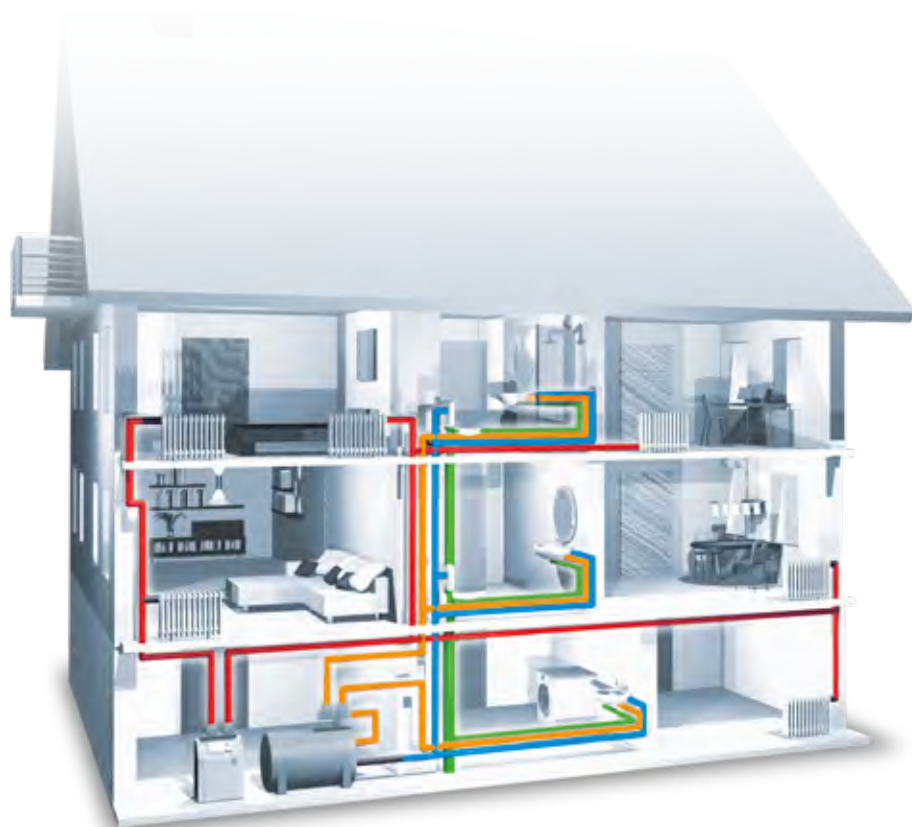
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ArmaLight™

INSTALL IT. BENEFIT FROM THE RANGE.

ArmaLight Tubolit



ArmaLight Tubolit saves energy, improves acoustic comfort in buildings and protects pipes installed within the building shell. ArmaLight Tubolit is the most complete range of thermal, acoustical and protective insulation products for installations of heating, domestic hot and cold water and sewage pipes in both residential as well as public and commercial buildings.

— Heating
 — Domestic hot water
 — Cold water pipes
 — Waste water

Typical application areas

Product	Type of installation				Additional Benefit /Requirement				
	Heating	Domestic hot water	Cold water pipes	Waste water	Extra protection	50% faster application	Noise reduction	Under plaster	Under floor
ArmaLight Tubolit									
DG	...	...	..						
DG self-seal	...	...	..			✓			
DG-B1	...	...	..						
DG Plus	...	...	..						
S	...	...	..		✓		✓	✓	
S Plus			...		✓		✓	✓	
DHS Quadra	...				✓		✓		✓
AR Fonowave				...	✓		✓		
AR Fonoblok				...	✓		✓		

TECHNICAL DATA - TUBOLIT DG PLUS

Brief description	Flexible, closed-cell extruded insulation material with very low smoke development to reduce heat losses and noise on heating and plumbing insulations.
Material type	Foam material based on polyethylene. Factory made polyethylene foam (PEF) according to EN 14313.
Product colour range	Dark grey
Applications	Insulation/protection of pipes (heating system pipes, domestic hot and cold water pipes), and other parts of heating and plumbing installations including elbows, fittings, flanges, etc.)
Installation	Certified and compatible adhesive for a long-term performing system is ArmaFlex 520. Please refer to the relevant Armacell application manual for advice. For further information please contact our Customer Service Centre.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .
Remarks	After installation linear shrinkage of approx. 2% (or more in particular cases) may occur during the initial and even later phase of system operation. Under certain conditions (e.g. high humidity, main distribution pipes with almost constant flow) cold water pipelines must be insulated with ArmaFlex, just the same as chilled water pipes in air-conditioning systems.

Property	Value / Assessment			Standard / Test method
Operating temperature				
Operating temperature	Maximum temperature: 100°C +85 °C for tapes Minimum temperature: As is usual in heating and plumbing installations			EN 14707, EN 14313
Thermal conductivity				
Declared thermal conductivity	θm	40°C	0°C	EN ISO 13787, EN ISO 8497
	λd ≤ [W/(m·K)]	0,038	0,033	
	Range	Tubolit DG Plus tubes 6-20 mm		
	Formula	λ(θm) = (35 + 0,111 · θm)/1000		
Declared thermal conductivity	θm	40°C	0°C	EN ISO 13787, EN ISO 8497
	λd ≤ [W/(m·K)]	0,040	0,035	
	Range	Tubolit DG Plus tubes>20 mm		
Fire Performance and Approvals				
Reaction to fire	Tubes 6-26 mm: B(L)-s1,d0			EN 13501-1, EN 13823, EN ISO 11925-2
Physical attributes				
Dimensions and tolerances	In accordance with EN 14313, table 1 and 2			EN 822, EN 823, EN 13467
Health and environment				
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
Environmental Product Declaration (EPD)	Type III Environmental Product Declaration (EPD): Declaration date 27.01.2023, Instytut Techniki Budowlanej (ITB)			EN 15804+A1
Green building assessment	Meets the sustainable construction requirements for LEED v4.1, BREEAM international, WELL v2 and DGNB.			
Additional features	SCCP, MCCP-free			
Other technical features				
Shelf life	self-adhesive tubes: 1 year			
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).			

Tube – self-seal. Dark grey. Length 2 meter.

13 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]
15	TL-15/13-DGPLUS-A	7612207407990	162 m
18	TL-18/13-DGPLUS-A	7612207407969	136 m
22	TL-22/13-DGPLUS-A	7612207408003	120 m
28	TL-28/13-DGPLUS-A	7612207408010	98 m
35	TL-35/13-DGPLUS-A	7612207407952	72 m
42	TL-42/13-DGPLUS-A	7612207407938	56 m
48	TL-48/13-DGPLUS-A	7612207407945	50 m
54	TL-54/13-DGPLUS-A	7612207407983	46 m
60	TL-60/13-DGPLUS-A	7612207407976	38 m

Tube – standard. Dark grey. Length 2 meter.

9 mm				13 mm				20 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]
12	TL-12/9-DGPLUS	7612207381764	300 m	12	TL-12/13-DGPLUS	7612207379136	190 m	15	TL-15/20-DGPLUS	7612207407822	100 m
15	TL-15/9-DGPLUS	7612207381757	232 m	15	TL-15/13-DGPLUS	7612207379143	162 m	18	TL-18/20-DGPLUS	7612207407730	88 m
18	TL-18/9-DGPLUS	7612207381771	190 m	18	TL-18/13-DGPLUS	7612207379198	136 m	22	TL-22/20-DGPLUS	7612207407747	80 m
22	TL-22/9-DGPLUS	7612207381788	162 m	22	TL-22/13-DGPLUS	7612207379181	120 m	28	TL-28/20-DGPLUS	7612207407754	68 m
28	TL-28/9-DGPLUS	7612207380408	126 m	28	TL-28/13-DGPLUS	7612207377798	98 m	35	TL-35/20-DGPLUS	7612207407402	50 m
35	TL-35/9-DGPLUS	7612207377804	92 m	35	TL-35/13-DGPLUS	7612207380675	72 m	42	TL-42/20-DGPLUS	7612207407419	44 m
42	TL-42/9-DGPLUS	7612207379921	72 m	42	TL-42/13-DGPLUS	7612207380682	56 m	48	TL-48/20-DGPLUS	7612207407426	40 m
48	TL-48/9-DGPLUS	7612207380644	66 m	48	TL-48/13-DGPLUS	7612207379969	50 m	54	TL-54/20-DGPLUS	7612207407839	32 m
54	TL-54/9-DGPLUS	7612207380651	50 m	54	TL-54/13-DGPLUS	7612207383577	46 m	60	TL-60/20-DGPLUS	7612207407846	28 m
60	TL-60/9-DGPLUS	7612207380668	46 m	60	TL-60/13-DGPLUS	7612207383553	38 m	64	TL-64/20-DGPLUS	7612207407785	26 m
64	TL-64/9-DGPLUS	7612207379952	42 m	64	TL-64/13-DGPLUS	7612207383584	32 m	76	TL-76/20-DGPLUS	7612207407792	20 m
76	TL-76/9-DGPLUS	7612207383546	32 m	76	TL-76/13-DGPLUS	7612207383591	24 m	89	TL-89/20-DGPLUS	7612207407808	18 m
89	TL-89/9-DGPLUS	7612207383560	22 m	89	TL-89/13-DGPLUS	7612207383607	18 m	110	TL-110/20-DGPLUS	7612207407761	12 m
-	-	-	-	114	TL-114/13-DGPLUS	7612207383614	12 m	114	TL-114/20-DGPLUS	7612207407778	12 m



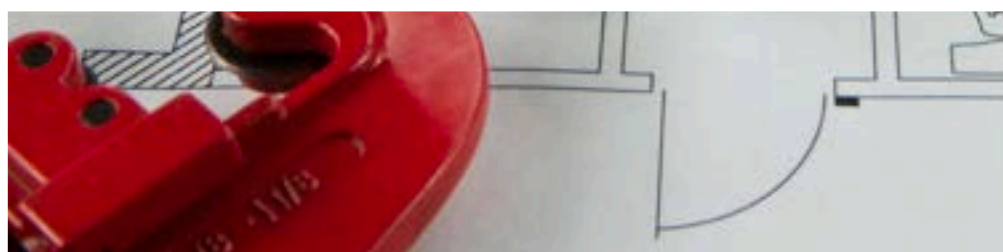
INSTALL IT. BENEFIT FROM
THE RANGE.

Tubolit DG B1

Flexible, closed-cell extruded insulation
material to reduce heat losses on
heating and plumbing installations

- // Complete range for plumber
- // Cost efficient PE-Insulation material
- // Meets European energy regulations

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TECHNICAL DATA - TUBOLIT DG B1

Brief description	Flexible, closed-cell extruded insulation material to reduce heat losses on heating and plumbing installations.
Material type	Foam material based on polyethylene. Factory made polyethylene foam (PEF) according to EN 14313.
Product colour range	Grey
Applications	Insulation/protection of pipes (heating system pipes, domestic hot and cold water pipes) and other parts of heating and plumbing installations (including elbows, fittings, flanges, etc).
Installation	Certified and compatible adhesive for a long-term performing system is ArmaFlex 520. Please refer to the relevant Armacell application manual for advice. For further information please contact our Customer Service Centre.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .
Remarks	After installation linear shrinkage of approx. 2% (or more in particular cases) may occur during the initial and even later phase of system operation. Under certain conditions (e.g. high humidity, main distribution pipes, pipes with constant or almost constant flow) cold water pipelines must be insulated with ArmaFlex, just the same as chilled water pipes in air-conditioning systems.

Property	Value / Assessment		Standard / Test method
Operating temperature			
Operating temperature	Maximum temperature: 100°C +85 °C for tapes Minimum temperature: As is usual in heating and plumbing installations		EN 14707, EN 14313
Thermal conductivity			
Declared thermal conductivity	Øm	40°C	EN ISO 13787, EN ISO 8497
	λd ≤ [W/(m·K)]	0,04	
	Range	Tubolit DG B1 Tubes 5-30 mm	
	Formula	[36 + 0,1· Øm + 0,0008 ·{Øm-40}²]/1000	
Fire Performance and Approvals			
Reaction to fire	Tubes 5 -30 mm: D(L)-s2, d0		EN 13501-1, EN 13823, EN ISO 11925-2
Physical attributes			
Dimensions and tolerances	In accordance with EN 14313, table 1 and 2		EN 822, EN 823, EN 13467
Acoustic performance			
Reduction of structure-borne sound transmission	≤ 27 dB(A) VM L(IN)		EN ISO 3822-1
Health and environment			
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
Environmental Product Declaration (EPD)	Type III Environmental Product Declaration (EPD): Declaration number "150/2021", Instytut Techniki Budowlanej (ITB)		
Additional features	SCCP, MCCP-free		
Other technical features			
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C –35 °C).		

Tube – standard. Grey. Length 2 meter

9 mm				13 mm				20 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]
15	TL-15/9-DG-B1	7612207398342	250 m	12	TL-12/13-DG-B1	7612207144796	190 m	15	TL-15/20-DG-B1	7612207398489	100 m
18	TL-18/9-DG-B1	7612207398359	214 m	15	TL-15/13-DG-B1	7612207398410	180 m	18	TL-18/20-DG-B1	7612207398496	88 m
20	TL-20/9-DG-B1	7612207390018	212 m	18	TL-18/13-DG-B1	7612207398427	148 m	22	TL-22/20-DG-B1	7612207398502	80 m
22	TL-22/9-DG-B1	7612207398687	178 m	20	TL-20/13-DG-B1	7612207390070	140 m	28	TL-28/20-DG-B1	7612207398519	68 m
25	TL-25/9-DG-B1	7612207390025	138 m	22	TL-22/13-DG-B1	7612207398434	128 m	35	TL-35/20-DG-B1	7612207398526	50 m
28	TL-28/9-DG-B1	7612207398694	130 m	28	TL-28/13-DG-B1	7612207399813	98 m	42	TL-42/20-DG-B1	7612207389869	44 m
32	TL-32/9-DG-B1	7612207390032	122 m	32	TL-32/13-DG-B1	7612207390087	90 m	48	TL-48/20-DG-B1	7612207389876	40 m
35	TL-35/9-DG-B1	7612207398700	96 m	35	TL-35/13-DG-B1	7612207491432	84 m	54	TL-54/20-DG-B1	7612207389883	32 m
42	TL-42/9-DG-B1	7612207334593	72 m	42	TL-42/13-DG-B1	7612207398458	60 m	60	TL-60/20-DG-B1	7612207389890	28 m
48	TL-48/9-DG-B1	7612207398380	70 m	48	TL-48/13-DG-B1	7612207398465	52 m	76	TL-76/20-DG-B1	7612207389906	20 m
54	TL-54/9-DG-B1	7612207398397	58 m	54	TL-54/13-DG-B1	7612207491357	46 m	89	TL-89/20-DG-B1	7612207389913	18 m
60	TL-60/9-DG-B1	7612207398403	48 m	60	TL-60/13-DG-B1	7612207334678	38 m	110	TL-110/20-DG-B1	7612207390131	12 m
64	TL-64/9-DG-B1	7612207389791	50 m	64	TL-64/13-DG-B1	7612207389814	32 m	114	TL-114/20-DG-B1	7612207389920	12 m
76	TL-76/9-DG-B1	7612207299557	32 m	70	TL-70/13-DG-B1	7612207389821	24 m	-	-	-	-
89	TL-89/9-DG-B1	7612207301526	22 m	76	TL-76/13-DG-B1	7612207390117	26 m	-	-	-	-
-	-	-	-	89	TL-89/13-DG-B1	7612207390124	22 m	-	-	-	-
-	-	-	-	110	TL-110/13-DG-B1	7612207389838	16 m	-	-	-	-
-	-	-	-	114	TL-114/13-DG-B1	7612207389845	12 m	-	-	-	-
-	-	-	-	125	TL-125/13-DG-B1	7612207389852	12 m	-	-	-	-

Tube – standard. Grey. Length 2 meter

25 mm				26 mm				27 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]
28	TL-28/25-DG-B1	7612207144901	46 m	18	TL-18/26-DG-B1	7612207144925	56 m	15	TL-15/27-DG-B1	7612207398557	66 m
35	TL-35/25-DG-B1	7612207334715	32 m	22	TL-22/26-DG-B1	7612207398540	54 m	-	-	-	-
42	TL-42/25-DG-B1	7612207144918	28 m	-	-	-	-	-	-	-	-
48	TL-48/25-DG-B1	7612207389968	24 m	-	-	-	-	-	-	-	-
54	TL-54/25-DG-B1	7612207389975	24 m	-	-	-	-	-	-	-	-

Tube – standard. Grey. Length 2 meter

25 mm				26 mm				27 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]
60	TL-60/25-DG-B1	7612207389982	24 m	-	-	-	-	-	-	-	-
76	TL-76/25-DG-B1	7612207389937	16 m	-	-	-	-	-	-	-	-
89	TL-89/25-DG-B1	7612207389944	14 m	-	-	-	-	-	-	-	-
110	TL-110/25-DG-B1	7612207389999	8 m	-	-	-	-	-	-	-	-
114	TL-114/25-DG-B1	7612207389951	8 m	-	-	-	-	-	-	-	-

Tube – standard. Grey. Length 2 meter

30 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]
18	TL-18/30-DG-B1	7612207407525	56 m
22	TL-22/30-DG-B1	7612207407532	46 m
28	TL-28/30-DG-B1	7612207407549	40 m
35	TL-35/30-DG-B1	7612207407556	34 m
42	TL-42/30-DG-B1	7612207407563	26 m
48	TL-48/30-DG-B1	7612207407570	22 m
54	TL-54/30-DG-B1	7612207407587	22 m
60	TL-60/30-DG-B1	7612207407594	18 m
76	TL-76/30-DG-B1	7612207407617	16 m
89	TL-89/30-DG-B1	7612207407624	10 m
114	TL-114/30-DG-B1	7612207407631	8 m



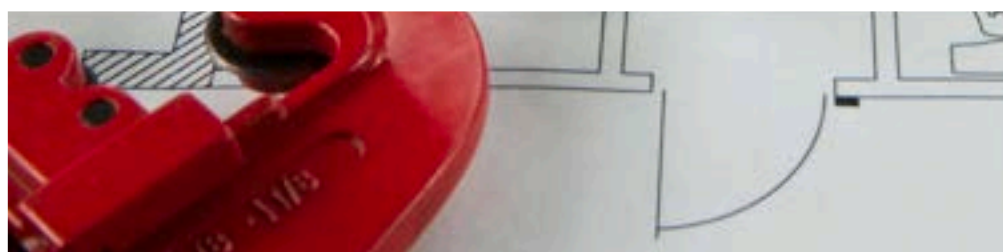
INSTALL IT. BENEFIT FROM
THE RANGE.

Tubolit DG

The flexible PE insulation material to
save energy and improve acoustic
comfort for heating and plumbing

- // Complete range for plumbers
- // Matching range for plastic pipe sizes
- // Economic insulation

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TECHNICAL DATA - TUBOLIT DG

Brief description	Flexible, closed-cell extruded insulation material to reduce heat losses and noise on heating and plumbing installations.
Material type	Foam material based on polyethylene. Factory made polyethylene foam (PEF) according to EN 14313.
Additional material information	Self-adhesive coating on tapes and self-seal coating on tubes: pressure-sensitive adhesive coating on modified acrylate basis with mesh structure, covered with polyethylene foil.
Product colour range	Grey
Applications	Insulation/protection of pipes (heating system pipes, domestic hot and cold water pipes) and other parts of heating and plumbing installations (including elbows, fittings, flanges, etc).
Installation	Certified and compatible adhesive for a long-term performing system is ArmaFlex 520. Please refer to the relevant Armacell application manual for advice. For further information please contact our Customer Service Centre.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .
Remarks	After installation linear shrinkage of approx. 2% (or more in particular cases) may occur during the initial and even later phase of system operation. Under certain conditions (e.g. high humidity, main distribution pipes, pipes with constant or almost constant flow) cold water pipelines must be insulated with ArmaFlex, just the same as chilled water pipes in air-conditioning systems.

Property	Value / Assessment	Standard / Test method
Operating temperature		
Operating temperature	Maximum temperature: 100°C, +85 °C for tapes Minimum temperature: As is usual in plumbing and heating installations	EN 14707, EN 14313
Thermal conductivity		
Declared thermal conductivity	Θm	40°C
	λd ≤ [W/(m·K)]	0,04
	Range	Tubolit DG tubes 5-30 mm
	Formula	$[36 + 0,1 \cdot \Theta m + 0,0008 \cdot (\Theta m - 40)^2] / 1000$
Declared thermal conductivity	Θm	40°C
	λd ≤ [W/(m·K)]	0,045
	Range	Tubolit DG self-adhesive tape
	Formula	$[41 + 0,1 \cdot \Theta m + 0,0008 \cdot (\Theta m - 40)^2] / 1000$
Fire Performance and Approvals		
Reaction to fire	Tubolit DG standard tubes 5-30 mm: E(L) Tubolit DG self-adhesive tape: E	EN 13501-1, EN ISO 11925
Physical attributes		
Dimensions and tolerances	In accordance with EN 14313, table 1 and 2	EN 822, EN 823, EN 13467
Acoustic performance		
Reduction of structure-borne sound transmission	≤ 30 dB(A)	EN ISO 3822-1
Health and environment		
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
Environmental Product Declaration (EPD)	Type III Environmental Product Declaration (EPD): Declaration number "150/2021", Instytut Techniki Budowlanej (ITB) Type III Environmental Product Declaration (EPD): Declaration number "151/2021", Instytut Techniki Budowlanej (ITB)	
Additional features	SCCP, MCCP-free	

Property	Value / Assessment	Standard / Test method
Other technical features		
Shelf life	Tapes self-adhesive and tubes self-seal: 1 year	
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).	

Tube – self-seal. Grey. Length 2 meter.

9 mm				13 mm				20 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]
12	TL-12/9-DG-A	7612207189209	300 m	15	TL-15/13-DG-A	7612207399134	180 m	15	TL-15/20-DG-A	7612207398151	100 m
15	TL-15/9-DG-A	7612207399172	250 m	18	TL-18/13-DG-A	7612207399196	148 m	18	TL-18/20-DG-A	7612207398168	88 m
18	TL-18/9-DG-A	7612207399189	214 m	22	TL-22/13-DG-A	7612207399318	128 m	22	TL-22/20-DG-A	7612207398175	80 m
22	TL-22/9-DG-A	7612207399233	178 m	28	TL-28/13-DG-A	7612207399851	98 m	28	TL-28/20-DG-A	7612207398182	68 m
28	TL-28/9-DG-A	7612207399257	130 m	35	TL-35/13-DG-A	7612207491395	84 m	35	TL-35/20-DG-A	7612207398199	50 m
35	TL-35/9-DG-A	7612207399271	96 m	42	TL-42/13-DG-A	7612207399158	60 m	42	TL-42/20-DG-A	7612207398212	44 m
42	TL-42/9-DG-A	7612207143430	72 m	48	TL-48/13-DG-A	7612207399165	52 m	48	TL-48/20-DG-A	7612207398236	40 m
48	TL-48/9-DG-A	7612207399288	70 m	54	TL-54/13-DG-A	7612207399219	50 m	54	TL-54/20-DG-A	7612207143973	32 m
54	TL-54/9-DG-A	7612207399073	58 m	60	TL-60/13-DG-A	7612207143737	38 m	60	TL-60/20-DG-A	7612207144000	28 m
60	TL-60/9-DG-A	7612207399080	48 m	-	-	-	-	-	-	-	-

Tube – standard. Grey. Length 2 meter.

5 mm				13 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]
15	TL-15/5-DG	7612207398885	390 m	40	TL-40/13-DG	7612207399141	70 m
18	TL-18/5-DG	7612207398908	280 m	-	-	-	-
20	TL-20/5-DG	7612207398915	280 m	-	-	-	-
22	TL-22/5-DG	7612207399004	240 m	-	-	-	-
28	TL-28/5-DG	7612207399028	180 m	-	-	-	-



INSTALL IT. BENEFIT FROM
THE RANGE.

Tubolit S

The insulation to prevent transmission of
structure-borne noise

- // Improved acoustic comfort by de-coupling the pipe
from the building structure
- // Pipe protection against aggressive building materials
- // Effective thermal insulation to reduce heat losses

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TECHNICAL DATA - TUBOLIT S

Brief description	Flexible, closed-cell extruded insulation material to reduce heat losses and noise on heating and plumbing installations
Material type	Factory made polyethylene foam (PEF) according to EN 14313.
Product colour range	Grey foam with blue or red covering
Special features	Foil coating on outer surface for additional protection of insulation surface.
Applications	Insulation/protection of pipes (heating system pipes, domestic hot and cold water pipes) and other parts of heating and plumbing installations (including elbows, fittings, flanges, etc)
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .
Remarks	After installation linear shrinkage of approx. 2% (or more in particular cases) may occur during the initial and even later phase of system operation. Under certain conditions (e.g. high humidity, main distribution pipes, pipes with constant or almost constant flow) cold water pipelines must be insulated with Armaflex, just the same as chilled water pipes in air-conditioning systems.

Property	Value / Assessment		Standard / Test method
Operating temperature			
Operating temperature	Maximum temperature: 100°C +85 °C for tapes Minimum temperature: As is usual in heating and plumbing installations		EN 14707, EN 14313
Thermal conductivity			
Declared thermal conductivity	Øm	40°C	EN ISO 13787, EN ISO 8497
	λd ≤ [W/(m·K)]	0,04	
	Range	Tubolit S tubes	
	Formula	[36 + 0,1· Øm + 0,0008 · (Øm-40)²]/1000	
Fire Performance and Approvals			
Reaction to fire	Tubolit S wall thickness 6-13 mm : B(L)-s1,d0 Tubolit S wall thickness 14-27 mm: E(L)		EN 13501-1, EN ISO 11925-2, EN 13823
Physical attributes			
Dimensions and tolerances	In accordance with EN 14313, table 1 and 2		EN 822, EN 823, EN 13467
Health and environment			
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		
Other technical features			
Shelf life	Tapes self-adhesive and tubes self-seal: 1 year		
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to70%) and ambient temperature (0 °C –35 °C).		

Tube – standard. Grey foam with blue covering

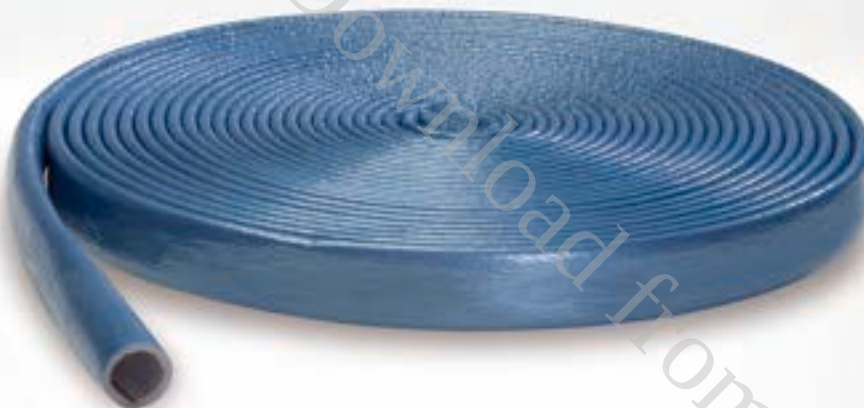
6 mm				9 mm				13 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]
12	TL-12/6-S	7612207396485	400 m	15	TL-15/9-S	7612207399721	234 m	15	TL-15/13-S	7612207399691	172 m
15	TL-15/6-S	7612207396379	340 m	18	TL-18/9-S	7612207399684	214 m	18	TL-18/13-S	7612207399653	148 m
16	TL-16/6-S	7612207396492	320 m	22	TL-22/9-S	7612207399592	178 m	22	TL-22/13-S	7612207399608	128 m
18	TL-18/6-S	7612207396829	280 m	28	TL-28/9-S	7612207399738	130 m	28	TL-28/13-S	7612207399714	98 m
20	TL-20/6-S	7612207397048	210 m	35	TL-35/9-S	7612207399677	96 m	35	TL-35/13-S	7612207189285	72 m
22	TL-22/6-S	7612207397055	240 m	42	TL-42/9-S	7612207144499	72 m	42	TL-42/13-S	7612207189292	56 m
25	TL-25/6-S	7612207397000	150 m	48	TL-48/9-S	7612207399646	70 m	-	-	-	-
28	TL-28/6-S	7612207397017	170 m	-	-	-	-	-	-	-	-
35	TL-35/6-S	7612207397024	118 m	-	-	-	-	-	-	-	-
42	TL-42/6-S	7612207397031	70 m	-	-	-	-	-	-	-	-

Tube – standard. Grey foam with blue covering

20 mm				25 mm				26 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]	Pipe Ø [mm]	Item	EAN	Content [metric]
28	TL-28/20-S	7612207144604	60 m	28	TL-28/25-S	7612207144635	46 m	18	TL-18/26-S	7612207144642	56 m
35	TL-35/20-S	7612207399615	50 m	-	-	-	-	22	TL-22/26-S	7612207399455	54 m
42	TL-42/20-S	7612207144628	40 m	-	-	-	-	-	-	-	-

Tube – standard. Grey foam with blue covering

27 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]
15	TL-15/27-S	7612207399622	66 m



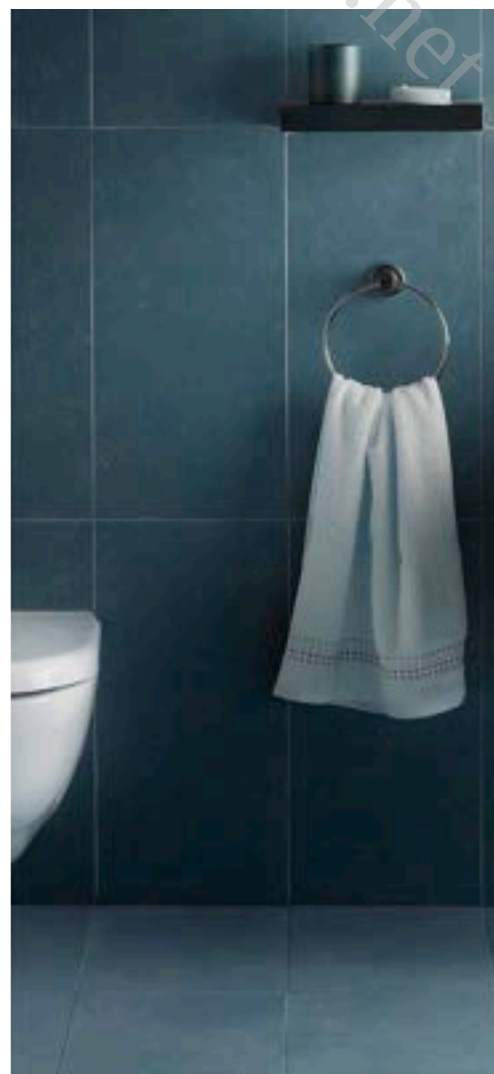
INSTALL IT. BENEFIT FROM
THE RANGE.

Tubolit S Plus

PE insulation for installations with
limited space

- // Optimised pipe protection and insulation thickness for
installations with limited space
- // Fast and easy sleeving due to extra inner foil
- // Reduce structure-borne sound

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TECHNICAL DATA - TUBOLIT S PLUS

Brief description	Flexible, closed-cell extruded insulation material to reduce heat losses and noise on heating and plumbing installations.
Material type	Foam material based on polyethylene. Factory made polyethylene foam (PEF) according to EN 14313.
Product colour range	Grey foam with blue or red covering
Special features	Foil coating on outer surface for additional protection of insulation surface. Foil coating on inner surface for better sleeve-on installation.
Applications	Insulation/protection of pipes (heating system pipes, domestic hot and cold water pipes) and other parts of heating and plumbing installations (including elbows, fittings, flanges, etc).
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .
Remarks	After installation linear shrinkage of approx. 2% (or more in particular cases) may occur during the initial and even later phase of system operation. Under certain conditions (e.g. high humidity, main distribution pipes, pipes with constant or almost constant flow) cold water pipelines must be insulated with Armaflex, just the same as chilled water pipes in air-conditioning systems.

Property	Value / Assessment	Standard / Test method
Operating temperature		
Operating temperature	Maximum temperature: 100°C +85 °C for tapes Minimum temperature: As is usual in heating and plumbing installations	EN 14313, EN 14707
Thermal conductivity		
Declared thermal conductivity	ϑ_m	40°C
	$\lambda_d \leq [W/(m \cdot K)]$	0,045
	Range	Tubolit S Plus tubes
	Formula	$[45 + 0,1 \cdot \vartheta_m + 0,0008 \cdot (\vartheta_m - 40)^2]/1000$
Fire Performance and Approvals		
Reaction to fire	Tubolit S Plus tubes : E(L)	EN ISO 11925-2, EN 13501-1
Physical attributes		
Dimensions and tolerances	In accordance with EN 14313, table 1 and 2	EN 822, EN 823, EN 13467
Health and environment		
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
Environmental Product Declaration (EPD)	Type III Environmental Product Declaration (EPD): Declaration number "150/2021", Instytut Techniki Budowlanej (ITB) Type III Environmental Product Declaration (EPD): Declaration number "151/2021", Instytut Techniki Budowlanej (ITB)	
Additional features	SCCP, MCCP-free	
Other technical features		
Shelf life	Tapes self-adhesive and tubes self-seal: 1 year	
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).	

Coil. Grey. Length 20 meter per coil.

Pipe Ø [mm]	Item	EAN	Content [metric]
15	TL-12-15/4-S+	7612207146059	520 m
18	TL-18/4-S+	7612207146066	440 m
20	TL-20/4-S+	7612207364132	440 m
22	TL-22/4-S+	7612207146073	400 m
25	TL-24/4-S+	7612207364163	400 m
28	TL-28/4-S+	7612207146080	320 m
30	TL-30/4-S+	7612207364262	320 m
35	TL-35/4-S+	7612207146097	280 m
42	TL-42/4-S+	7612207146103	240 m



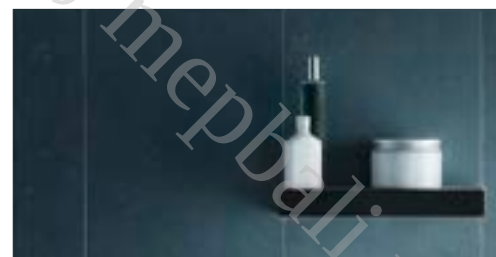
INSTALL IT. BENEFIT FROM
THE RANGE.

Tubolit AR Fonoblok

Improved acoustic comfort for waste
water pipes

- // PE endless insulation for cast iron and plastic waste water pipes
- // Noise reduction up to 15 dB(A) on waste water pipes
- // Full range available up to DN 150
- // Easy application over flanges and elbows including tape

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TECHNICAL DATA - TUBOLIT AR FONOBLOK

Brief description	Flexible closed cell extruded insulation material to reduce noise and prevent condensation especially on cast iron pipes for waste water, rain water and sewage pipes
Material type	Factory made polyethylene foam (PEF) according to EN 14313.
Additional material information	Self-adhesive coating on tapes: pressure-sensitive adhesive coating on modified acrylate basis with mesh structure, covered with polyethylene foil.
Product colour range	Blue
Applications	Acoustical and thermal insulation of internal waste water, rain water and sewage pipes in residential and non-residential buildings. For complex and large diameter rain collecting and (roof-) drainage pipes, to provide optimal protection against the risk of condensation, we recommend using ArmaFlex insulation.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Property	Value / Assessment	Standard / Test method
Operating temperature		
Operating temperature	Maximum temperature: 100°C +85 °C for tapes Minimum temperature: As is usual in plumbing and heating installations	EN 14707, EN 14313
Thermal conductivity		
Declared thermal conductivity	Øm	40°C
	$\lambda_d \leq [W/(m \cdot K)]$	0,045
	Formula	$[41 + 0,1 \cdot \delta m + 0,0008 \cdot (\delta m - 40)^2]/1000$
Fire Performance and Approvals		
Reaction to fire	Tubolit AR Fonoblok : E(L) Tubolit AR tape : E	EN 13501-1, EN ISO 11925-2
Physical attributes		
Dimensions and tolerances	In accordance with EN 14313, table 1 and 2	EN 822, EN 823, EN 13467
Acoustic performance		
System acoustic insertion loss	on cast iron waste water pipes ≤ 15 dB(A)	EN 14366
Health and environment		
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
Environmental Product Declaration (EPD)	Type III Environmental Product Declaration (EPD): Declaration number "150/2021", Instytut Techniki Budowlanej (ITB)	
Additional features	SCCP, MCCP-free	
Other technical features		
Shelf life	Tapes self-adhesive: 1 year	
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).	

Coil. Blue

Pipe Ø [mm]	Plastic pipe DN (ISO 1452)	Item	Insulation thickness [mm]	Length [m]	EAN	Content [metric]	Content [quantity]
57	50	TL-50/5-AR	5	15	7612207144154	135 m	9 roll
64	60	TL-60/5-AR	5	15	7612207304541	120 m	8 roll
76	70	TL-70/5-AR	5	15	7612207144178	105 m	7 roll
89	90	TL-90/5-AR	5	15	7612207220742	75 m	5 roll
108	100	TL-100/5-AR	5	15	7612207144208	75 m	5 roll
133	125	TL-125/5-AR	5	15	7612207144222	60 m	4 roll
160	150	TL-150/5-AR	5	15	7612207144246	45 m	3 roll

Tape – insulation

Item	Description	Thickness [mm]	Width [mm]	Length [m]	Content [quantity]
TL-TAPE/100-AR	Tubolit AR Fonoblok Tape (100 mm x 15 m x 3 mm)	3	100	15	6 roll
TL-TAPE/50-AR	Tubolit AR Fonoblok Tape (50 mm x 15 m x 3 mm)	3	50	15	12 roll



INSTALL IT. BENEFIT FROM
THE RANGE.

Tubolit AR Fonowave

PE endless insulation tube with sound
wave profile for plastic waste water
pipes

- // Improved acoustic comfort: < 11dB (A) on plastic pipes
- // Easy application over flanges and elbows
- // Durable outside coating for protection

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TECHNICAL DATA - TUBOLIT AR FONOWAVE

Brief description	Flexible, closed-cell extruded insulation material to reduce noise and prevent condensation especially on plastic waste water, rain water and sewage pipes.
Material type	Foam material based on polyethylene. Factory made polyethylene foam (PEF) according to EN 14313.
Additional material information	Self-adhesive coating on tapes: pressure-sensitive adhesive coating on modified acrylate basis with mesh structure, covered with polyethylene foil.
Product colour range	Blue
Special features	Foil coating on outer surface for additional protection of insulation surface. Specially wave-shaped inner surface provides excellent acoustical performance on plastic pipes.
Applications	Acoustical and thermal insulation of internal waste water, rain water and sewage pipes in residential and non-residential buildings. For complex and large diameter rain collecting and (roof-) drainage pipes, to provide optimal protection against the risk of condensation, we recommend using ArmaFlex insulation.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Property	Value / Assessment		Standard / Test method
Operating temperature			
Operating temperature	Maximum temperature: 100°C +85 °C for tapes Minimum temperature: As is usual in plumbing and heating installations		EN 14707, EN 14313
Thermal conductivity			
Declared thermal conductivity	Øm	40°C	EN ISO 13787, EN ISO 8497
	λd ≤ [W/(m·K)]	0,045	
	Range	Tubolit AR Fonowave, Tubolit AR tape	
	Formula	[41 + 0,1· Øm + 0,0008 ·{Øm-40}²]/1000	
Fire Performance and Approvals			
Reaction to fire	Tubolit AR Fonowave : E(L) Tubolit AR tape : E		EN 13501-1, EN ISO 11925-2
Physical attributes			
Dimensions and tolerances	In accordance with EN 14313, table 1 and 2		EN 822, EN 823, EN 13467
Acoustic performance			
System acoustic insertion loss	on plastic waste water pipes ≤ 11 dB(A)		EN 14366
Health and environment			
Additional features	SCCP, MCCP-free		
Other technical features			
Shelf life	Tapes self-adhesive: 1 year		
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C –35 °C).		

Coil. Blue

Pipe Ø [mm]	Item	EAN	Content [metric]
57	CO-50/9-ARW	7612207334012	80 m
75	CO-70/9-ARW	7612207334029	60 m
90	CO-90/9-ARW	7612207351484	50 m
110	CO-100/9-ARW	7612207468755	40 m
125	CO-125/9-ARW	7612207334043	40 m

Tape – insulation. Tape. Blue, low-density Polyethylene foam (PEF) with protective PE-coating and self-adhesive layer.

Item	Description	Thickness [mm]	Width [mm]	Length [m]	Content [metric]
TL-TAPE/50-ARW	Tape with self-adhesive layer, LDPE foam based covered with blue foil.	3	50	15	12 roll



INSTALL IT. BENEFIT FROM
THE RANGE.

Tubolit Tape

Accessories for professional plumbers

- // Various tapes available for every application
- // Moisture-resistant with / without self-adhesive
- // Different surface coverings available
- // Easy to install

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TECHNICAL DATA - TUBOLIT TAPE

Brief description	Insulation tape based on grey PE-based foam. One side is PE-based foam, and the other side is covered by an adhesive layer with a release liner. Tubolit DG tape is grey, Tubolit AR tape is blue.
Applications	Insulation/protection of pipes (heating system pipes, domestic hot and cold water pipes) and other parts of heating and plumbing installations.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Property	Value / Assessment		Standard / Test method
Operating temperature			
Operating temperature	Maximum temperature: +85 °C Minimum temperature: As is usual in heating and plumbing installations		EN 14707, EN 14313
Thermal conductivity			
Declared thermal conductivity	Øm	40°C	EN ISO 13787, EN ISO 8497
	λd ≤ [W/(m·K)]	0,045	
	Range	Tubolit DG self-adhesive tape, Tubolit AR self-adhesive tape	
	Formula	[41 + 0,1· Øm + 0,0008 ·(Øm-40)²]/1000	
Fire Performance and Approvals			
Reaction to fire	Tubolit DG and Tubolit AR self-adhesive tapes: E		EN 13501-1, EN ISO 11925-2
Physical attributes			
Dimensions and tolerances	In accordance with EN 14313, table 1		EN 822, EN 823
Other technical features			
Shelf life	Tapes self-adhesive : 1 year		
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to70%) and ambient temperature (0 °C –35 °C).		

Tape – PVC. Packed in cartons.

Item	Description	Width [mm]	Length [m]	Content [quantity]
TL-TAPE/50M-BE	Tubolit duct tape 50 mm x 0.18 mm x 50 m. Blue colour.	50	50	24 roll
TL-TAPE/50M-GY	Tubolit duct tape 50 mm x 0.18 mm x 50 m. Grey colour.	50	50	24 roll

Tape – insulation. Grey. Packed in cartons.

Item	Description	Thickness [mm]	Width [mm]	Length [m]	Content [quantity]
TLT-TAPE/50-DG	Tubolit DG PE tape 50 mm x 3 mm x 10 m. Grey colour.		50	10	12 roll



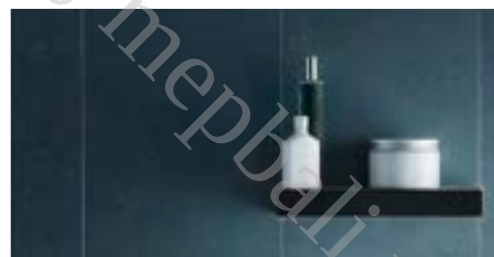
INSTALL IT. BENEFIT FROM
THE RANGE.

Tubolit Accessories

Professional accessories for the full
Tubolit product range

- // Various tapes available for every application
- // Moisture-resistant with / without self-adhesive
- // Different surface coverings available
- // Clips for fixation of Tubolit Tubes
- // Easy to install

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TECHNICAL DATA - TUBOLIT ACCESSORIES

Brief description		Accessories for installing Tubolit insulation: Tubolit clips, Tubolit bands and tapes
Property	Value / Assessment	Standard / Test method
Operating temperature		
Operating temperature	Maximum temperature: +85 °C Minimum temperature: As is usual in plumbing and heating installations	EN 14706, EN 14707, EN 14313
Fire Performance and Approvals		
Reaction to fire	Tubolit clips E class Tubolit DG Tape E class	EN ISO 11925-2, EN 13501-1
Health and environment		
Environmental aspects	Tubolit Clips and Tubolit tapes comply with REACH regulation	

Accessories Tubolit Clips

Item	Description	EAN	Content [quantity]
TL-CLIPS	Tubolit Clips for fixation/closure of Tubolit insulation pipes	7612207142129	25 bag



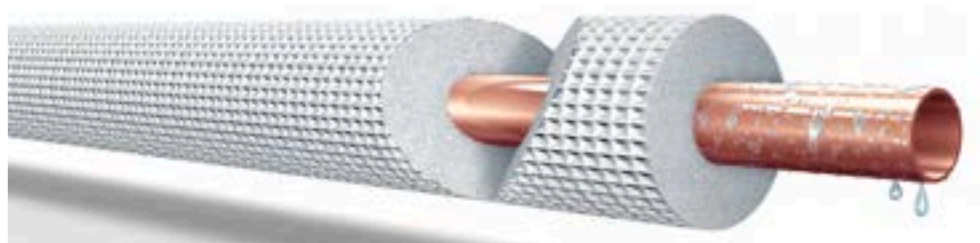
INSTALL IT. BENEFIT FROM
THE RANGE.

Tubolit Split

Pre-insulated copper pipes with
polyethylene insulation

- // Excellent protection against energy losses and condensation
- // Euroclass B certified – B(L)-s1,d0
- // Suitable for most refrigerant gases
- // Patented join-split adhesive technology to easily split and join the pipes without any tool
- // Easy to connect - complete range with matching accessories

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ArmaLight™

INSTALL IT. BENEFIT FROM THE RANGE.

ArmaLight Tubolit Split and DuoSplit

// Low Smoke Density

In the event of a fire it is vital that those trapped find escape routes quickly. This is only possible with minimal smoke development. ArmaLight Tubolit Split and ArmaLight Tubolit DuoSplit achieve class B_L-s1, d0 in the European fire test. In a fire the pipe insulation develops significantly less smoke than traditional PE products and has been proven to contribute to people's safety in buildings.



// Sustainable Space-saving: The Towerpack

The transport- and storage-friendly packaging takes up 40 % less space than traditional boxes. To ensure that the coils can be transported safely they are secured with straps and wrapped in a tough foil.



// Accessories

We also offer a comprehensive range of accessories for installing air-conditioning systems.

TUBOLIT SPLIT INCH SIZES TOWERPACK

Order number	SZ-067/E25	SZ-067/E50	SZ-068/E25	SZ-068/E50	SZ-061/E50	SZ-107/E25	SZ-107/E50	SZ-108/E25	SZ-108/E50	SZ-101/E50	SZ-127/E25	SZ-127/E50	SZ-128/E25	SZ-128/E50	SZ-121/E50	SZ-168/E25	SZ-161/E25	SZ-191/E25	SZ-221/E25
Copper Tube Size (inch)	1/4"	1/4"	1/4"	1/4"	1/4"	3/8"	3/8"	3/8"	3/8"	3/8"	1/2"	1/2"	1/2"	1/2"	1/2"	5/8"	5/8"	3/4"	7/8"
Copper Tube Size (mm)	6.35 x 0.7	6.35 x 0.7	6.35 x 0.8	6.35 x 0.8	6.35 x 1	9.53 x 0.7	9.53 x 0.7	9.53 x 0.8	9.53 x 0.8	9.53 x 1	12.7 x 0.7	12.7 x 0.7	12.7 x 0.8	12.7 x 0.8	12.7 x 1	15.87 x 0.8	15.87 x 1	19.05 x 1	22.22 x 1
Insulation Wall Thickness (mm)	6	6	9	9	9	6	6	9	9	9	6	6	9	9	9	9	9	9	9
Outer-Ø Pre-Insulated Pipe (mm)	18	18	24	24	24	22	22	28	28	28	25	25	31	31	31	34	34	37	40
Coil Length (m)	25	50	25	50	50	25	50	25	50	50	25	50	25	50	50	25	25	25	25
Coils per tower	30	26	30	16	16	30	23	26	13	13	30	18	24	12	12	21	21	12	11
Length per tower (m)	750	1300	750	800	800	750	1150	650	650	650	750	900	600	600	600	525	525	300	275

TUBOLIT SPLIT METRIC SIZES CARTON

Order number	SMC-061/E25	SMC-061/E50	SMC-101/E25	SMC-101/E50	SMC-121/E25	SMC-121/E50	SMC-161/E25	SMC-181/E25	SMC-221/E25
Copper Tube Size (mm)	6 x 1	6 x 1	10 x 1	10 x 1	12 x 1	12 x 1	16 x 1	18 x 1	22 x 1
Insulation Wall Thickness (mm)	9	9	9	9	9	9	9	9	9
Outer-Ø Pre-Insulated Pipe (mm)	24	24	28	28	30	30	34	36	40
Coil Length (m)	25	50	25	50	25	50	25	25	25
Coils per carton	2	1	2	1	2	1	1	1	1
Length per carton (m)	50	50	50	50	50	50	25	25	25

TUBOLIT SPLIT INCH SIZES CARTON

Order number	SZC-068/E25	SZC-068/E50	SZC-108/E25	SZC-108/E50	SZC-128/E25	SZC-128/E50	SZC-168/E25	SZC-161/E25	SZC-191/E25	SZC-221/E25
Copper Tube Size (inch)	1/4"	1/4"	3/8"	3/8"	1/2"	1/2"	5/8"	5/8"	3/4"	7/8"
Copper Tube Size (mm)	6.35 x 0.8	6.35 x 0.8	9.53 x 0.8	9.53 x 0.8	12.7 x 0.8	12.7 x 0.8	15.87 x 0.8	15.87 x 1	19.05 x 1	22.22 x 1
Insulation Wall Thickness (mm)	9	9	9	9	9	9	9	9	9	9
Outer-Ø Pre-Insulated Pipe (mm)	24	24	28	28	31	31	34	34	37	40
Coil Length (m)	25	50	25	50	25	50	25	25	25	25
Coils per carton	2	1	2	1	2	1	1	1	1	1
Length per carton (m)	50	50	50	50	50	50	25	25	25	25

TECHNICAL DATA - TUBOLIT SPLIT

Brief description	Tubolit Split is a reliable pre-insulated system solution to connect the indoor and outdoor air conditioning, refrigeration units of split , multi-split and heat pumps systems. The system consists of copper pipe(s), insulation material, a UV-resistant facing and matching accessories.
Material type	Foam material based on polyethylene. Polyolefin-copolymer coating. Soft-annealed, seamlessly drawn refrigeration copper pipes according to EN 12735-1.
Additional material information	Insulation material is original Tubolit closed-cell insulation. Durable solution, resistant against mechanical strain and UV radiation. Suitable for refrigeration gases R-410A , R-407C and R32
Product colour range	White
Applications	Split and multi-split air-conditioning systems, heat pumps and cooling counters.
Installation	No special tools required. Matching accessories facilitate assembly. In case of contact adhesion press firmly together during the contact adhesion time. It is recommended that the insulation tube ends are additionally protected with tape. Insulation should remain uncut along the complete applied length and glued to the pipe at both ends.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .
Remarks	Certificate of Conformity with in heating and plumbing installations available on request.

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature	Min. °C ¹	Max. °C	EN 14706, EN 14707, EN 14313
	-50	100	
Thermal conductivity			
Declared thermal conductivity	Øm	0°C	EN ISO 13787, EN ISO 8497
	λd ≤ [W/(m·K)]	0,036	
	Range	Tubolit Split insulation tubes	
	Formula	[36 + 0,1· Øm + 0,0008 · Øm²]/1000	
Fire Performance and Approvals			
Reaction to fire	Tubolit Split insulation tube : B(L)-s1,d0		EN 13501-1, EN 13823, EN ISO 11925-2
Resistance to water vapour			
Water vapour diffusion resistance factor	μ ≥ 5000 (Only for slotted insulation and foils)		EN 13469
Physical attributes			
Dimensions and tolerances	In accordance with EN 14313, table 1 and 2		EN 13467
Weather and UV resistance			
UV resistance	Very Good TB 142		EN ISO 4892-2
Other technical features			
Maximum operating pressure (bar)	Imperial 1/4" x 06 mm 114 bar 1/4" x 0.7 mm 136 bar 1/4" x 0.8 mm 159 bar 1/4" x 1.0 mm 206 bar 3/8" x 0,6 mm 74 bar 3/8" x 0.7 mm 87 bar 3/8" x 0.8 mm 101 bar 3/8" x 1.0 mm 129 bar 1/2" x 0,6 mm 54 bar 1/2" x 0.7 mm 64 bar 1/2" x 0.8 mm 74 bar 1/2" x 1.0 mm 94 bar 5/8" x 0.8 mm 58 bar 5/8" x 1.0 mm 74 bar 3/4" x 1.0 mm 61 bar 7/8" x 1.0 mm 52 bar		

Property	Value / Assessment	Standard / Test method
	Metric 6 x 0.8 mm 169 bar 6 x 1.0 mm 220 bar 10 x 0.8 mm 96 bar 10 x 1.0 mm 122 bar 12 x 0.8 mm 79 bar 12 x 1.0 mm 100 bar 16 x 1.0 mm 73 bar 18 x 1.0 mm 65 bar 22 x 1.0 mm 52 bar	

¹For use in temperatures below 0 °C, please contact our Customer Service Centre.



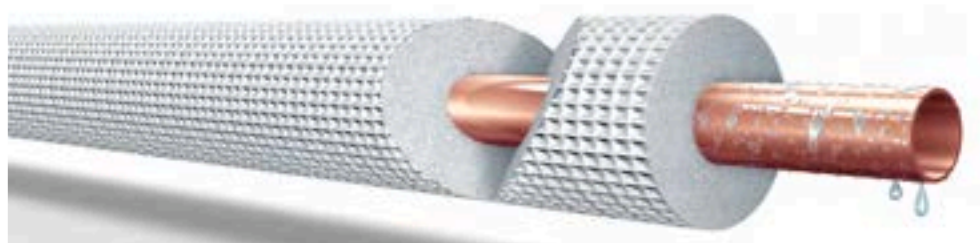
INSTALL IT. BENEFIT FROM
THE RANGE.

Tubolit DuoSplit

Pre-insulated copper pipes with
polyethylene insulation

- // Excellent protection against energy losses and condensation
- // Euroclass B certified – B(L)-s1,d0
- // Suitable for most refrigerant gases
- // Patented join-split adhesive technology to easily split and join the pipes without any tool
- // Easy to connect - complete range with matching accessories

www.armacell.com



 **armacell**
ArmaLight™

INSTALL IT. BENEFIT FROM THE RANGE.

ArmaLight Tubolit Split and DuoSplit

// Low Smoke Density

In the event of a fire it is vital that those trapped find escape routes quickly. This is only possible with minimal smoke development. ArmaLight Tubolit Split and ArmaLight Tubolit DuoSplit achieve class B_L-s1, d0 in the European fire test. In a fire the pipe insulation develops significantly less smoke than traditional PE products and has been proven to contribute to people's safety in buildings.



// Sustainable Space-saving: The Towerpack

The transport- and storage-friendly packaging takes up 40 % less space than traditional boxes. To ensure that the coils can be transported safely they are secured with straps and wrapped in a tough foil.



// Accessories

We also offer a comprehensive range of accessories for installing air-conditioning systems.

TUBOLIT DUOSPLIT INCH SIZES TOWERPACK

Order number	DZ-061077/ E25	DZ-061088/ E25	DZ-061277/ E25	DZ-061288/ E25	DZ-061688/ E25	DZ-101678/ E25	DZ-101688/ E25	DZ-101981/ E25
Copper Tube Size (inch)	1/4" - 3/8"	1/4" - 3/8"	1/4" - 1/2"	1/4" - 1/2"	1/4" - 5/8"	3/8" - 5/8"	3/8" - 5/8"	3/8" - 3/4"
Copper Tube Size (mm)	6.35 x 0.7 & 9.53 x 0.7	6.35 x 0.8 & 9.53 x 0.8	6.35 x 0.7 & 12.7 x 0.7	6.35 x 0.8 & 12.7 x 0.8	6.35 x 0.8 & 15.87 x 0.8	9.53 x 0.7 & 15.87 x 0.8	9.53 x 0.8 & 15.87 x 0.8	9.53 x 0.8 & 19.05 x 1
Insulation Wall Thickness (mm)	6.0 / 6.0	9.0 / 9.0	6.0 / 6.0	9.0 / 9.0	9.0 / 9.0	6.0 / 9.0	9.0 / 9.0	9.0 / 9.0
Outer-Ø Pre-Insulated Pipe (mm)	18 / 22	24 / 28	18 / 25	24 / 30	24 / 34	22 / 34	28 / 34	28 / 37
Coil Length (m)	25	25	25	25	25	25	25	25
Coils per tower	18	14	18	13	9	15	9	8
Length per tower (m)	450	350	450	325	225	375	225	200

TUBOLIT DUOSPLIT METRIC SIZES CARTON

Order number	DMC-06101/ E25	DMC-06121/ E25	DMC-06161/ E25	DMC-10161/ E25	DMC-10181/ E25
Copper Tube Size (mm)	6 x 1 & 10 x 1	6 x 1 & 12 x 1	6 x 1 & 16 x 1	10 x 1 & 16 x 1	10 x 1 & 18 x 1
Insulation Wall Thickness (mm)	9.0 / 9.0	9.0 / 9.0	9.0 / 9.0	9.0 / 9.0	9.0 / 9.0
Outer-Ø Pre-Insulated Pipe (mm)	24 / 28	24 / 30	24 / 34	28 / 34	28 / 36
Coil Length (m)	25	25	25	25	25
Coils per carton	1	1	1	1	1
Length per carton (m)	25	25	25	25	25

TUBOLIT DUOSPLIT INCH SIZES CARTON

Order number	DZC-061088/ E25	DZC-061288/ E25	DZC-061688/ E25	DZC-061681/ E25	DZC-101688/ E25	DZC-101681/ E25	DZC-101981/ E25
Copper Tube Size (inch)	1/4" - 3/8"	1/4" - 1/2"	1/4" - 5/8"	1/4" - 5/8"	3/8" - 5/8"	3/8" - 5/8"	3/8" - 3/4"
Copper Tube Size (mm)	6.35 x 0.8 & 9.53 x 0.8	6.35 x 0.8 & 12.7 x 0.8	6.35 x 0.8 & 15.87 x 0.8	6.35 x 0.8 & 15.87 x 1	9.53 x 0.8 & 15.87 x 0.8	9.53 x 0.8 & 15.87 x 1	9.53 x 0.8 & 19.05 x 1
Insulation Wall Thickness (mm)	9.0 / 9.0	9.0 / 9.0	9.0 / 9.0	9.0 / 9.0	9.0 / 9.0	9.0 / 9.0	9.0 / 9.0
Outer-Ø Pre-Insulated Pipe (mm)	24 / 28	24 / 30	24 / 34	24 / 34	28 / 34	28 / 34	28 / 37
Coil Length (m)	25	25	25	25	25	25	25
Coils per carton	1	1	1	1	1	1	1
Length per carton (m)	25	25	25	25	25	25	25

TECHNICAL DATA - TUBOLIT DUOSPLIT

Brief description	Tubolit DuoSplit is a reliable pre-insulated system solution for connecting the indoor and outdoor air conditioning, refrigeration units of split, multi-split and heat pumps systems. The system consists of copper pipes, insulation material, a UV-resistant facing and matching accessories.
Material type	Foam material based on polyethylene. Polyolefin-copolymer coating. Soft-annealed, seamlessly drawn refrigeration copper pipes according to EN 12735-1.
Additional material information	Insulation material is original Tubolit closed-cell insulation. Durable solution, resistant against mechanical strain and UV radiation. Suitable for refrigeration gases R-410A, R-407C and R32
Product colour range	White
Applications	Split and multi-split air-conditioning systems, heat pumps and cooling counters.
Installation	No special tools required. Matching accessories facilitate assembly. Insulation should remain uncut along the complete applied length and glued to the pipe at both ends. It is recommended that the insulation tube ends are additionally protected with tape.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .
Remarks	Certificate of Conformity with EN 12735-1 for Tubolit Split and DuoSplit copper pipes is available on request.

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature	Min. °C ¹	Max. °C	EN 14706, EN 14707, EN 14313
	-50	100	
Thermal conductivity			
Declared thermal conductivity	Øm	0°C	EN ISO 13787, EN ISO 8497
	λd ≤ [W/[m·K]]	0,036	
	Range	Tubolit DuoSplit insulation tube	
	Formula	[36 + 0,1· Øm + 0,0008 · Øm²)/1000	
Fire Performance and Approvals			
Reaction to fire	Tubolit DuoSplit insulation tube : B(L)-s1,d0		EN 13501-1, EN 13823, EN ISO 11925-2
Resistance to water vapour			
Water vapour diffusion resistance factor	μ ≥ 5000 (Only for slotted insulation and foils)		EN 13469
Physical attributes			
Dimensions and tolerances	In accordance with EN 14313, table 1 and 2		EN 13467
Weather and UV resistance			
UV resistance	Very Good, TB 142		EN ISO 4892-2
Other technical features			
Maximum operating pressure (bar)	Imperial 1/4" x 0.8 mm 159 bar 1/4" x 1.0 mm 206 bar 3/8" x 0.8 mm 101 bar 3/8" x 1.0 mm 129 bar 1/2" x 1.0 mm 94 bar 5/8" x 1.0 mm 74 bar 3/4" x 1.0 mm 61 bar 7/8" x 1.0 mm 52 bar		
	Metric 6 x 0.8 mm 169 bar 6 x 1.0 mm 220 bar 10 x 0.8 mm 96 bar 10 x 1.0 mm 122 bar 12 x 0.8 mm 79 bar 12 x 1.0 mm 100 bar 16 x 1.0 mm 73 bar		

Property	Value / Assessment	Standard / Test method
	18 x 1.0 mm 65 bar 22 x 1.0 mm 52 bar	

¹For use in temperatures below 0 °C, please contact our Customer Service Centre.



INSTALL IT. BENEFIT FROM
THE RANGE.

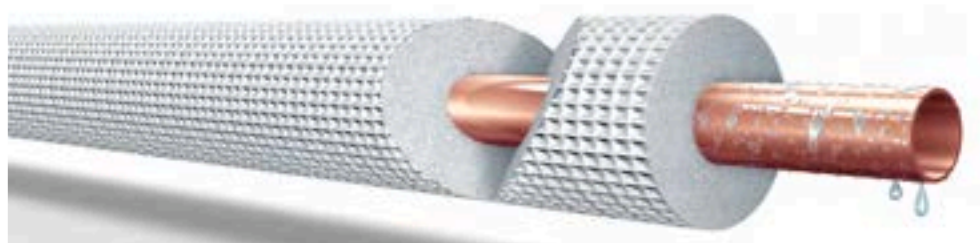
Tubolit

Split & DuoSplit Accessories

A full range of accessories - versatile,
professional and always just right

- // SAE Flare Fittings
- // Ducts and accessories
- // Covers and connectors
- // Floor supports and wall brackets

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TECHNICAL DATA - TUBOLIT SPLIT & DUOSPLIT ACCESSORIES

Brief description	Accessories for Tubolit Split and DuoSplit including: SAE flare fittings, brackets, Split ducts, connection cover, wal covers, tightening clamps	
Property	Value / Assessment	Standard / Test method
Other technical features		
Additional remarks	For technical properties please refer to the information displayed at the following pages under each range.	

Adaptors for walls

Item	Description	EAN	Content [quantity]
SD-CA-110X75	wall adapter 110 x 75 mm	7612207205534	4 piece
SD-CA-60X45	wall adapter 60 x 45 mm	7612207205510	9 piece
SD-CA-80X60	wall adapter 80 x 60 mm	7612207205527	6 piece
Other information			
Reaction to fire	Euroclass E pass - EN ISO 11925-2 UL 94 - V0, V1, V2 vertically pass - EN 60695-11-10 A+B		
Regulation	Armacecl adaptors for walls shall not contain materials or substances listed as: - SVHC, Annex XIV, Annex XVII according to REACH (Regulation (EC) Nr. 1907/2006) - POPs according to Regulation (EC) 2019/1021 - RoHS restricted materials according to RoHS directive (2011/65/EU)		
Remarks	Products are typically supplied as sets in cartons.		

Caps and Covers

Item	Description	EAN	Content [quantity]
SOR-CAP	End cover for flat console 80 x 60 mm	7612207206043	24 piece
Other information			
Reaction to fire	Euroclass E pass - EN ISO 11925-2 UL 94 - V0, V1, V2 vertically pass - EN 60695-11-10 A+B		
Regulation	Armacecl Caps and Covers shall not contain materials or substances listed as: - SVHC, Annex XIV, Annex XVII according to REACH (Regulation (EC) Nr. 1907/2006) - POPs according to Regulation (EC) 2019/1021 - RoHS restricted materials according to RoHS directive (2011/65/EU)		
Remarks	Products are typically supplied as sets in cartons.		

SAE-Flare Fittings

Item	Description	EAN	Content [quantity]
SF-CBZ-06-16	Toolbox sae calibration tool for 1/4" 3/8" 1/2" 5/8"	7612207238327	5 piece
SF-CTZ-006	SAE calibration tool, imperial 1/4"	7612207191561	10 piece
SF-CTZ-010	SAE calibration tool, imperial 3/8"	7612207191578	10 piece
SF-CTZ-012	SAE calibration tool, imperial 1/2"	7612207191516	10 piece
SF-CTZ-016	SAE calibration tool, imperial 5/8"	7612207191585	10 piece
SF-CTZ-019	SAE calibration tool, imperial 3/4"	7612207222999	5 piece
SIP540X85	Cover 540 x 85 mm	7612207213300	15 piece

Covers, spiral hoses, clamps and support rails

Item	Description	EAN	Content [metric]	Content [quantity]
SC-CH-1618/E50	corrugated hose 16 / 18	7612207205763	50 m	
SC-SH-16/E30	spiral hose smooth bore 16	7612207205770	30 m	
SC-SH-18/E30	spiral hose smooth bore 18	7612207205787	30 m	
SC-SH-20/E30	spiral hose smooth bore 20	7612207205794	30 m	
SC-YW-16-18	two-way junction 16 / 18	7612207205800		20 piece
SD-CC-110X75	Connection cover 110 x 75 mm	7612207205565		20 piece
SD-CC-60X45	Connection cover 60 x 45 mm	7612207205541		30 piece
SD-CC-80X60	Connection cover 80 x 60 mm	7612207205558		30 piece
SD-CD-110X75	Duct split 110 x 75 - Rigid PVC, UV stabilized, Color RAL P001 [white]	7612207205596	8 m	

Covers, spiral hoses, clamps and support rails

Item	Description	EAN	Content [metric]	Content [quantity]
SD-CD-60X45	Duct split 60 x 45 mm - Rigid PVC, UV stabilized, Color RAL P001 (white)	7612207205572	24 m	
SD-CD-80X60	Duct split 80 x 60 mm - Rigid PVC, UV stabilized, Color RAL P001 (white)	7612207205589	16 m	
SD-CE-60X45	End cover 60 x 45 mm	7612207205602		12 piece
SD-CE-80X60	End cover 80 x 60 mm	7612207205619		9 piece
SD-CT-110X75	Tightening clamps 110 x 75 mm	7612207205916		20 piece
SD-CT-60X45	Tightening clamps 60 x 45 mm	7612207205893		30 piece
SD-CT-80X60	Tightening clamps 80 x 60 mm	7612207205909		30 piece
SD-CW-60X45	Wall cover 60 x 45 mm	7612207205923		10 piece
SD-CW-80X60	Wall cover 80 x 60 mm	7612207551358		16 piece
SOR-1000	floor support rails 1000 mm	7612207206074		4 piece
SOR-350	floor support rails 350 mm	7612207206050		24 piece
SOR-450	floor support rails 450 mm	7612207206067		24 piece
Other information				
Reaction to fire	Euroclass E pass - EN ISO 11925-2 UL 94 - V0, V1, V2 vertically pass - EN 60695-11-10 A+B			
Regulation	Armacecl covers, spiral hoses, clamps and support rails shall not contain materials or substances listed as - SVHC, Annex XIV, Annex XVII according to REACH (Regulation (EC) Nr. 1907/2006) - POPs according to Regulation (EC) 2019/1021 - RoHS restricted materials according to RoHS directive (2011/65/EU)			
Remarks	Products are typically supplied as sets in cartons.			

Elbows Bends and T-Pieces made of PVC

Item	Description	EAN	Content [quantity]
SD-CF-110X75	Flat bend 110 x 75 mm	7612207205640	6 piece
SD-CF-60X45	Flat bend 60 x 45 mm	7612207205626	10 piece
SD-CF-80X60	Flat bend 80 x 60 mm	7612207205633	8 piece
SD-CI-110X75	Internal elbow 110 x 75 mm	7612207205831	4 piece
SD-CI-60X45	Internal elbow 60 x 45 mm	7612207205817	8 piece
SD-CI-80X60	Internal elbow 80 x 60 mm	7612207205824	6 piece
SD-CL-60X45	Flexible duct 60 x 45 mm	7612207205848	6 piece
SD-CL-80X60	Flexible duct 80 x 60 mm	7612207205855	4 piece
SD-CP-110X75	T-piece 110 x 75 mm	7612207551341	4 piece
SD-CP-80X60	T-piece 80 x 60 mm	7612207205862	4 piece
SD-CR-110X75	Reduction joint 110x75 mm	7612207205886	8 piece
SD-CR-80X60	reduction joint 80 x 60 mm	7612207205879	12 piece
SD-CX-110X75	External elbow 110 x 75 mm	7612207205961	6 piece
SD-CX-60X45	External elbow 60 x 45 mm	7612207205947	12 piece
SD-CX-80X60	External elbow 80 x 60 mm	7612207205954	9 piece
Other information			
Reaction to fire	Euroclass E pass - EN ISO 11925-2 UL 94 - V0, V1, V2 vertically pass - EN 60695-11-10 A+B		
Regulation	Armacecl elbows bends and T-pieces shall not contain materials or substances listed as - SVHC, Annex XIV, Annex XVII according to REACH (Regulation (EC) Nr. 1907/2006)		

Elbows Bends and T-Pieces made of PVC

Item	Description	EAN	Content [quantity]
	- POPs according to Regulation (EC) 2019/1021 - RoHS restricted materials according to RoHS directive (2011/65/EU)		
Remarks	Products are typically supplied as sets in cartons.		

Fitting for copper pipes. SAE flare fittings

Item	Description	EAN	Content [quantity]
SF-FZ-006	1/4" - 10 bags per carton	7612207191530	100 piece
SF-FZ-010	3/8" - 10 bags per carton	7612207191592	100 piece
SF-FZ-012	1/2" - 10 bags per carton	7612207191547	100 piece
SF-FZ-016	5/8" - 10 bags per carton	7612207191554	100 piece
SF-FZ-019	3/4" - 10 bags per carton	7612207222982	50 piece

Other information

Regulation	Corresponds to the new standards and regulations of the CEN for refrigeration installations (EN 378/1 - EN 378/2).		
Remarks	The SAE flare fittings are supplied in small bags of 10 sets, each carton contains 10 bags; one set contains a stiffener sleeve, a compression ferrule and a union nut. No copper sealing necessary - compression ferrule - tight up to 10-7 mbar l/s or < 0.5 g/a Helium for all refrigerants (CFC, HFC, HCFC). Pressure rating 1/4" 100 bar 3/8" 64 bar 1/2" 45 bar 5/8" 45 bar 3/4" 45 bar Subjected to internal testing according to DIN 3859 and by CETIM: * Reverse-bending strength test: no leakage after 10 million. cycles at 50 Hz under normal pressure * Helium-leakage detector (gas-tightness): < 0.5 g/year (10-5 mbar/l/s) * Burst pressure test (4 times nominal pressure): no leakage * Temperature cycle test (5 cycles at -40 °C to -120 °C at 10 bar He): no leakage CETIM, internal and field test results.		

Bracket – adjustable, standard

Item	Description	EAN	Content [quantity]
SBAH-800X465	adjustable bracket with safety hook 800 x 465 mm	7612207213263	1 piece
SBAL-800X420	adjustable bracket with level 800 x 420 mm	7612207213249	1 piece
SBAS-700X465	adjustable bracket standard 700 x 465 mm	7612207213256	1 piece
SBHD-550X550	heavy duty bracket 550 x 550 mm - max load 100 + 100 kg	7612207213287	1 piece
SIC540X85X55	installation frame 540 x 85 x 55 mm	7612207213294	15 piece

Other information

Remarks	Armacell wall brackets are made of electro-galvanised steel and are available in different designs and for various load requirements. The brackets are painted with epoxy resins for outdoor use in RAL 9002. Each set is packed in a carton, including an assembly kit and installation instructions.



INSTALL IT. TRUST IT.

ArmaFlex Fastlink

The quick-and-easy connection for heat pumps

- // Specially designed ready-to-use heat pump connection
- // Sets contain most convenient sizes DN25 and DN32 , including quick couplings needed to connect the pipes
- // Highly flexible corrugated stainless-steel pipes, practical for confined spaces on the jobsite
- // Efficient energy saving elastomeric insulation – compliant to German Buildings Energy Act
- // UV- and weathering protective coating

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ArmaFlex®

ARMAFLEX® FASTLINK

THE QUICK AND EASY ABOVE-GROUND CONNECTION FOR HEAT PUMPS

Based on decades of experience and newly acquired technical know-how, our product gives you a solution with an optimised insulating effect and a space-saving alternative for connecting heat pumps. It enables quick and simultaneous installation of flow and return, consisting of highly flexible corrugated pipes according to 1.4404, and pre-insulated with our insulation materials. ArmaFlex Fastlink is compliant to the German Buildings Energy Act (Gebäudeenergiegesetz, GEG).¹

To protect against weathering or mechanical damage, our insulation comes with a seamless extruded robust UV-resistant outer skin, plus this closed-cell, dust- and fibre-free material prevents heat loss and condensation formation. Thanks to its flexible structure, ArmaFlex Fastlink reduces noise and vibrations. The lengths offered are ideally suited for space-saving installations, if it is not possible to lay the pipework underground and

offers a quick solution for installing heat pumps close to a house wall. The good bending capacity/ flexibility of the corrugated pipes makes it possible to implement practical solutions best suited to the installation location of the heat pump's outdoor unit. The scope of delivery includes the appropriate quick couplings, so that the installation can be carried out fast and easy.

**HIGHLY
FLEXIBLE
INSTALLATIONS
POSSIBLE**



The use of the unique Armacell elastomer technology enables a compact design and facilitates installation even in tight conditions. Significant time and cost savings are achieved by using the offered lengths of the ready-to-use sets. No special tools are required for installation.

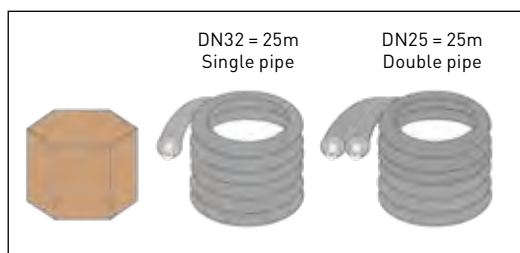


ARMAFLEX FASTLINK DN32 SETS



- // Pre-insulated flexible corrugated stainless-steel pipes in handy lengths suitable for quick installation in various structural conditions: 2,4,6,8 metres. Two individual pipes (flow and return flow) in one box.
- // Four quick couplings for common heat pump connections: 1.25 inches external thread, including installation instructions.

ARMAFLEX FASTLINK COILS



- // Also available as 25 metre long coils in carton
- // For DN32 – 25 metre as a single pipe
- // For DN25 – 25 metre as a double pipe (combined flow and return)
- // Quick couplings are not included

QUICK COUPLINGS



External thread

The scope of delivery includes the screw connections in 1 inch or 1.25 inches external thread. Other connections are available on request.^{2,3}

ARMAFLEX FASTLINK DN25 SETS



- // Pre-insulated flexible corrugated stainless-steel pipes in handy lengths suitable for quick installation in various structural conditions: 2,4,6,8 metres. A double pipe (combined flow and return) - separable if required - in one box.
- // Four quick couplings for common heat pump connections: 1 inch external thread, including installation instructions.



SYSTEM ADVANTAGES:

- // Our ready-to-use solution for connecting heat pumps: Pre-insulated pipes in practical lengths including quick couplings in one package.
- // Easy installation for varying jobsite conditions, thanks to pre-insulated corrugated stainless steel pipes according to 1.4404, with low bending radii and small outer diameters.
- // Energy saving insulation in accordance with the German Buildings Energy Act (GEG) and reduction of vibrations based on unique Armacell elastomer technology – flexible, dust- and fibre-free, and free of CFCs¹.
- // Durable and resilient coating, for protection of the pipe against external influences and as mechanical protection during installation.

¹ The insulation supplied complies with the German Buildings Energy Act (GEG) and meets the requirement of 50 percent insulation.

² During installation, the usual instructions for the installation of coupling systems must be observed in order to ensure the tightness of the system.

³ See the available quick couplings on the next page.

ARMAFLEX FASTLINK

AVAILABLE QUICK COUPLINGS



Fastlink type	DN	Pipe outer diameter [mm]	Length [m]	SOL-SDN25-E1 / SOL-SDN25-E11/4 2 pcs/bag	SO-SDN25-E1 / SO-SDN25-E11/4 4 pcs/car	SO-VA-FIT-25 4 sets/bag	SO-VA-DNI-25 2 pcs/bag
FL-AV-19X25/E02 ¹	25	31.2	2	Metallic sealing 1 inch or 1.25 inch external thread.	Metallic sealing 1 inch or 1.25 inch external thread. With sealing ring as an installation support.	Fitting set for double nipple DN25, with snap ring, union nut and sealing ring.	Double nipple DN25, 1.25 inch external thread.
FL-AV-19X25/E04 ¹	25	31.2	4				
FL-AV-19X25/E06 ¹	25	31.2	6				
FL-AV-19X25/E08 ¹	25	31.2	8				
FL-AV-19X25/E25-D ²	25	31.2	25				

¹ SOL-SDN25-E1 is included in sets E02, E04, E06 and E08, 1 inch external thread.

² Set E25 does not include any quick couplings. 25 metre double pipe.

Fastlink type	DN	Pipe outer diameter [mm]	Length [m]	SOL-SDN32-E11/4 SOL-SDN32-E11/2 2 pcs/bag	SO-SDN32-E11/4 SO-SDN32-E11/2 4 pcs/car	SO-VA-FIT-32 4 sets/bag	SO-VA-DNI-32 2 pcs/bag
FL-AV-19X32/E02 ³	32	40.6	2	Metallic sealing 1 inch or 1.5 inch external thread.	Currently not available.	Fitting set for double nipple DN32, with snap ring, union nut and sealing ring.	Double nipple DN32, 1.5 inch external thread.
FL-AV-19X32/E04 ³	32	40.6	4				
FL-AV-19X32/E06 ³	32	40.6	6				
FL-AV-19X32/E08 ³	32	40.6	8				
FL-AV-19X32/E25-S ⁴	32	40.6	25				

³ SOL-SDN32-E11/4 is included in sets E02, E04, E06 and E08, 1.25 inch external thread.

⁴ Set E25 does not include any quick couplings. 25 metre single pipe.

TECHNICAL DATA - ARMAFLEX FASTLINK

Brief description	ArmaFlex Fastlink is a flexible pre-insulated, UV-resistant piping system used to connect heat pumps with the hot-water circuit in a professional way. The system is offered with the most common sizes for heat pumps, i.e. DN25 and DN32 and includes quick couplings, making it ready-to-connect.
Material type	Corrugated austenitic stainless steel hose according to EN 10088-2: X 2 CrNiMo 17-12-2 and DIN 17441: 1.4404 // Fullfill EN ISO 10380:2013 and EN 13618 p.B. 7.2. Polyolefin-copolymer coating. Factory-made flexible elastomeric foam (FEF), according to EN 14304.
Product colour range	Grey
Product range	Pre-insulated corrugated stainless steel tubes in different coil lengths. Each set also includes corresponding quick couplings.
Applications	Flexible piping system to connect heat pump units with hot-water circuit.
Installation	We recommend the use of TL-Tape/50M-GY to be used. Certified and compatible adhesive for a long-term performing system is ArmaFlex 520.
Remarks	During installation, we strongly recommend that metal cable trays are used at every one meter distance to support the whole system as well as the use of the proprietary fitting system to ensure long-term leakage tightness of the system. The heatpump equipment and the heat transfer fluid has to be well matched to ensure corrosion- and interference-free operations.

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature ¹	Min. °C	Max. °C	EN 14707, EN 14304
	-50	110	
Thermal conductivity			
Declared thermal conductivity	Θm	40°C	EN ISO 13787, EN 14304
	λd ≤ [W/(m·K)]	0,038	
	Formula	λd =[33 + 0,1· Θm + 0,0008 · Θm²]/1000	
Fire Performance and Approvals			
Reaction to fire	E(L)		EN 13501-1, EN ISO 11925-2
Resistance to water vapour			
Water vapour diffusion resistance factor	μ ≥ 4.000		EN 13469
Physical attributes			
Dimensions and tolerances	In accordance to EN 14304, table 1.		EN 13467
Weather and UV resistance			
UV resistance	Very good		EN ISO 4892-2
Other technical features			
Maintenance	Long term corrosion and failure proof operation of the heat pump equipment is only possible when the system and heat transfer medium are optimally matched to each other.		
Maximum operating pressure [bar] ¹	DN25 = 6 @ 20°C DN32 = 2.5 @20°C		

¹ For use in temperatures beyond the maximum and minimum service temperature range indicated in the technical data table, please contact our Customer Service Centre.² Pressure drop [mbar/m] over Volume flow [l/h] for Medium temperature 20°C // Heat fluid Water.

Coil – pre-insulated with stainless steel pipes. Grey. Range contains sets [2, 4, 6, 8 m length incl. 4 fittings].

19 mm			
Pipe Ø [mm]	Item	EAN	Content [metric]
32	FL-AV-19X25/E02	7612207535068	2 m
32	FL-AV-19X25/E04	7612207535006	4 m
32	FL-AV-19X25/E06	7612207535037	6 m
32	FL-AV-19X25/E08	7612207535075	8 m
41	FL-AV-19X32/E02	7612207535044	2 m
41	FL-AV-19X32/E04	7612207535013	4 m
41	FL-AV-19X32/E06	7612207535051	6 m
41	FL-AV-19X32/E08	7612207535020	8 m
Other information			
Remarks		For DN25: SOL-SDN25-E1 (1 inch outer thread). For DN32: SOL-SDN32-E11/4 (1 1/4 inch outer thread) All sets come as a double pipe (forward and return flow).	

Coil – pre-insulated with stainless steel pipes. Grey. Doesn't include any quick couplings.

Pipe Ø [mm]	Item	EAN	Content [metric]
32	FL-AV-19X25E25D	9009590119520	25 m
41	FL-AV-19X32E25S	9009590119537	25 m
Other information			
Remarks		FL-AV-19X25E25D comes as a double pipe (forward and return flow). FL-AV-19X32E25S comes as a single pipe.	

Accessories

Item	Description	Content [quantity]
SOL-SDN25-E1	External thread R1"	2 piece
SOL-SDN25-E11/4	External thread R1 1/4"	2 piece
SOL-SDN32-E11/4	External thread R1 1/4"	2 piece
SOL-SDN32-E11/2	External thread R1 1/2"	2 piece
SO-VA-FIT-25/4	Fitting set for DN25 with 4 of each spring rings, union nuts, washers	1 piece
SO-SDN25-E1	External thread R1"	4 piece
SO-SDN25-E11/4	External thread R1 1/4"	4 piece
SO-SDN25-I1	Inside thread G1"	4 piece
SO-SDN25-I11/4	Inside thread G1 1/4"	4 piece



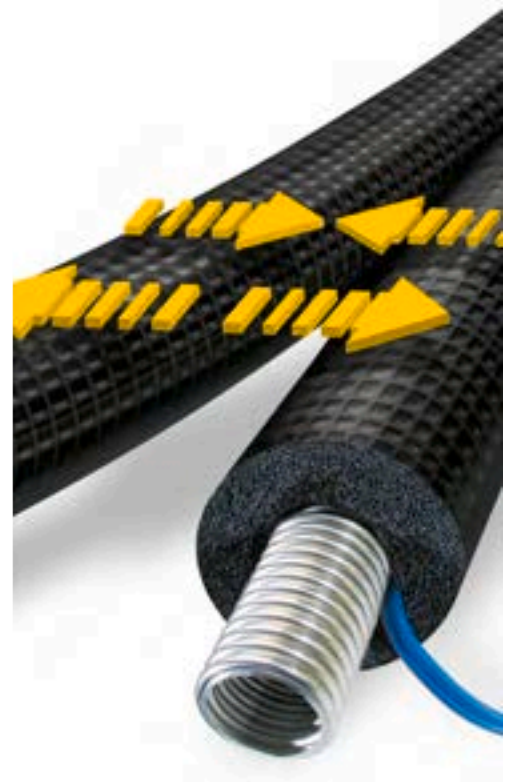
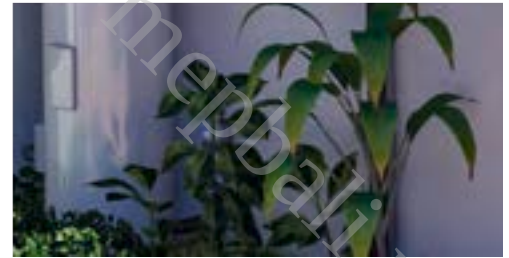
INSTALL IT. OPTIMIZE SOLAR ENERGY.

ArmaFlex DuoSolar

Provides a full system solution and ease of installation for solar energy applications

- // Specially designed, pre-insulated solar tubing
- // Stainless steel and copper pipe options
- // Easy and fast to install
- // Wide range of accessories
- // Integrated sensor cable

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ArmaFlex®

INSTALL IT. OPTIMIZE SOLAR ENERGY

ArmaFlex DuoSolar

The ArmaFlex DuoSolar range offers reliable and easy-to-install solutions for solar thermal systems. The pre-insulated feed and return pipes connect the solar panel with the thermal storage water heater. They optimize thermal efficiency and increase the life time expectancy of the entire system. ArmaFlex DuoSolar for flat solar collectors with up to +150 °C is available as covered corrugated stainless-steel tubing (ArmaFlex DuoSolar VA) and copper piping (ArmaFlex DuoSolar CU). Due to the patented join-split fastening system, the pre-insulated pipes can be split and re-joined easily during the installation process without any damage to the protective foil.



// Quick-fitting Couplings

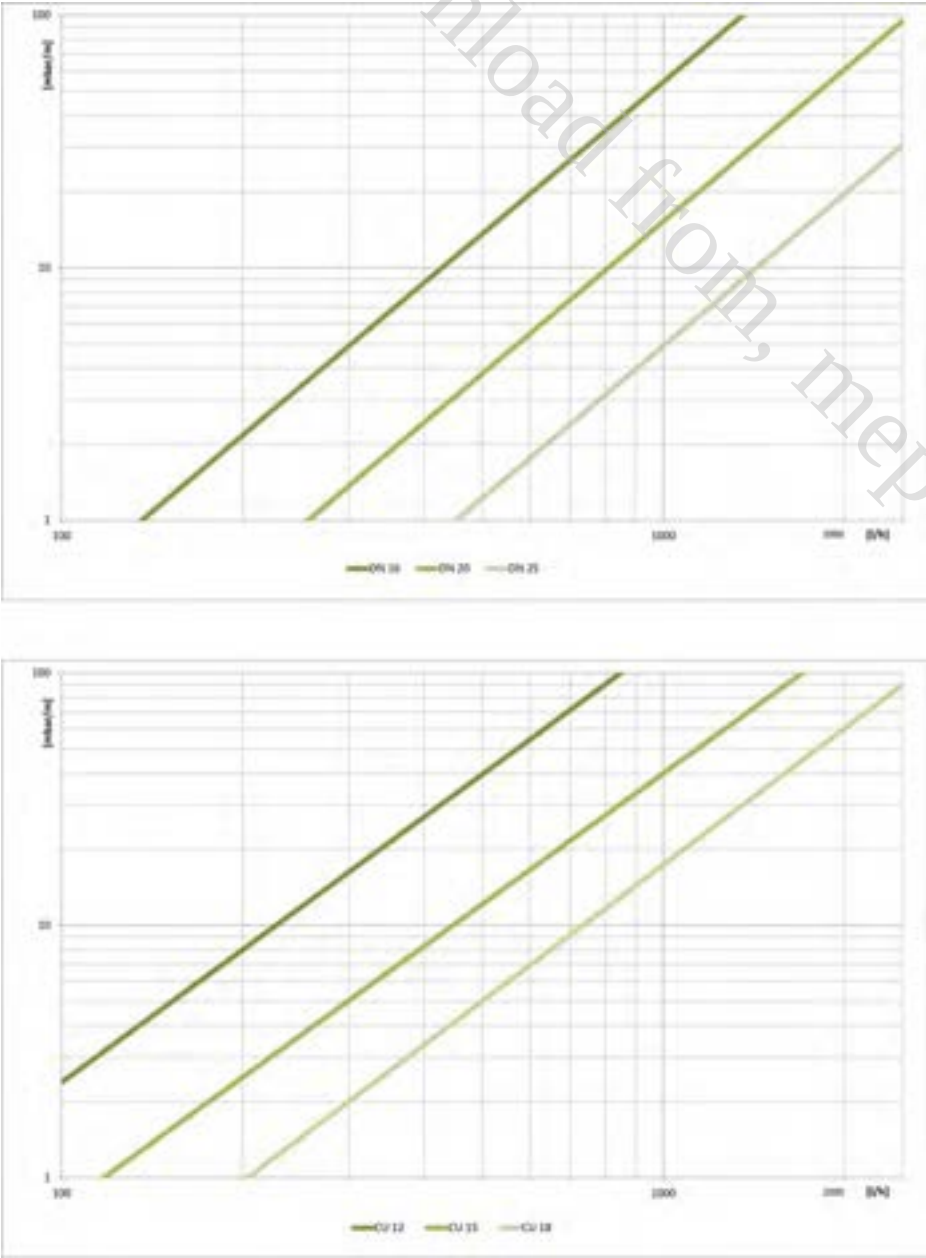
System accessories which are especially tailored to the solar range ensure tight connections. For the installation of Armaflex DuoSolar VA Armacell offers quick-fitting couplings: The flexible pipes can be connected to the system components of solar thermal systems in seconds – simply by tightening a nut. This eliminates the time-consuming flanging of connections and allows considerable cost savings. The couplings provide a permanent and leakproof seal for corrugated stainless steel tubes.



TECHNICAL DATA - ARMAFLEX DUOSOLAR

Brief description	ArmaFlex DuoSolar is a flexible pre-insulated, UV resistant piping system used to connect solar collectors with the hot-water storage tank in an easy and professional way. The system is offered with a smart join-split system with two copper or stainless steel hoses and includes a sensor cable.
Material type	Factory-made flexible elastomeric foam based on ethylene propylene diene methylene (EPDM), according to EN 14304. Corrugated austenitic stainless steel hose according to EN 10088-2: X 2 CrNiMo 17-12-2 and DIN 17441: 1.4404 // Fullfill EN ISO 10380:2013 and EN 13618 p.B. 7.2. Soft-annealed, seamlessly drawn refrigeration copper pipes according to EN 12735-1. Polyolefin-copolymer coating.
Product colour range	Black
Product range	Pre-insulated copper pipes or corrugated stainless steel hoses in different coil lengths. In the return pipe, a sensor cable [2x0.75 mm ²] with halogen free, temperature resistant silicon coating (+180°C) is integrated.
Applications	Piping system to connect solar collectors with the hot-water storage tank, hot-water boiler and for other uses.
Installation	ArmaFlex HT 625 is a certified and compatible adhesive for a long-term performing system.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .
Remarks	During installation, we strongly recommend that proprietary hangers are used at every one meter distance to support the whole system. The solar system and heat transfer fluid has to be well matched to ensure corrosion- and interference-free operations. We recommend an annual laboratory test of the fluid medium (density, concentration, corrosion, pH value). The heat transfer fluid has to be completely replaced in case the parameters are out of limits. EC Certificate of Conformity no. 0543 of Güteschutzgemeinschaft Hartschaum e.V. Celle

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature ¹	Min. °C	Max. °C	EN 14707, EN 14304
	-50	150	
Thermal conductivity			
Declared thermal conductivity	θm	40°C	EN ISO 8497, EN ISO 13787
	λd ≤ [W/(m·K)]	0,042	
	Formula	λ = [36.92 + 0.125 · θm + 0.0008 · (θm-30)²] / 1000]	
Fire Performance and Approvals			
Reaction to fire	E(L)		EN 13501-1, EN ISO 11925-2
Resistance to water vapour			
Water vapour diffusion resistance factor	μ ≥ 4,000		EN 13469
Physical attributes			
Dimensions and tolerances	In accordance to EN 14304, table 1.		EN 13467
Weather and UV resistance			
UV resistance	Very good		EN ISO 4892-2
Other technical features			
Maintenance	Long term corrosion and failure proof operation of the solar thermal equipment is only possible when the system and heat transfer medium are optimally matched to each other. We recommend an annual laboratory test of the medium [e.g. density, concentration, corrosion protection, pH]. The heat transfer medium must be replaced completely, if the parameters do not longer meet the specifications.		
Maximum operating pressure [bar]	CU 12 = 79 // DN 16 = 16 CU 15 = 62 // DN 20 = 10 CU 18 = 65 // DN 25 = 10		

Property	Value / Assessment	Standard / Test method
Maximum operating pressure [graph] ²		
Pipe volume [l/m]	CU 12 = 0,085 // DN 16 = 0,272 CU 15 = 0,141 // DN 20 = 0,430 CU 18 = 0,201 // DN 25 = 0,633	

¹For use in temperatures beyond the maximum and minimum service temperature range indicated in the technical data table, please contact our Customer Service Centre.

²Pressure drop [mbar/m] over Volume flow [l/h] for Medium temperature 60°C // Heat fluid 1,2-Propylen glycol // Dynamic Viscosity 1612.8×10^{-6} kg/ms // Weight density 1008 kg/m³.

Coil – pre-insulated with stainless steel pipes. Black foam with black covering. Pre-insulated corrugated stainless steel pipes 1.4404 (ASTM 316 L)

Pipe Ø [mm]	Item	Outer diameter [mm]	Thickness [mm]	Length [m]	EAN	Content [metric]
21	SO-DV-14X16/100	50	14	100	7612207369496	100 m
21	SO-DV-14X16/E10	50	14	10	7612207227178	10 m
21	SO-DV-14X16/E15	50	14	15	7612207227185	15 m
21	SO-DV-14X16/E20	50	14	20	7612207227192	20 m
21	SO-DV-14X16/E25	50	14	25	7612207227208	25 m
21	SO-DV-14X16/E50	50	14	50	7612207290547	50 m
27	SO-DV-14X20/100	55	14	100	7612207371413	100 m
27	SO-DV-14X20/E10	55	14	10	7612207227215	10 m
27	SO-DV-14X20/E15	55	14	15	7612207227222	15 m
27	SO-DV-14X20/E20	55	14	20	7612207227239	20 m
27	SO-DV-14X20/E25	55	14	25	7612207227246	25 m
27	SO-DV-14X20/E50	55	14	50	7612207301762	50 m
32	SO-DV-14X25/100	60	14	100	7612207371420	100 m
32	SO-DV-14X25/E15	60	14	15	7612207280975	15 m
32	SO-DV-14X25/E25	60	14	25	7612207280982	25 m

VA accessories

Item	Description	EAN	Content [quantity]
SO-VA-DNI-16	Double nipple ¾" for DN 16	7612207234268	1 piece
SO-VA-DNI-20	Double nipple 1" for DN 20	7612207234275	1 piece
SO-VA-FIT-16/4	Fitting set for DN16 with 4 of each spring rings, union nuts, washers	7612207234244	1 piece
SO-VA-FIT-20/4	Fitting set for DN20 with 4 of each spring rings, union nuts, washers	7612207234251	1 piece
SO-VA-FIT-25/4	Fitting set for DN25 with 4 of each spring rings, union nuts, washers	7612207279948	1 piece

Clamping ring. Clamping ring for quick fitting coupling

Item	Description	EAN	Content [quantity]
SO-SDN16-CR	Clamping ring	7612207355819	50 piece
SO-SDN20-CR	Clamping ring	7612207355826	50 piece
SO-SDN25-CR	Clamping ring	7612207355833	50 piece

VA accessories

Item	Description	EAN	Content [quantity]
SCH-DN16-FEF14	Pipe hanger for DN16-FEF14 with hex-head screw M8x80 and raw plugs S10, insulation thickness 14mm	7612207289763	1 piece
SCH-DN16-FEF20	Pipe hanger for DN16-FEF20 with hex-head screw M8x80 and raw plugs S10, insulation thickness 20mm	7612207289046	1 piece
SCH-DN20-FEF14	Pipe hanger for DN20-FEF14 with hex-head screw M8x80 and raw plugs S11, insulation thickness 14mm	7612207289787	1 piece
SCH-DN20-FEF20	Pipe hanger for DN20-FEF20 with hex-head screw M8x80 and raw plugs S11, insulation thickness 20mm	7612207289053	1 piece

VA accessories

Item	Description	EAN	Content [quantity]
SCH-DN25-FEF14	Pipe hanger for DN25-FEF14 with hex-head screw M8x80 and raw plugs S12, insulation thickness 14mm	7612207289039	1 piece

Fitting for copper pipes. Quick fitting coupling with clamping ring for copper pipes

Item	Description	EAN	Content [quantity]
SO-SDN16-CU12	Plain pipes Ø 12 mm	7612207336634	10 piece
SO-SDN16-CU15	Plain pipes Ø 15 mm	7612207324839	10 piece
SO-SDN16-CU18	Plain pipes Ø 18 mm	7612207324846	10 piece
SO-SDN16-CU22	Plain pipes Ø 22 mm	7612207324853	10 piece
SO-SDN20-CU15	Plain pipes Ø 15 mm	7612207324938	10 piece
SO-SDN20-CU18	Plain pipes Ø 18 mm	7612207324945	10 piece
SO-SDN20-CU22	Plain pipes Ø 22 mm	7612207324952	10 piece
SO-SDN25-CU18	Plain pipes Ø 18 mm	7612207377187	4 piece
SO-SDN25-CU22	Plain pipes Ø 22 mm	7612207377170	4 piece

Fitting with cylindrical connection. Quick fitting coupling with cylindrical connection piece

Item	Description	EAN	Content [quantity]
SO-SDN16-Z18	Cylindrical connection piece Ø 18 mm	7612207352764	10 piece
SO-SDN20-Z18	Cylindrical connection piece Ø 18 mm	7612207352771	10 piece

Fitting with female straight internal thread. Quick fitting coupling with female straight internal thread for metal-to-metal or for flat-sealing screw joints

Item	Description	EAN	Content [quantity]
SO-SDN16-I1	Inside thread G1"	7612207324822	10 piece
SO-SDN16-I1/2	Inside thread G1½"	7612207324808	10 piece
SO-SDN16-I3/4	Inside thread G¾"	7612207324815	10 piece
SO-SDN20-I1	Inside thread G1"	7612207324921	10 piece
SO-SDN20-I3/4	Inside thread G¾"	7612207324914	10 piece
SO-SDN25-I1	Inside thread G1"	7612207377156	4 piece
SO-SDN25-I1¼	Inside thread G1 ¼"	7612207377163	4 piece

Fitting with male straight thread. Quick fitting coupling with male straight thread for flat-sealing screw joints

Item	Description	EAN	Content [quantity]
SO-SDN16-F1	External thread G1"	7612207324877	10 piece
SO-SDN16-F3/4	External thread G¾"	7612207324860	10 piece
SO-SDN20-F1	External thread 1"	7612207324976	10 piece
SO-SDN20-F3/4	External thread G¾"	7612207324969	10 piece

Fitting with male tapered thread. Quick fitting coupling with male tapered thread for metal-to-metal sealing screw joints

Item	Description	EAN	Content [quantity]
SO-SDN16-E1	External thread R1"	7612207324792	10 piece
SO-SDN16-E1/2	External thread R1½"	7612207324778	10 piece
SO-SDN16-E3/4	External thread R¾"	7612207324785	10 piece

Fitting with male tapered thread. Quick fitting coupling with male tapered thread for metal-to-metal sealing screw joints

Item	Description	EAN	Content [quantity]
SO-SDN20-E1	External thread R1"	7612207324907	10 piece
SO-SDN20-E3/4	External thread R¾"	7612207324891	10 piece
SO-SDN25-E1	External thread R1"	7612207377149	4 piece
SO-SDN25-E11/4	External thread R1 ¼"	7612207377194	4 piece

VA accessories. Quick fitting coupling for corrugated stainless steel hoses

Item	Description	EAN	Content [quantity]
SO-SDN16-DN16	Corrugated stainless steel hoses DN 16	7612207324761	10 piece
SO-SDN20-DN20	Corrugated stainless steel hoses DN 20	7612207324884	10 piece
SO-SDN25-DN25	Corrugated stainless steel hoses DN 25	7612207377132	4 piece
SOL-SDN25-E1	External thread R1"	9009590056177	2 piece
SOL-SDN25-E11/4	External thread R1 ¼"	9009590056184	2 piece
SOL-SDN25-I1	Internal Thread R1"	9009590056047	2 piece
SOL-SDN25-I11/4	Internal Thread R1 ¼"	9009590056054	2 piece
SOL-SDN32-E11/2	External thread R1 ½"	9009590119735	2 piece
SOL-SDN32-E11/4	External thread R1 ¼"	9009590056191	2 piece
SOL-SDN32-I11/2	Internal Thread R1 ½"	9009590118332	2 piece
SOL-SDN32-I11/4	Internal Thread R1 ¼"	9009590086877	2 piece



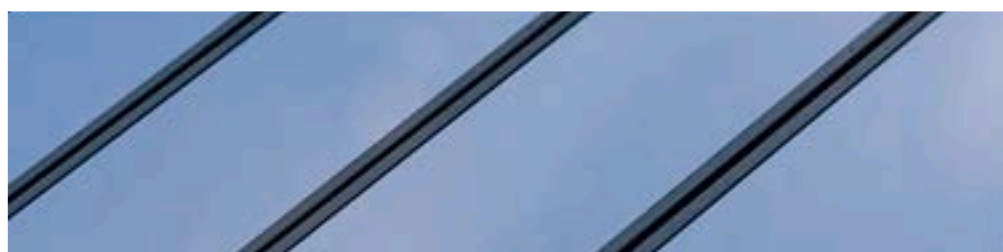
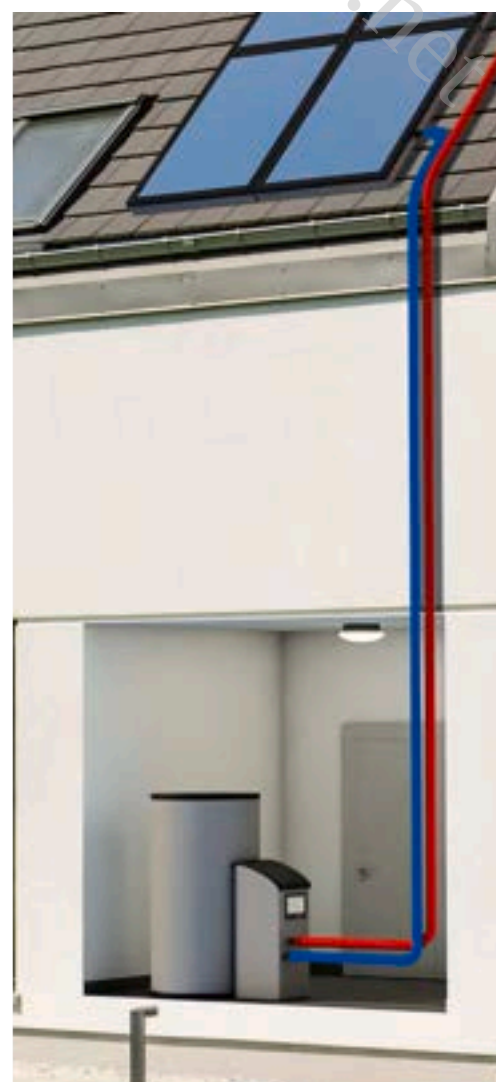
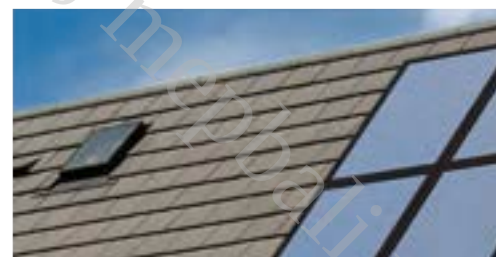
INSTALL IT. OPTIMIZE SOLAR ENERGY.

ArmaFlex DuoSolar e-Save

ArmaFlex DuoSolar e-Save with its unique space-saving design is specifically purposed to meet challenging installation situation on the jobsite

- // Specially designed to save more space (up to 53%)
- // Dedicated solution for tight space conditions on jobsites
- // Fast and easy installation, due to patented "Join-Split" technology

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ArmaFlex DuoSolar e-Save



// Your Benefits

- Space-saving '100% solution'
- Pre-insulated twin pipes
- Maximum energy savings with extreme space-efficiency
- Requires less than half the space needed by separately laid solar pipes

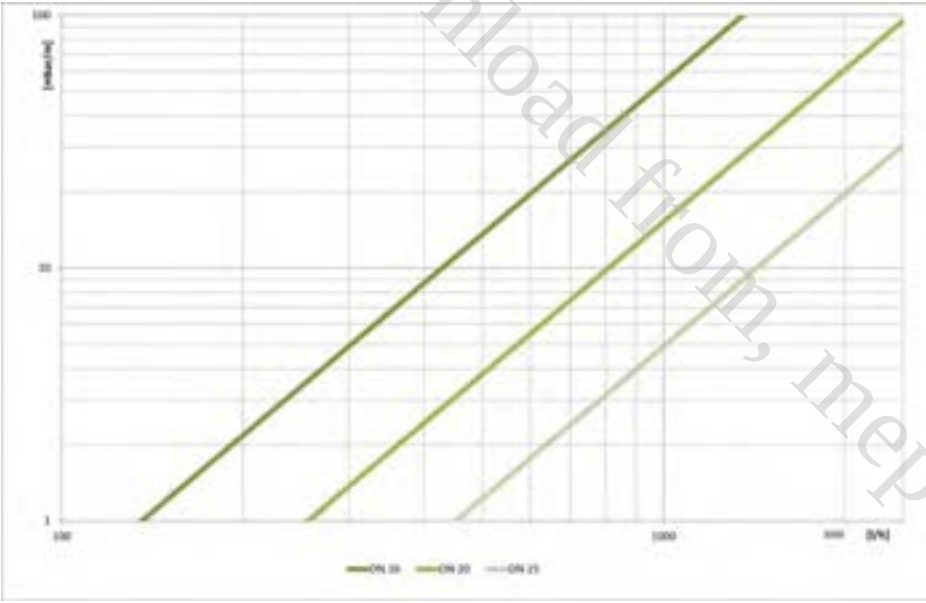
With ArmaFlex DuoSolar e-Save Armacell now provides a space-saving "100% solution". Based on calculations by FIW Munich using the finite element method, the R&D department developed pre-insulated twin pipes that not only offer high energy savings, but are also extremely space-efficient. ArmaFlex DuoSolar e-Save requires less than half the space needed by separately laid solar pipes to achieve same energy efficiency.



TECHNICAL DATA - ARMAFLEX DUOSOLAR E-SAVE

Brief description	ArmaFlex DuoSolar e-Save is a flexible pre-insulated, UV resistant piping system used to connect solar collectors with the hot-water storage tank in an easy and professional way. The system is offered with a smart join-split system with two stainless steel hoses and includes a sensor cable.
Material type	Factory-made flexible elastomeric foam based on ethylene propylene diene methylene (EPDM), according to EN 14304. Corrugated austenitic stainless steel hose according to EN 10088-2: X 2 CrNiMo 17-12-2 and DIN 17441: 1.4404 // Fullfill EN ISO 10380:2013 and EN 13618 p.B. 7.2. Polyolefin-copolymer coating.
Product colour range	Black
Product range	Pre-insulated corrugated stainless steel hoses in different coil lengths. In the return pipe, a sensor cable [2x0.75 mm ²] with halogen free, temperature resistant silicon coating (+180°C) is integrated.
Applications	Piping system to connect solar collectors with the hot-water storage tank, hot-water boiler and for other uses.
Installation	ArmaFlex HT 625 is a certified and compatible adhesive for a long-term performing system.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .
Remarks	During installation we strongly recommend that proprietary hangers are used at every one meter distance to support the whole system. The solar system and heat transfer fluid has to be well matched to ensure corrosion- and interference-free operations. We recommend an annual laboratory test of the fluid medium (density, concentration, corrosion, pH value). The heat transfer fluid has to be completely replaced in case the parameters are out of limits. EC Certificate of Conformity no. 0543 of Güteschutzgemeinschaft Hartschaum e.V. Celle

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature	Min. °C	Max. °C	EN 14707, EN 14304
	-50	150	
Thermal conductivity			
Declared thermal conductivity	θm	40°C	EN ISO 8497, EN ISO 13787
	λd ≤ [W/(m·K)]	0,042	
	Formula	λ = [36.92 + 0.125 · θm + 0.0008 · (θm-30)²] / 1000]	
Fire Performance and Approvals			
Reaction to fire	E		EN 13501-1, EN ISO 11925-2
Resistance to water vapour			
Water vapour diffusion resistance factor	μ ≥ 4.000		EN 13469
Physical attributes			
Dimensions and tolerances	In accordance to EN 14304, table 1.		EN 13467
Weather and UV resistance			
UV resistance	Very good		EN ISO 4892-2
Other technical features			
Maintenance	Long term corrosion and failure proof operation of the solar thermal equipment is only possible when the system and heat transfer medium are optimally matched to each other. We recommend an annual laboratory test of the medium (e.g. density, concentration, corrosion protection, pH). The heat transfer medium must be replaced completely, if the parameters do not longer meet the specifications.		
Maximum operating pressure [bar]	DN 16 = 16 DN 20 = 10		

Property	Value / Assessment	Standard / Test method
Maximum operating pressure (graph) ¹		

Pipe volume [l/m]
DN 16 = 0,272
DN 20 = 0,430

¹Pressure drop [mbar/m] over Volume flow [l/h] for Medium temperature 60°C // Heat fluid 1,2-Propylenglycol // Dynamic Viscosity 1612.8 x 10⁻⁶ kg/ms // Weight density 1008 kg/m³.

Coil – pre-insulated with stainless steel pipes. Black

Pipe Ø [mm]	Item	Insulation thickness [mm]	Length [m]	EAN	Content [metric]
21	DVE-19X16/E10	19	10	7612207422948	10 m
21	DVE-19X16/E15	19	15	7612207422955	15 m
21	DVE-19X16/E20	19	20	7612207423006	20 m
21	DVE-19X16/E25	19	25	7612207423013	25 m
21	DVE-19X16/E50	19	50	7612207423037	50 m
27	DVE-19X20/E15	19	15	7612207423020	15 m
27	DVE-19X20/E20	19	20	7612207422979	20 m
27	DVE-19X20/E25	19	25	7612207422986	25 m
27	DVE-19X20/E50	19	50	7612207422993	50 m



INSTALL IT. OPTIMIZE SOLAR ENERGY.

ArmaFlex DuoSolar 220

Combines efficiency and ease in solar applications with evacuated tube collectors

- // Specifically designed for evacuated tube collectors
- // Suitable for solar applications up to +220 °C
- // Easy and fast to install

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INSTALL IT. OPTIMIZE SOLAR ENERGY.

ArmaFlex DuoSolar 220



The stagnation temperature of evacuated tube collectors is significantly higher than that of flat plate collectors. This often leads to breakdowns when standard +150°C components are used.

Armacell now provides the new ArmaFlex DuoSolar 220 which has been especially designed for evacuated tube collectors and offers a perfect solution at high temperatures.

- operating temperatures up to 220°C
- for evacuated tube collectors



// Components

ArmaFlex DuoSolar 220 consists of a flexible corrugated stainless steel pipe, which is quick and easy to install even with small bending radii and in retrofit applications. The high-tech polyester insulation withstands the extreme operating temperatures of evacuated tube collectors and the tough foil covering protects the pre-insulated pipe against mechanical damage and UV radiation. ArmaFlex DuoSolar 220 has an integrated sensor cable with halogen-free, high-temperature-resistant silicon coating.

// Accessories

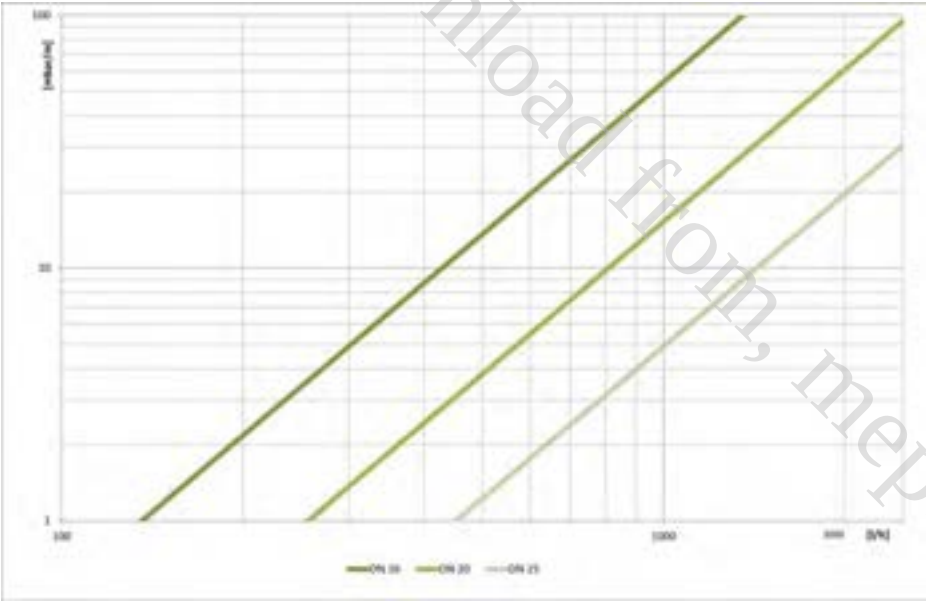
The metal-to-metal sealing quick-fitting couplings from Armacell allow the flexible pipes to be connected to the system components in seconds.

- Ease of assembly: connections are made simply by tightening a nut
- The breakthrough family of quick-fitting couplings provides a permanent, leakproof seal for corrugated stainless steel pipes

TECHNICAL DATA - ARMAFLEX DUOSOLAR 220

Brief description	ArmaFlex DuoSolar 220 is a flexible pre-insulated, UV-resistant piping system used to connect solar collectors with the hot-water storage tank in an easy and professional way. The system is offered with a smart join-split system with two stainless-steel hoses and includes a sensor cable.
Material type	Corrugated austenitic stainless steel hose according to EN 10088-2: X 2 CrNiMo 17-12-2 and DIN 17441: 1.4404 // Fullfill EN ISO 10380:2013 and EN 13618 p.B. 7.2. Polyolefin-copolymer coating. Insulation: polyester.
Product colour range	Black
Special features	Fulfills DIN 1988 part 200. The covering offers excellent durability, even under UV exposure when used for outdoor applications.
Product range	Pre-insulated corrugated stainless-steel hoses in different coil lengths. In the return pipe, a sensor cable (2x0.75 mm ²) with halogen free, temperature resistant silicon coating (+180°C) is integrated.
Applications	Piping system to connect solar collectors with the hot-water storage tank, hot-water boiler and for other uses.
Remarks	During installation we strongly recommend that proprietary hangers are used at every one meter distance to support the whole system. The solar system and heat transfer fluid has to be well matched to ensure corrosion- and interference-free operations. We recommend an annual laboratory test of the fluid medium (density, concentration, corrosion, pH value). The heat transfer fluid has to be completely replaced in case the parameters are out of limits.

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature ¹	Min. °C	Max. °C	
	-50	220	
Thermal conductivity			
Declared thermal conductivity	Øm	40°C	EN ISO 8497
	λd ≤ [W/(m·K)]	0,040	
Fire Performance and Approvals			
Reaction to fire	B1		DIN 4102
Weather and UV resistance			
UV resistance	Excellent		EN ISO 4892-2
Other technical features			
Additional remarks	Melting point +265°C		
Maintenance	Long term corrosion and failure proof operation of the solar thermal equipment is only possible when the system and heat transfer medium are optimally matched to each other. We recommend an annual laboratory test of the medium [e.g. density, concentration, corrosion protection, pH]. The heat transfer medium must be replaced completely, if the parameters do not longer meet the specifications.		
Maximum operating pressure (bar)	DN 16 = 16 DN 20 = 10 DN 25 = 10		

Property	Value / Assessment	Standard / Test method
Maximum operating pressure [graph] ²		
Pipe volume [l/m]	DN 16 = 0,272 DN 20 = 0,430 DN 25 = 0,633	

¹For environmental conditions outside the given range, please contact Technical Services.
²Pressure drop [mbar/m] over Volume flow [l/h] for Medium temperature 60°C // Heat fluid 1,2-Propylenglycol // Dynamic Viscosity 1612.8 x 10⁻⁶ kg/ms // Weight density 1008 kg/m³.

Coil – pre-insulated with stainless steel pipes. Black

Pipe Ø [mm]	Item	Outer diameter [mm]	Thickness [mm]	Length [m]	EAN	Content [metric]
21	SO-DP-20X16/E15	62	20	15	7612207388220	15 m
21	SO-DP-20X16/E25	62	20	25	7612207388244	25 m
27	SO-DP-20X20/E15	67	20	15	7612207388251	15 m
27	SO-DP-20X20/E25	67	20	25	7612207388275	25 m
32	SO-DP-20X25/E25	72	20	25	7612207388299	25 m

ENERGY-EFFICIENT AND FIRE-
RESISTANT SOLUTION.

AstraTHERM

- // Easy and fast installation
- // Non-combustible
- // Complete system solution

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ArmaWool™

TECHNICAL DATA - ASTRATHERM

Brief description AstraTherm stone wool, laminated with a tear-resistant pure aluminium foil, in AS quality according to AGI Q132, highly water-repellent (hydrophobic according to AGI Q132/DIN 13472) and odourless. Double-sided adhesive tape to seal the pipe section.

Property	Value / Assessment			Standard / Test method
Temperature range				
Service temperature ¹	Range	Max. °C (intermittent)		EN 14707
	Aluminium laminated	250		
	Uncoated	660		
Thermal conductivity				
Declared thermal conductivity	Øm	+40 °C	+50 °C	EN ISO 13787, EN ISO 8497
	λd ≤ [W/(m·K)]	37	39	
	Range	Aluminium laminated		
Declared thermal conductivity	Øm	+40 °C		EN ISO 13787, EN ISO 8497
	λd ≤ [W/(m·K)]	40		
	Range	Uncoated		
Fire Performance and Approvals				
Reaction to fire	A2-s1,d0 (aluminium laminated) A1 (uncoated)			EN 13501-1
Fire performance				
Melting point [°C]	> 1000 °C			

¹max. 80 °C aluminium foil

Sections. Precovered mineral wool with aluminium foil

20 mm					25 mm				
Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]
15	MF-AT-20X015/ AL	20	9009590056979	42 m	15	MF-AT-25X015/ AL	25	9009590062956	30 m
18	MF-AT-20X018/ AL	20	9009590056986	42 m	18	MF-AT-25X018/ AL	25	9009590062963	30 m
22	MF-AT-20X022/ AL	20	9009590056993	36 m	22	MF-AT-25X022/ AL	25	9009590062970	25 m
28	MF-AT-20X028/ AL	20	9009590057020	30 m	28	MF-AT-25X028/ AL	25	9009590057129	25 m
33	MF-AT-20X033/ AL	20	9009590084460	25 m	33	MF-AT-25X033/ AL	25	9009590084606	20 m
35	MF-AT-20X035/ AL	20	9009590057037	25 m	35	MF-AT-25X035/ AL	25	9009590057136	20 m
42	MF-AT-20X042/ AL	20	9009590057044	20 m	42	MF-AT-25X042/ AL	25	9009590057143	16 m
48	MF-AT-20X048/ AL	20	9009590057051	16 m	48	MF-AT-25X048/ AL	25	9009590057150	16 m
54	MF-AT-20X054/ AL	20	9009590057068	16 m	54	MF-AT-25X054/ AL	25	9009590062987	12 m
57	MF-AT-20X057/ AL	20	9009590057075	15 m	60	MF-AT-25X060/ AL	25	9009590063007	9 m
60	MF-AT-20X060/ AL	20	9009590057082	12 m	64	MF-AT-25X064/ AL	25	9009590063014	9 m
64	MF-AT-20X064/ AL	20	9009590057099	12 m	70	MF-AT-25X070/ AL	25	9009590063021	9 m
70	MF-AT-20X070/ AL	20	9009590062932	9 m	76	MF-AT-25X076/ AL	25	9009590063038	9 m
76	MF-AT-20X076/ AL	20	9009590062949	9 m	89	MF-AT-25X089/ AL	25	9009590084620	6 m
89	MF-AT-20X089/ AL	20	9009590084491	9 m	-	-	-	-	-
102	MF-AT-20X102/ AL	20	9009590084514	6 m	-	-	-	-	-
108	MF-AT-20X108/ AL	20	9009590084521	6 m	-	-	-	-	-
114	MF-AT-20X114/ AL	20	9009590084538	5 m	-	-	-	-	-
168	MF-AT-20X168/ AL	20	9009590007049	2 m	-	-	-	-	-
169	MF-AT-20X169/ AL	20	9009590084583	2 m	-	-	-	-	-
219	MF-AT-20X219/ AL	20	9009590007070	2 m	-	-	-	-	-

Sections. Precovered mineral wool with aluminium foil

30 mm					40 mm				
Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]
15	MF-AT-30X015/ AL	30	9009590057167	25 m	15	MF-AT-40X015/ AL	40	9009590084835	16 m
18	MF-AT-30X018/ AL	30	9009590057174	25 m	18	MF-AT-40X018/ AL	40	9009590057372	16 m
22	MF-AT-30X022/ AL	30	9009590057181	20 m	22	MF-AT-40X022/ AL	40	9009590057389	12 m

Sections. Precovered mineral wool with aluminium foil

30 mm					40 mm				
Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]
28	MF-AT-30X028/ AL	30	9009590057198	20 m	28	MF-AT-40X028/ AL	40	9009590057396	12 m
35	MF-AT-30X035/ AL	30	9009590057204	16 m	33	MF-AT-40X033/ AL	40	9009590084859	9 m
42	MF-AT-30X042/ AL	30	9009590057211	12 m	35	MF-AT-40X035/ AL	40	9009590057419	9 m
48	MF-AT-30X048/ AL	30	9009590057228	11 m	42	MF-AT-40X042/ AL	40	9009590057426	9 m
50	MF-AT-30X050/ AL	30	9009590007339	9 m	48	MF-AT-40X048/ AL	40	9009590057433	9 m
54	MF-AT-30X054/ AL	30	9009590057235	9 m	54	MF-AT-40X054/ AL	40	9009590057440	6 m
57	MF-AT-30X057/ AL	30	9009590057242	9 m	55	MF-AT-40X055/ AL	40	9009590007773	6 m
60	MF-AT-30X060/ AL	30	9009590057259	9 m	57	MF-AT-40X057/ AL	40	9009590063090	6 m
64	MF-AT-30X064/ AL	30	9009590057266	9 m	60	MF-AT-40X060/ AL	40	9009590057457	6 m
70	MF-AT-30X070/ AL	30	9009590057273	8 m	64	MF-AT-40X064/ AL	40	9009590057464	6 m
76	MF-AT-30X076/ AL	30	9009590057280	7 m	68	MF-AT-40X068/ AL	40	9009590007780	5 m
89	MF-AT-30X089/ AL	30	9009590057297	6 m	70	MF-AT-40X070/ AL	40	9009590057471	5 m
102	MF-AT-30X102/ AL	30	9009590057327	4 m	76	MF-AT-40X076/ AL	40	9009590057488	5 m
108	MF-AT-30X108/ AL	30	9009590057334	4 m	80	MF-AT-40X080/ AL	40	9009590007797	4 m
114	MF-AT-30X114/ AL	30	9009590057341	4 m	85	MF-AT-40X085/ AL	40	9009590007803	4 m
125	MF-AT-30X125/ AL	30	9009590084729	4 m	89	MF-AT-40X089/ AL	40	9009590057495	4 m
133	MF-AT-30X133/ AL	30	9009590057358	4 m	90	MF-AT-40X090/ AL	40	9009590091710	4 m
140	MF-AT-30X140/ AL	30	9009590057365	3 m	92	MF-AT-40X092/ AL	40	9009590007810	4 m
152	MF-AT-30X152/ AL	30	9009590084736	2 m	102	MF-AT-40X102/ AL	40	9009590057501	4 m
159	MF-AT-30X159/ AL	30	9009590063045	2 m	104	MF-AT-40X104/ AL	40	9009590007827	4 m
165	MF-AT-30X165/ AL	30	9009590007506	2 m	108	MF-AT-40X108/ AL	40	9009590057518	4 m
168	MF-AT-30X168/ AL	30	9009590007513	2 m	110	MF-AT-40X110/ AL	40	9009590007834	4 m
169	MF-AT-30X169/ AL	30	9009590063052	2 m	114	MF-AT-40X114/ AL	40	9009590057525	4 m
180	MF-AT-30X180/ AL	30	9009590063069	1 m	120	MF-AT-40X120/ AL	40	9009590007841	3 m
-	-	-	-	-	125	MF-AT-40X125/ AL	40	9009590084873	2 m
-	-	-	-	-	130	MF-AT-40X130/ AL	40	9009590007858	2 m
-	-	-	-	-	133	MF-AT-40X133/ AL	40	9009590057532	2 m

Sections. Precovered mineral wool with aluminium foil

30 mm					40 mm				
Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]
-	-	-	-	-	140	MF-AT-40X140/ AL	40	9009590057549	2 m
-	-	-	-	-	150	MF-AT-40X150/ AL	40	9009590007865	2 m
-	-	-	-	-	152	MF-AT-40X152/ AL	40	9009590084880	2 m
-	-	-	-	-	154	MF-AT-40X154/ AL	40	9009590007872	2 m
-	-	-	-	-	159	MF-AT-40X159/ AL	40	9009590063106	2 m
-	-	-	-	-	160	MF-AT-40X160/ AL	40	9009590007889	2 m
-	-	-	-	-	168	MF-AT-40X168/ AL	40	9009590007896	2 m
-	-	-	-	-	169	MF-AT-40X169/ AL	40	9009590063113	2 m
-	-	-	-	-	180	MF-AT-40X180/ AL	40	9009590063120	2 m
-	-	-	-	-	194	MF-AT-40X194/ AL	40	9009590007902	2 m
-	-	-	-	-	200	MF-AT-40X200/ AL	40	9009590063137	2 m
-	-	-	-	-	219	MF-AT-40X219/ AL	40	9009590063144	2 m
-	-	-	-	-	230	MF-AT-40X230/ AL	40	9009590007919	1 m
-	-	-	-	-	240	MF-AT-40X240/ AL	40	9009590007926	1 m
-	-	-	-	-	250	MF-AT-40X250/ AL	40	9009590007933	1 m
-	-	-	-	-	273	MF-AT-40X273/ AL	40	9009590084897	1 m
-	-	-	-	-	320	MF-AT-40X320/ AL	40	9009590007940	1 m
-	-	-	-	-	324	MF-AT-40X324/ AL	40	9009590084903	1 m
-	-	-	-	-	356	MF-AT-40X356/ AL	40	9009590007957	1 m

Sections. Precovered mineral wool with aluminium foil

50 mm					60 mm				
Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]
15	MF-AT-50X015/ AL	50	9009590084934	9 m	18	MF-AT-60X018/ AL	60	9009590085016	6 m
18	MF-AT-50X018/ AL	50	9009590084941	9 m	22	MF-AT-60X022/ AL	60	9009590085023	6 m
22	MF-AT-50X022/ AL	50	9009590084958	9 m	25	MF-AT-60X025/ AL	60	9009590085030	6 m
25	MF-AT-50X025/ AL	50	9009590084965	9 m	28	MF-AT-60X028/ AL	60	9009590057716	5 m
28	MF-AT-50X028/ AL	50	9009590084972	9 m	33	MF-AT-60X033/ AL	60	9009590085047	5 m

Sections. Precovered mineral wool with aluminium foil

50 mm					60 mm				
Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]
33	MF-AT-50X033/ AL	50	9009590084989	7 m	35	MF-AT-60X035/ AL	60	9009590057723	5 m
35	MF-AT-50X035/ AL	50	9009590057556	7 m	38	MF-AT-60X038/ AL	60	9009590085054	4 m
38	MF-AT-50X038/ AL	50	9009590084996	7 m	42	MF-AT-60X042/ AL	60	9009590057730	4 m
42	MF-AT-50X042/ AL	50	9009590057563	6 m	48	MF-AT-60X048/ AL	60	9009590057747	4 m
45	MF-AT-50X045/ AL	50	9009590008015	6 m	50	MF-AT-60X050/ AL	60	9009590008367	4 m
48	MF-AT-50X048/ AL	50	9009590057570	6 m	54	MF-AT-60X054/ AL	60	9009590057754	4 m
50	MF-AT-50X050/ AL	50	9009590099532	5 m	57	MF-AT-60X057/ AL	60	9009590057761	4 m
54	MF-AT-50X054/ AL	50	9009590057587	5 m	60	MF-AT-60X060/ AL	60	9009590057778	4 m
57	MF-AT-50X057/ AL	50	9009590057594	5 m	64	MF-AT-60X064/ AL	60	9009590057785	4 m
60	MF-AT-50X060/ AL	50	9009590057600	5 m	70	MF-AT-60X070/ AL	60	9009590057792	4 m
64	MF-AT-50X064/ AL	50	9009590057617	4 m	76	MF-AT-60X076/ AL	60	9009590057808	4 m
70	MF-AT-50X070/ AL	50	9009590057624	4 m	80	MF-AT-60X080/ AL	60	9009590008374	2 m
76	MF-AT-50X076/ AL	50	9009590057631	4 m	84	MF-AT-60X084/ AL	60	9009590008381	2 m
80	MF-AT-50X080/ AL	50	9009590008022	4 m	85	MF-AT-60X085/ AL	60	9009590085061	2 m
84	MF-AT-50X084/ AL	50	9009590008039	4 m	89	MF-AT-60X089/ AL	60	9009590057815	2 m
89	MF-AT-50X089/ AL	50	9009590057648	4 m	96	MF-AT-60X096/ AL	60	9009590008398	2 m
102	MF-AT-50X102/ AL	50	9009590057655	3 m	100	MF-AT-60X100/ AL	60	9009590008404	2 m
104	MF-AT-50X104/ AL	50	9009590008046	3 m	102	MF-AT-60X102/ AL	60	9009590057822	2 m
108	MF-AT-50X108/ AL	50	9009590057662	2 m	104	MF-AT-60X104/ AL	60	9009590008411	2 m
110	MF-AT-50X110/ AL	50	9009590008053	2 m	108	MF-AT-60X108/ AL	60	9009590057839	2 m
114	MF-AT-50X114/ AL	50	9009590057679	2 m	110	MF-AT-60X110/ AL	60	9009590008428	2 m
118	MF-AT-50X118/ AL	50	9009590008060	2 m	114	MF-AT-60X114/ AL	60	9009590057846	2 m
125	MF-AT-50X125/ AL	50	9009590085009	2 m	120	MF-AT-60X120/ AL	60	9009590008435	2 m
133	MF-AT-50X133/ AL	50	9009590057686	2 m	125	MF-AT-60X125/ AL	60	9009590085078	2 m
140	MF-AT-50X140/ AL	50	9009590057693	2 m	133	MF-AT-60X133/ AL	60	9009590057853	2 m
150	MF-AT-50X150/ AL	50	9009590008077	2 m	140	MF-AT-60X140/ AL	60	9009590057860	2 m
155	MF-AT-50X155/ AL	50	9009590008084	2 m	142	MF-AT-60X142/ AL	60	9009590008442	1 m

Sections. Precovered mineral wool with aluminium foil

50 mm					60 mm				
Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]
159	MF-AT-50X159/ AL	50	9009590057709	2 m	148	MF-AT-60X148/ AL	60	9009590008459	1 m
163	MF-AT-50X163/ AL	50	9009590008091	2 m	154	MF-AT-60X154/ AL	60	9009590008466	1 m
168	MF-AT-50X168/ AL	50	9009590008107	2 m	159	MF-AT-60X159/ AL	60	9009590057877	1 m
168	MF-AT-50X268/ AL	50	9009590008183	1 m	165	MF-AT-60X165/ AL	60	9009590008473	1 m
169	MF-AT-50X169/ AL	50	9009590063151	2 m	168	MF-AT-60X168/ AL	60	9009590008480	1 m
180	MF-AT-50X180/ AL	50	9009590063168	2 m	169	MF-AT-60X169/ AL	60	9009590063205	1 m
183	MF-AT-50X183/ AL	50	9009590008114	2 m	194	MF-AT-60X194/ AL	60	9009590008497	1 m
191	MF-AT-50X191/ AL	50	9009590008121	2 m	200	MF-AT-60X200/ AL	60	9009590063229	1 m
194	MF-AT-50X194/ AL	50	9009590008138	2 m	214	MF-AT-60X214/ AL	60	9009590089830	1 m
200	MF-AT-50X200/ AL	50	9009590063175	2 m	219	MF-AT-60X219/ AL	60	9009590063236	1 m
205	MF-AT-50X205/ AL	50	9009590008145	2 m	224	MF-AT-60X224/ AL	60	9009590008503	1 m
219	MF-AT-50X219/ AL	50	9009590063182	2 m	250	MF-AT-60X250/ AL	60	9009590008510	1 m
239	MF-AT-50X239/ AL	50	9009590008152	1 m	254	MF-AT-60X254/ AL	60	9009590089847	1 m
250	MF-AT-50X250/ AL	50	9009590008169	1 m	273	MF-AT-60X273/ AL	60	9009590008527	1 m
259	MF-AT-50X259/ AL	50	9009590008176	1 m	280	MF-AT-60X280/ AL	60	9009590008534	1 m
273	MF-AT-50X273/ AL	50	9009590008190	1 m	290	MF-AT-60X290/ AL	60	9009590008541	1 m
280	MF-AT-50X280/ AL	50	9009590008206	1 m	310	MF-AT-60X310/ AL	60	9009590008558	1 m
293	MF-AT-50X293/ AL	50	9009590008213	1 m	325	MF-AT-60X325/ AL	60	9009590008565	1 m
300	MF-AT-50X300/ AL	50	9009590008220	1 m	339	MF-AT-60X339/ AL	60	9009590008572	1 m
310	MF-AT-50X310/ AL	50	9009590008237	1 m	-	-	-	-	-
313	MF-AT-50X313/ AL	50	9009590008244	1 m	-	-	-	-	-
319	MF-AT-50X319/ AL	50	9009590008251	1 m	-	-	-	-	-
325	MF-AT-50X325/ AL	50	9009590008268	1 m	-	-	-	-	-
330	MF-AT-50X330/ AL	50	9009590008275	1 m	-	-	-	-	-
350	MF-AT-50X350/ AL	50	9009590008282	1 m	-	-	-	-	-

Sections. Precovered mineral wool with aluminium foil

70 mm					80 mm				
Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]
33	MF-AT-70X033/ AL	70	9009590064462	4 m	28	MF-AT-80X028/ AL	80	9009590064516	4 m
42	MF-AT-70X042/ AL	70	9009590054272	4 m	35	MF-AT-80X035/ AL	80	9009590064523	4 m
48	MF-AT-70X048/ AL	70	9009590064479	4 m	42	MF-AT-80X042/ AL	80	9009590064530	3 m
54	MF-AT-70X054/ AL	70	9009590099648	3 m	48	MF-AT-80X048/ AL	80	9009590064547	2 m
57	MF-AT-70X057/ AL	70	9009590064486	3 m	54	MF-AT-80X054/ AL	80	9009590064554	2 m
60	MF-AT-70X060/ AL	70	9009590064493	3 m	60	MF-AT-80X060/ AL	80	9009590064561	2 m
64	MF-AT-70X064/ AL	70	9009590057884	3 m	64	MF-AT-80X064/ AL	80	9009590090720	2 m
70	MF-AT-70X070/ AL	70	9009590057891	2 m	76	MF-AT-80X076/ AL	80	9009590057969	2 m
76	MF-AT-70X076/ AL	70	9009590057907	2 m	84	MF-AT-80X084/ AL	80	9009590008770	2 m
89	MF-AT-70X089/ AL	70	9009590057914	2 m	89	MF-AT-80X089/ AL	80	9009590057976	2 m
92	MF-AT-70X092/ AL	70	9009590008626	2 m	102	MF-AT-80X102/ AL	80	9009590008787	1 m
102	MF-AT-70X102/ AL	70	9009590057921	2 m	104	MF-AT-80X104/ AL	80	9009590008794	1 m
104	MF-AT-70X104/ AL	70	9009590008633	2 m	108	MF-AT-80X108/ AL	80	9009590057983	1 m
108	MF-AT-70X108/ AL	70	9009590057938	2 m	114	MF-AT-80X114/ AL	80	9009590008800	1 m
114	MF-AT-70X114/ AL	70	9009590057945	2 m	128	MF-AT-80X128/ AL	80	9009590008817	1 m
125	MF-AT-70X125/ AL	70	9009590008640	2 m	130	MF-AT-80X130/ AL	80	9009590008824	1 m
133	MF-AT-70X133/ AL	70	9009590057952	2 m	133	MF-AT-80X133/ AL	80	9009590008831	1 m
140	MF-AT-70X140/ AL	70	9009590008657	1 m	140	MF-AT-80X140/ AL	80	9009590008848	1 m
155	MF-AT-70X155/ AL	70	9009590008664	1 m	153	MF-AT-80X153/ AL	80	9009590008855	1 m
159	MF-AT-70X159/ AL	70	9009590008671	1 m	155	MF-AT-80X155/ AL	80	9009590008862	1 m
168	MF-AT-70X168/ AL	70	9009590008688	1 m	159	MF-AT-80X159/ AL	80	9009590008879	1 m
169	MF-AT-70X169/ AL	70	9009590063243	1 m	168	MF-AT-80X168/ AL	80	9009590008886	1 m
194	MF-AT-70X194/ AL	70	9009590008695	1 m	169	MF-AT-80X169/ AL	80	9009590063267	1 m
200	MF-AT-70X200/ AL	70	9009590008701	1 m	178	MF-AT-80X178/ AL	80	9009590008893	1 m
219	MF-AT-70X219/ AL	70	9009590008718	1 m	180	MF-AT-80X180/ AL	80	9009590008909	1 m
224	MF-AT-70X224/ AL	70	9009590064509	1 m	191	MF-AT-80X191/ AL	80	9009590008916	1 m
250	MF-AT-70X250/ AL	70	9009590008725	1 m	194	MF-AT-80X194/ AL	80	9009590008923	1 m

Sections. Precovered mineral wool with aluminium foil

70 mm					80 mm				
Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]
280	MF-AT-70X280/ AL	70	9009590008732	1 m	203	MF-AT-80X203/ AL	80	9009590008930	1 m
310	MF-AT-70X310/ AL	70	9009590008749	1 m	205	MF-AT-80X205/ AL	80	9009590008947	1 m
-	-	-	-	-	219	MF-AT-80X219/ AL	80	9009590008954	1 m
-	-	-	-	-	253	MF-AT-80X253/ AL	80	9009590008961	1 m
-	-	-	-	-	255	MF-AT-80X255/ AL	80	9009590008978	1 m
-	-	-	-	-	273	MF-AT-80X273/ AL	80	9009590008985	1 m
-	-	-	-	-	303	MF-AT-80X303/ AL	80	9009590008992	1 m
-	-	-	-	-	305	MF-AT-80X305/ AL	80	9009590009005	1 m
-	-	-	-	-	308	MF-AT-80X308/ AL	80	9009590009012	1 m
-	-	-	-	-	323	MF-AT-80X323/ AL	80	9009590009029	1 m

Sections. Precovered mineral wool with aluminium foil

90 mm					100 mm				
Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]
60	MF-AT-90X060/ AL	90	90095900064578	1 m	28	MF-AT-100X028AL	100	9009590009111	1 m
76	MF-AT-90X076/ AL	90	90095900097729	1 m	48	MF-AT-100X048AL	100	9009590009128	1 m
89	MF-AT-90X089/ AL	90	9009590009043	1 m	54	MF-AT-100X054AL	100	9009590009135	1 m
108	MF-AT-90X108/ AL	90	9009590009050	1 m	60	MF-AT-100X060AL	100	90095900055897	1 m
133	MF-AT-90X133/ AL	90	9009590009067	1 m	70	MF-AT-100X070AL	100	9009590009142	1 m
159	MF-AT-90X159/ AL	90	9009590009074	1 m	76	MF-AT-100X076AL	100	9009590009159	1 m
169	MF-AT-90X169/ AL	90	9009590009081	1 m	84	MF-AT-100X084AL	100	9009590009166	1 m
255	MF-AT-90X255/ AL	90	9009590009098	1 m	89	MF-AT-100X089AL	100	9009590009173	1 m
-	-	-	-	-	100	MF-AT-100X100AL	100	9009590009180	1 m
-	-	-	-	-	102	MF-AT-100X102AL	100	9009590009197	1 m
-	-	-	-	-	104	MF-AT-100X104AL	100	9009590009203	1 m
-	-	-	-	-	108	MF-AT-100X108AL	100	9009590009210	1 m
-	-	-	-	-	114	MF-AT-100X114AL	100	9009590009227	1 m
-	-	-	-	-	124	MF-AT-100X124AL	100	9009590009234	1 m

Sections. Precovered mineral wool with aluminium foil

90 mm					100 mm				
Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]
-	-	-	-	-	133	MF-AT-100X133AL	100	9009590009241	1 m
-	-	-	-	-	140	MF-AT-100X140AL	100	9009590009258	1 m
-	-	-	-	-	159	MF-AT-100X159AL	100	9009590009265	1 m
-	-	-	-	-	168	MF-AT-100X168AL	100	9009590009272	1 m
-	-	-	-	-	180	MF-AT-100X180AL	100	9009590098566	1 m
-	-	-	-	-	194	MF-AT-100X194AL	100	9009590009289	1 m
-	-	-	-	-	205	MF-AT-100X205AL	100	9009590009296	1 m
-	-	-	-	-	219	MF-AT-100X219AL	100	9009590009302	1 m
-	-	-	-	-	255	MF-AT-100X255AL	100	9009590009319	1 m
-	-	-	-	-	273	MF-AT-100X273AL	100	9009590009326	1 m
-	-	-	-	-	324	MF-AT-100X324AL	100	9009590009333	1 m
-	-	-	-	-	355	MF-AT-100X355AL	100	9009590009340	1 m

ADVANCED THERMAL
INSULATION.

Glass-Wool Lamella Mats

- // Premium glass wool insulation
- // RAL-certified quality
- // Mold and mildew resistant
- // Long-lasting insulation protection
- // Lightweight

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TECHNICAL DATA - GLASS-WOOL LAMELLA MATS

Brief description	Lamella mats made of high-quality glass wool laminated on a tear-resistant, scrim-reinforced pure aluminium foil, glass wool with vertical fibre orientation.
Additional material information	In rolls, 120 mm thickness stacked on pallets. Width: 500 mm or 1000 mm (600 mm and 1200 mm available on request)
Installation	Warm and hot water pipes, tanks, boilers, ventilation and air conditioning ducts

Property	Value / Assessment				Standard / Test method
Temperature range					
Service temperature ¹	Range		Max. °C		EN 14706
	Aluminium laminated		260		
Thermal conductivity					
Declared thermal conductivity	Øm	+10 °C	+40 °C	+50 °C	EN ISO 13787, EN ISO 8497
	λd ≤ [W/(m·K)]	36	40	43	
Fire Performance and Approvals					
Reaction to fire	A2-s1,d0				EN 13501-1

¹ max. 80 °C aluminium foil

Roll – standard precovered. mineral wool with aluminium foil, Lamella

Item	Thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
MF-ATG-100-05	100	0,5	3	9009590018007	3 m ²
MF-ATG-100-06	100	0,6	3	9009590054821	3.6 m ²
MF-ATG-100-10	100	1	3	9009590017987	3 m ²
MF-ATG-100-12	100	1,2	3	9009590054814	3.6 m ²
MF-ATG-120-06	120	0,6	2,4	9009590085603	2.88 m ²
MF-ATG-120-10	120	1	2,4	9009590068439	2.4 m ²
MF-ATG-20-05/AL	20	0,5	10	9009590017772	10 m ²
MF-ATG-20-06/AL	20	0,6	10	9009590054678	12 m ²
MF-ATG-20-10/AL	20	1	10	9009590017765	10 m ²
MF-ATG-20-12/AL	20	1,2	10	9009590054685	12 m ²
MF-ATG-25-05/AL	25	0,5	10	9009590017796	10 m ²
MF-ATG-25-10/AL	25	1	10	9009590017789	10 m ²
MF-ATG-25-12/AL	25	1,2	10	9009590085573	12 m ²
MF-ATG-30-05/AL	30	0,5	8	9009590017819	8 m ²
MF-ATG-30-06/AL	30	0,6	8	9009590054708	9.6 m ²
MF-ATG-30-10/AL	30	1	8	9009590017802	8 m ²
MF-ATG-30-12/AL	30	1,2	8	9009590054692	9.6 m ²
MF-ATG-40-05/AL	40	0,5	6	9009590017833	6 m ²
MF-ATG-40-06/AL	40	0,6	6	9009590054746	7.2 m ²
MF-ATG-40-10/AL	40	1	6	9009590017826	6 m ²
MF-ATG-40-12/AL	40	1,2	6	9009590054739	7.2 m ²
MF-ATG-50-05/AL	50	0,5	5	9009590017857	5 m ²
MF-ATG-50-06/AL	50	0,6	5	9009590054722	6 m ²
MF-ATG-50-10/AL	50	1	5	9009590017840	5 m ²
MF-ATG-50-12/AL	50	1,2	5	9009590054715	6 m ²
MF-ATG-60-05/AL	60	0,5	4	9009590017895	4 m ²
MF-ATG-60-06/AL	60	0,6	4	9009590054760	4.8 m ²
MF-ATG-60-10/AL	60	1	4	9009590017871	4 m ²
MF-ATG-60-12/AL	60	1,2	4	9009590054753	4.8 m ²
MF-ATG-70-05/AL	70	0,5	3,5	9009590017932	3.5 m ²
MF-ATG-70-06/AL	70	0,6	3,5	9009590054784	4.2 m ²
MF-ATG-70-10/AL	70	1	3,5	9009590017918	3.5 m ²
MF-ATG-70-12/AL	70	1,2	3,5	9009590054777	4.2 m ²
MF-ATG-80-05/AL	80	0,5	3,5	9009590017963	3.5 m ²
MF-ATG-80-06/AL	80	0,6	3,5	9009590054807	4.2 m ²
MF-ATG-80-10/AL	80	1	3,5	9009590017956	3.5 m ²
MF-ATG-80-12/AL	80	1,2	3,5	9009590054791	4.2 m ²

Roll – standard precovered. mineral wool with aluminium foil, Lamella, on pallets

Item	Thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
MF-ATG-100-10P	100	1	3	9009590109217	30 m ²
MF-ATG-100-12P	100	1,2	3	9009590089700	28.8 m ²

Roll – standard precovered. mineral wool with aluminium foil, Lamella, on pallets

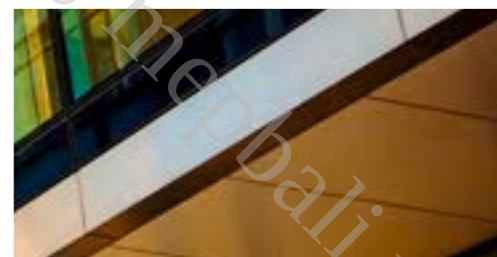
Item	Thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
MF-ATG-20-12P	20	1,2	10	9009590089625	96 m ²
MF-ATG-25-10P				9009590120588	100 m ²
MF-ATG-25-12P	25	1,2	10	9009590089632	96 m ²
MF-ATG-30-06P	30	0,6	8	9009590108555	76.8 m ²
MF-ATG-30-10P	30	1	8	9009590109194	80 m ²
MF-ATG-30-12P	30	1,2	8	9009590089649	76.8 m ²
MF-ATG-40-10P	40	1	6	9009590109200	60 m ²
MF-ATG-40-12P	40	1,2	6	9009590089656	57.6 m ²
MF-ATG-50-10P	50	1	5	9009590109385	50 m ²
MF-ATG-50-12P	50	1,2	5	9009590089663	48 m ²
MF-ATG-60-12P	60	1,2	4	9009590089670	38.4 m ²
MF-ATG-70-12P	70	1,2	3,5	9009590089687	33.6 m ²
MF-ATG-80-12P	80	1,2	3,5	9009590089694	33.6 m ²

ADVANCED THERMAL
INSULATION.

Stone-Wool Lamella Mats

- // High-quality stone wool insulation
- // AS quality production standards
- // Reinforced aluminum foil
- // Easy to apply

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TECHNICAL DATA - STONE-WOOL LAMELLA MATS

Brief description	Stone wool lamella mats with a tear-resistant, grid-reinforced pure aluminium foil, stone wool with upright fibre direction. Produced in AS quality according to AGI Q132, highly water-repellent (hydrophobic according to AGI Q132/DIN 13472) and odourless.
Installation	Warm and hot water pipes, tanks, boilers, ventilation and air conditioning ducts
Remarks	Packaging: Rolls

Property	Value / Assessment			Standard / Test method
Temperature range				
Service temperature ¹	Range	Max. °C		EN 14707
	Aluminium laminated	300		
Thermal conductivity				
Declared thermal conductivity	θ _m	+50 °C	+100 °C	EN ISO 13787, EN ISO 8497
	λ _d ≤ [W/(m·K)]	44	54	
Fire Performance and Approvals				
Reaction to fire	A2-s1,d0			EN 13501-1
Fire performance				
Melting point [°C]	> 1000 °C			

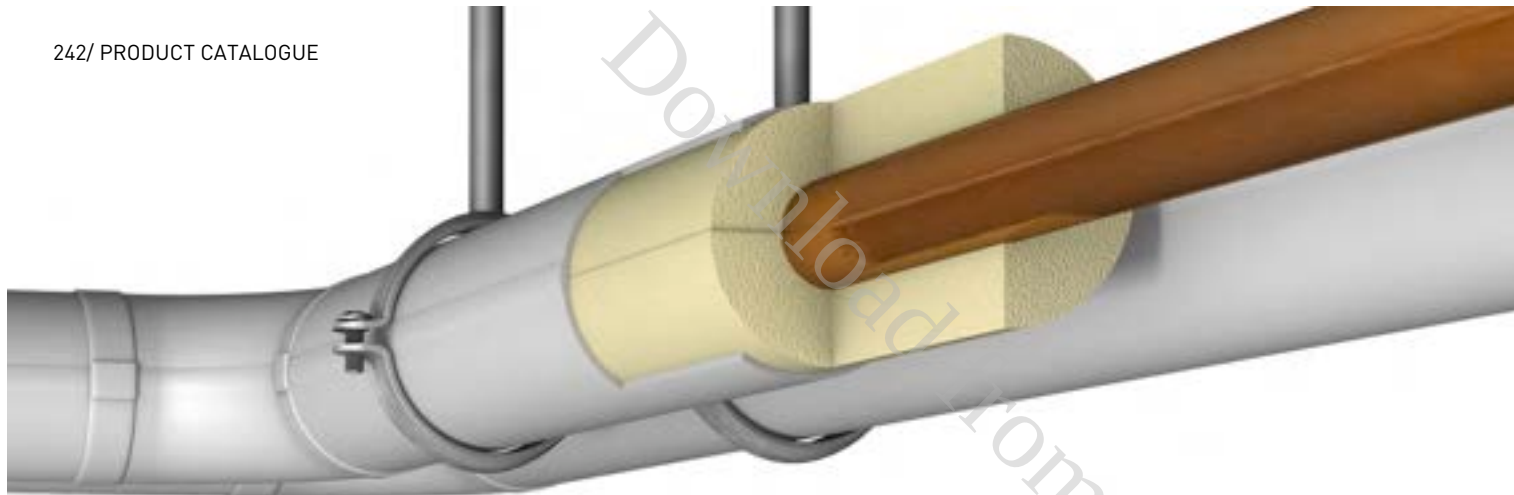
¹max. 80 °C aluminium foil

Roll - standard. Precovered mineral wool with aluminium foil

Item	Thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
MF-ATS-100-10	100	1	2,5	9009590018090	2.5 m ²
MF-ATS-20-05/AL	20	0,5	10,0	9009590018021	10 m ²
MF-ATS-30-05/AL	30	0,5	8,0	9009590018038	8 m ²
MF-ATS-40-05/AL	40	0,5	6,0	9009590018045	6 m ²
MF-ATS-50-05/AL	50	0,5	5,0	9009590018052	5 m ²
MF-ATS-60-10/AL	60	1	4,0	9009590018069	4 m ²
MF-ATS-80-10/AL	80	1	3,0	9009590018083	3 m ²

Roll - standard. Mineral wool with wire mesh

Item	Thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
MF-ATS-100-05/W	100	0,5	2,5	9009590018182	1.25 m ²
MF-ATS-120-05/W	120	0,5	2,0	9009590018199	1 m ²
MF-ATS-30-0,5/W	30	0,5	6,0	9009590018106	3 m ²
MF-ATS-40-0,5/W	40	0,5	5,0	9009590018113	2.5 m ²
MF-ATS-50-0,5/W	50	0,5	4,0	9009590018120	2 m ²
MF-ATS-60-0,5/W	60	0,5	3,5	9009590018137	1.75 m ²
MF-ATS-70-0,5/W	70	0,5	3,5	9009590018151	1.75 m ²
MF-ATS-80-0,5/W	80	0,5	3,0	9009590018168	1.5 m ²
MF-ATS-90-0,5/W	90	0,5	2,5	9009590018175	1.25 m ²



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ArmaLok

The pre-covered light grey insulation system for visible heating and plumbing applications

- // Pre-formed bends adjustable to several pipe dimensions
- // Time-saving pipe closure with self-adhesive seal
- // Robust and washable surface
- // Good thermal efficiency

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TECHNICAL DATA - ARMALOK

Brief description	PUR-insulation covered with PVC cladding, with self-seal locks, for visible areas.
Product colour range	Light grey
Applications	For installation/protection of pipes (heating systems and domestic hot water pipes), fittings and other elements, for heating and plumbing installations.

Property	Value / Assessment						Standard / Test method
Temperature range							
Service temperature ¹	Max. °C						
	110						
Thermal conductivity							
Declared thermal conductivity	Øm	10	20	30	40	50	EN ISO 8497
	$\lambda d \leq [W/(m \cdot K)]$	0,034	0,035	0,037	0,038	0,039	
	Range	ArmaLok 50					
Declared thermal conductivity	Øm	10	20	30	40	50	EN ISO 8497
	$\lambda d \leq [W/(m \cdot K)]$	0,032	0,034	0,035	0,036	0,038	
	Range	ArmaLok 100					
Fire Performance and Approvals							
Reaction to fire	all sections and elbows: E(L)						EN 13501-1, EN ISO 11925-2
Other technical features							
Shelf life	Tapes, sections and elbows, self-adhesive: 1 year						
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature [0 °C – 35 °C].						

¹Minimum service temperature: as usual in heating and plumbing systems.

Sections. GEG Norm 50% & 100%

Pipe Ø [mm]	Item	Description	Insulation thickness [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Description	Insulation thickness [mm]	EAN	Content [metric]
15	AL-15X20-50	GEG 50%	20	7612207156737	70 m	15	AL-15X20-100	GEG 100%	20	7612207156935	70 m
18	AL-18X20-50	GEG 50%	20	7612207156744	70 m	18	AL-18X20-100	GEG 100%	20	7612207156959	70 m
22	AL-22X20-50	GEG 50%	20	7612207156751	60 m	18	AL-18X30-100	GEG 100%	30	7612207157031	40 m
28	AL-28X20-50	GEG 50%	20	7612207156768	48 m	22	AL-22X20-100	GEG 100%	20	7612207156973	60 m
35	AL-35X20-50	GEG 50%	20	7612207156775	40 m	22	AL-22X30-100	GEG 100%	30	7612207157048	30 m
42	AL-42X25-50	GEG 50%	25	7612207156782	24 m	28	AL-28X20-100 (Fe)	GEG 100%	20	7612207156997	48 m
42	AL-42X30-50	GEG 50%	30	7612207229714	20 m	28	AL-28X30-100	GEG 100%	30	7612207157062	28 m
48	AL-48X25-50	GEG 50%	25	7612207156799	20 m	28	AL-28X40-100	GEG 100%	40	7612207157178	20 m
57	AL-57X30-50	GEG 50%	30	7612207156812	15 m	35	AL-35X30-100	GEG 100%	30	7612207157086	24 m
60	AL-60X30-50	GEG 50%	30	7612207156829	15 m	35	AL-35X40-100	GEG 100%	40	7612207157185	15 m
76	AL-76X30-50	without requirement according to GEG	30	7612207350173	12 m	42	AL-42X30-100	GEG 50%	30	7612207157109	20 m
76	AL-76X40-50	GEG 50%	40	7612207350197	9 m	42	AL-42X40-100	GEG 100%	40	7612207157208	15 m
89	AL-89X30-50	without requirement according to GEG	30	7612207350180	9 m	48	AL-48X30-100	GEG 50%	30	7612207157123	18 m
-	-	-	-	-	-	48	AL-48X40-100	GEG 50%	40	7612207157222	12 m
-	-	-	-	-	-	57	AL-57X50-100	GEG 100%	50	7612207157277	7 m
-	-	-	-	-	-	62	AL-62X53-100	GEG 100%	53	7612207405330	7 m

Bend. GEG Norm 50% & 100%

Pipe Ø [mm]	Item	Description	Insulation thickness [mm]	EAN	Content [metric]	Content [quantity]
15	AL-ABO-1520	GEG 100%	20	7612207156355		20 piece
18	AL-ABO-1820	GEG 100%	20	7612207156362		20 piece
18	AL-ABO-1830	GEG 100%	30	7612207156423		24 piece
22	AL-ABO-2220	GEG 100%	20	7612207156379		20 piece
22	AL-ABO-2230	GEG 100%	30	7612207156430		24 piece
28	AL-ABO-2820	GEG 100%	20	7612207156386		20 piece
28	AL-ABO-2830	GEG 100%	30	7612207156447		20 piece
28	AL-ABO-2840	GEG 100%	40	7612207156522		20 piece
35	AL-ABO-3520	GEG 100%	20	7612207156393		20 piece
35	AL-ABO-3530	GEG 100%	30	7612207156454		12 piece
35	AL-ABO-3540	GEG 100%	40	7612207156539		12 piece
42	AL-ABO-4225	GEG 50%	25	7612207156409		20 piece

Bend. GEG Norm 50% & 100%

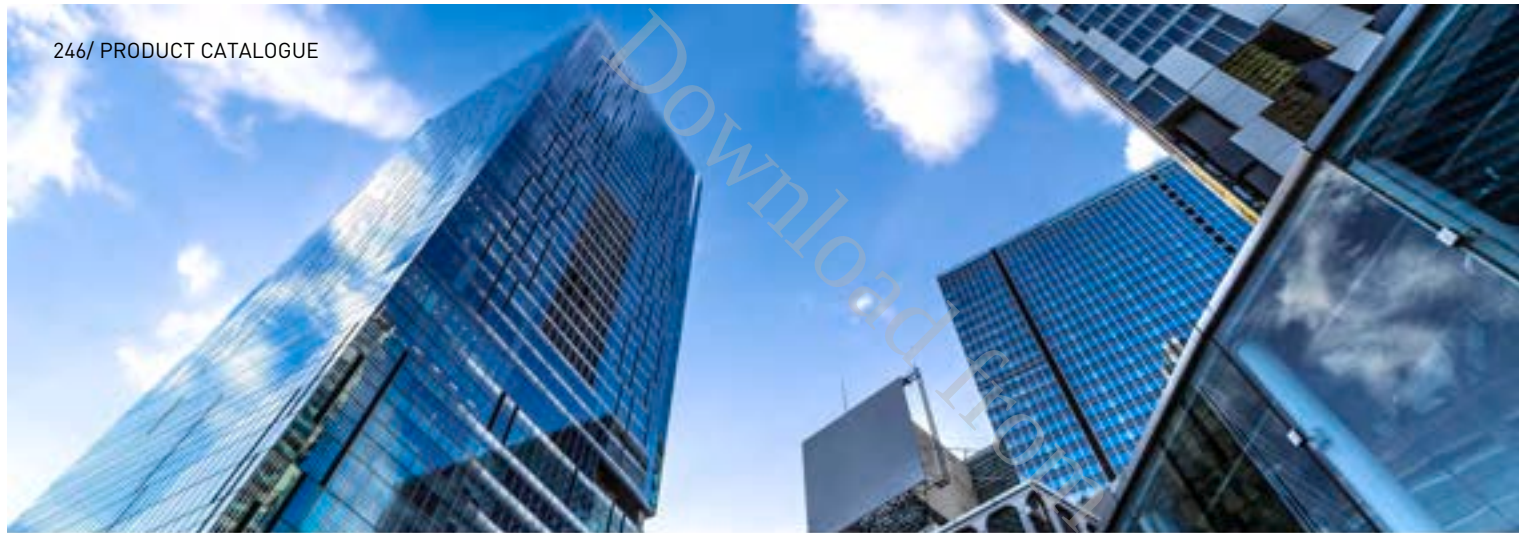
Pipe Ø [mm]	Item	Description	Insulation thickness [mm]	EAN	Content [metric]	Content [quantity]
42	AL-ABO-4230	GEG 50%	30	7612207156461		20 piece
42	AL-ABO-4240	GEG 100%	40	7612207156546		12 piece
48	AL-ABO-4825	GEG 50%	25	7612207156416		20 piece
48	AL-ABO-4830	GEG 50%	30	7612207156478		20 piece
48	AL-ABO-4840	GEG 50%	40	7612207156553		11 piece
57	AL-ABO-5730	GEG 50%	30	7612207156485		10 piece
57	AL-ABO-5750	GEG 50%	50	7612207156607		6 piece
60	AL-ABO-6030	GEG 50%	30	7612207156492		10 piece
60	AL-ABO-6050	GEG 100%	50	7612207156614		6 piece
76	AL-ABO-7630	without requirement according to GEG	30	7612207156508		8 piece
89	AL-ABO-8930	without requirement according to GEG	30	7612207156515		8 piece

Accessories. Tape

Item	Description	Thickness [mm]	Width [mm]	Length [m]	Content [quantity]
AL-ASKB-40	Width: 38mm, Length: 25m, 0,15 thickness: 0,15mm		38	25	16 piece

Accessories. Endcapping

Item	Description	EAN	Content [metric]
AL-AEMBA-18B	Color: Aluminium with 2 fixing grooves, width: 18mm, length 5m	7612207156652	50 m
AL-AEMBA-28B	Color: Aluminium with 2 fixing grooves, width: 28mm, length 5m	7612207156669	50 m
AL-AEMBA-38B	Color: Aluminium with 2 fixing grooves, width: 38mm, length 5m	7612207156676	50 m
AL-AEMBG-18B	Color: Light grey with 2 fixing grooves, width: 18mm, length 5m	7612207156683	50 m
AL-AEMBG-28B	Color: Light grey with 2 fixing grooves, width: 28mm, length 5m	7612207156690	50 m
AL-AEMBG-38B	Color: Light grey with 2 fixing grooves, width: 38mm, length 5m	7612207156706	50 m



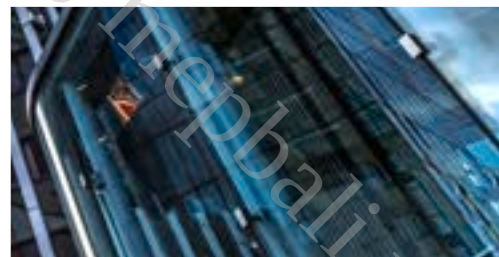
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Arma-Chek Wrap

Fast and flexible covering solution

- // Quick & easy installation
- // High mechanical resistance
- // Self-welding covering

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Arma-Chek Wrap

✓
QUICK AND
EASY TO INSTALL

✓
HIGH MECHANICAL
RESISTANCE

✓
SPACE-SAVING

✓
WEATHER-RESISTANT –
SUITABLE EVEN FOR OUTDOOR
APPLICATIONS

✓
SUSTAINABLE

Claddings have come a long way from rigid jackets to flexible coverings. With Arma-Chek Wrap, protecting technical insulation from mechanical impact and weathering has now become even easier and faster.

// QUICK AND EASY TO INSTALL

It could not be any easier:

Arma-Chek Wrap is simply wound



around the insulated pipe with an overlap of 20 mm. The self-welding material

bonds to the surface of the insulation without any further action. The best part: It does not vulcanize immediately, but the installation can still be adjusted within 10 to 20 minutes after application. A knife or scissors is all you need for installation.

// HIGH MECHANICAL RESISTANCE

Arma-Chek Wrap offers the perfect combination of high flexibility and mechanical strength. Unlike rigid jacketing systems, the flexible material recovers from mechanical impact without any dents, which could lead to a compression of the insulation underneath and condensation on the pipe.

// SPACE-SAVING

The super-flexible covering allows easy application even in the tightest spaces and under difficult building situations. What's more: As the black covering material is highly absorptive, thinner insulation thicknesses can be specified to prevent condensation.

// WEATHER-RESISTANT – SUITABLE EVEN FOR OUTDOOR APPLICATIONS

Arma-Chek Wrap is UV- and weather-resistant. It is rainproof and resistant to the majority of chemicals. Whether protecting insulated pipes, ducts, elbows, flanges or T-pieces, Arma-Chek Wrap is versatile and can be installed on various technical insulation materials. It is the ideal solution when a quick fix is needed.

Sustainable solution:

Arma-Chek Wrap is 100 percent recyclable and free of halogens, silicone and solvents.



TECHNICAL DATA - ARMA-CHEK WRAP

Brief description	Arma-Chek Wrap is a new self-welding material utilized for cladding of technical insulation on any building equipment and industrial applications.
Material type	High performance polymer based on polyisobutylene.
Additional material information	Self-welding. Provides very good UV stability and weather resistance in all environments.
Product colour range	Black / Anthracite
Applications	Protection of pipes, ducts, valves and vessels of refrigeration and air conditioning equipment, clean room environments, food industries etc.
Installation	Arma-Chek Wrap is a self-welding cladding material that does not require any additional adhesive or tape for installation. The material is wrapped around the insulated surface and overlapping the edges. Arma-Chek Wrap can be applied on various insulation materials like fibrous (e.g. mineral wool, stone wool..) and cellular (flexible elastomeric foams..) insulation materials. The self-welding properties of the material allow it to stick to itself, creating a secure and tight seal. Suitable for the use of underground and underwater applications.

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature	Min. °C	Max. °C	EN 14706, EN 14707, EN 14304
	-40	100	
Fire Performance and Approvals			
Reaction to fire	Euroclass E		EN 13501-1, EN 13823, EN ISO 11925-2
Resistance to water vapour			
Water vapour diffusion resistance factor	water vapour diffusion tight.		EN 12086, EN 13469
Water vapour transmission rate (SD value)			DIN EN 1931.
Physical attributes			
Mass per unit area	1,5 (kg/m2) +/- 0,2 kg		
Density	1,5 (g/cm3) +/- 0,2 g		EN ISO 1183
Dimensions and tolerances	width: 70, 250, 500, 750, 1050 mm length: 10 m +/- 0,30 m thickness: 1 mm +/- 0,1 mm		EN 822, EN 823
Weather and UV resistance			
UV resistance	Very high - Approved for outdoor application		ISO 4982
Health and environment			
Green building assessment	Meets the sustainable construction requirements for LEED v4.1, BREEAM international and DGNB QS4 Platin and BNB QN5.		
Additional features	SCCP, MCCP, LCCP-free		
Other technical features			
Application conditions	Between 0°C and +40°C.		
Disposal and recycling	100% recyclable.		
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 40 °C).		

Arma-Chek Wrap. Black

Item	Thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]	Content [quantity]
ACH-WP1050	1,05	1.050	10	7612207534191	10.5 m ²	1 roll
ACH-WP250	1,05	250	10	7612207534207	5 m ²	2 roll
ACH-WP500	1,05	500	10	7612207534184	5 m ²	1 roll
ACH-WP70	1,05	70	10	7612207534221	4.9 m ²	7 roll
ACH-WP750	1,05	750	10	7612207534214	7.5 m ²	1 roll
Other information						
Thickness tolerance	+- 5%					
Remarks	Primary content: m ² /roll					

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Arma-Chek Silver

The brilliant precovered ArmaFlex
insulation designed for fast installation,
durability and easy cleaning

- // 2-in-1 precovered system, saves installation time
- // Easy to clean aesthetic surface in metallic look
- // Strong and resistant surface
- // Good chemical resistance

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INSTALL IT. SAFEGUARD YOUR EQUIPMENT.

Arma-Chek Silver

INSULATION AND CLADDING IN ONE PRODUCT



Arma-Chek Silver is based on high performance AF/ArmaFlex insulation combined with a UV resistant metal finishing for aesthetic indoor and outdoor installations.

The product saves installation time with the pre-covered System compared with traditional cladding. In addition, the self-adhesive tubes are with tangential cut for improved adhesion security.

Watch the video under
<http://youtu.be/x0nHyDRcEzo>
and see the difference!

// Pre-formed Parts

Specially designed Arma-Chek Silver elbows and T-pieces offer you additional installation time savings. The pre-formed parts match the ArmaFlex tubes perfectly and complete the system.

Together with the prefabricated AF/ArmaFlex elbows and Tpieces thus fabrication and installation times can be reduced even further.

// UV-Resistance

The UV-resistance of Arma-Chek Silver is constantly tested with Weather-O-Meter equipment according to ISO 4892. The samples are exposed to simulated weather for at least 15000 hours, which equals estimated 15 years of outdoor application in Central Europe.

// Surface Pressure Resistance

Unlike traditional metal cladding, Arma-Chek Silver recovers itself to original shape after pressure is exerted on its surface.

This property prevents lasting dents and ensures a durable installation.



Arma-Chek Silver in the world's largest lyocell plant

LENZING, AUSTRIA

The Lenzing Group's new lyocell fibre plant is recordbreaking: in just 24 months the most modern fibre production facilities in the world were constructed at the company headquarters.



// Challenge

Part of the new patented TENCEL® line is an innovative air-handling concept. The wet-spinning process results in very high temperatures and high humidity in the production areas. These conditions are very different to those outdoors where temperatures range from -16 °C in winter to +35 °C in summer. So it is essential that the air-handling equipment is insulated efficiently. The product installed also had to be UV-resistant and easy to clean. Furthermore, the schedule for insulating the extensive pipe- and ductwork was very tight.

// Solution

In these ambient conditions a closed-cell insulation material was the only option for the project management

of Lenzing AG. Together with the insulation company Knierzinger the optimal solution for the complex requirements was found in Arma-Chek Silver. The product not only provides the pipes with reliable protection against condensation – the tough, covered insulation material is also UV-resistant and very easy to clean. Unlike traditional insulation materials and coverings, Arma-Chek Silver can be installed in one work step. The pre-covered elastomeric insulation material was specified for insulating the entire pipe- and ductwork of the air-handling system. All in all 10,455 m² of Arma-Chek Silver continuous sheets in insulation thicknesses of 19, 25 and 32 mm were installed.



The insulation contractor:

„Especially in production areas where space is at a premium, Arma-Chek Silver is an ideal solution. When installed professionally, the pre-covered, closed-cell insulation material ensures reliable condensation control even where there is a high temperature difference and prevents energy losses. Using the 2-in-1 product also allowed us to save a great deal of time – a huge benefit when you're on such a tight schedule. And the result looks really good, too.“

TECHNICAL DATA - ARMA-CHEK SILVER

Brief description	Arma-Chek Silver is a covering system with a double layer laminate of aluminium, coated with a special UV protection and a PVC backing. Enclosing an Armaflex substrate, the Arma-Chek Silver jacketing is highly puncture and tear resistant as well as flame retardant. Arma-Chek Silver can be used for insulation and protection of HVAC and refrigeration systems inside or outside.
Material type	Highly flexible, closed-cell elastomeric foam material based on synthetic rubber. Covering: double layer of aluminium laminate, coated with a special UV protection and a PVC backing.
Product colour range	Silver (Covering)
Special features	UV resistance testing regarding of these materials showed excellent results. When used on outdoor applications, the materials showed very good durability even under UV exposure. However, due to the unpredictable nature of outdoor conditions in the whole variety of thinkable installations, there might be occasional weathering influences on the consistence of the material, which cannot be tested in advance. Therefore, installations in extreme environments (regions of extreme weather conditions like high mountains etc.) cannot be recommended. In case of doubt, please contact our Customer Service.
Product range	Arma-Chek Silver is available in a range of pre-insulated tubes & sheets, as well as single covering including pre-insulated bends and t-pieces.
Applications	Insulation and protection of pipes, ducts, valves and vessels of refrigeration and air conditioning equipment, clean room environments, food industries etc.
Installation	The ArmaFlex and ArmaClad Arma-Chek installation manuals should be consulted before assembly. We offer special installation courses for the application of ArmaClad Arma-Chek.
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 (Armaflex substrate)

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature ^{1,2}	Min. °C	Max. °C	EN 14304, EN 14706, EN 14707
	-50	110	
	Remarks	+85 °C if sheet or tape is glued to the object with its whole surface	
Thermal conductivity			
Remarks	Depends on ArmaFlex substrate.		EN ISO 13787, EN 12667, EN ISO 8497
Fire Performance and Approvals			
Reaction to fire	Arma-Chek Silver (AF) tubes D(L)-s3,d0 Arma-Chek Silver (AF) sheets 13 - 25 mm D-s3,d0 Arma-Chek Silver (AF) sheets 32 - 50 mm D-s3,d0 Arma-Chek Silver (ACE) tubes and sheets E		EN 13823, EN ISO 11925-2
Resistance to water vapour			
Water vapour diffusion resistance factor	sheets and tubes μ ≥ 15.000.		EN 13469, EN 12086
Physical attributes			
Thickness	approx. 230 μm (covering)		EN 22286
Dimensions and tolerances	In acc. with EN 14304, Table 1 (ArmaFlex substrate)		EN 822, EN 823, EN 13467
Mechanical properties			
Tear strength	MD 70 N CD 28 N		EN ISO 527-3
Resistance to mechanical impact	Good puncture and tear resistance.		
Weather and UV resistance			
UV resistance ³	Excellent		EN ISO 4892-2
Health and environment			
Health aspects	Dust- and fibre-free.		

Property	Value / Assessment	Standard / Test method
Other technical features		
Shelf life	Tape, sheets, tubes, self-adhesive: 1 year	
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).	

¹When there are fluctuations in temperature, the surface may wrinkle slightly, as elastomeric products expand and contract in these circumstances. However, these superficial changes do not have any impact on the performance of the material. The wrinkles usually disappear as soon as the plant is heated to its original operating temperature.

²For temperatures below -50 °C or above +110°C please contact our Customer Service Centre to request for the corresponding technical information.

³In outdoor applications the colour may fade. This does not have any impact on the functionality of the covering or the insulation material.

Tube – precovered and self-seal. Silver (Covering)

AF-2 (insulation thickness: 11.5mm - 16.0mm)

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
15	AFSI-2-015	16,00	17,50	11,5	7612207397901	65 m
18	AFSI-2-018	19,00	20,50	11,5	7612207339383	60 m
22	AFSI-2-022	23,00	24,50	12	7612207339390	50 m
28	AFSI-2-028	29,00	30,50	12,5	7612207339406	42 m
35	AFSI-2-035	36,00	38,00	13	7612207339413	31 m
42	AFSI-2-042	43,50	45,50	13,5	7612207339420	24 m
48	AFSI-2-048	49,50	51,50	13,5	7612207339437	22 m
54	AFSI-2-054	55,00	57,00	13,5	7612207339444	18 m
60	AFSI-2-060	61,50	63,50	14	7612207339451	16 m
64	AFSI-2-064	65,00	67,50	14	7612207339468	15 m
76	AFSI-2-076	77,00	79,50	14	7612207339475	14 m
89	AFSI-2-089	90,50	93,50	14,5	7612207339482	11 m
114	AFSI-2-114	116,00	120,00	15	7612207339499	8 m
140	AFSI-2-140	142,00	146,00	15,5	7612207339505	4 m

Other information

Thickness tolerance

≤8mm: ±10mm
 9 - 18mm: ±1.5mm
 19 - 31mm: ±2.5mm
 >31mm: ±3.0mm

Length tolerance

±1.5%

Remarks

Some items have a self-adhesive seam achieved with a radial cut surface. Contact Armacell for more details.

Tube – precovered and self-seal. Silver (Covering)

AF-4 (insulation thickness: 17.0mm - 25.0mm)

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
15	AFSI-4-015	16,00	17,50	17	7612207397765	44 m
18	AFSI-4-018	19,00	20,50	17,5	7612207397727	35 m
22	AFSI-4-022	23,00	24,50	18	7612207339543	30 m
28	AFSI-4-028	29,00	30,50	19	7612207339550	24 m
35	AFSI-4-035	36,00	38,00	19,5	7612207339567	18 m
42	AFSI-4-042	43,50	45,50	20,5	7612207339574	16 m
48	AFSI-4-048	49,50	51,50	21	7612207339581	12 m
54	AFSI-4-054	55,00	57,00	21	7612207339598	12 m
60	AFSI-4-060	61,50	63,50	21,5	7612207339604	10 m
64	AFSI-4-064	65,00	67,50	21,5	7612207339611	9 m
76	AFSI-4-076	77,00	79,50	22	7612207339628	8 m
89	AFSI-4-089	90,50	93,50	22,5	7612207339635	6 m
114	AFSI-4-114	116,00	120,00	23,5	7612207339642	5 m
140	AFSI-4-140	142,00	146,00	24,5	7612207339659	3 m
168	AFSI-4-168	170,00	176,00	25	7612207339666	2 m

Other information

Tube – precovered and self-seal. Silver (Covering)

AF-4 (insulation thickness: 17.0mm - 25.0mm)

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
Thickness tolerance		≤8mm: ±10mm 9 - 18mm: ±1.5mm 19 - 31mm: ±2.5mm >31mm: ±3.0mm				
Length tolerance		±1.5%				
Remarks		Some items have a self-adhesive seam achieved with a radial cut surface. Contact Armacell for more details.				

Tube – precovered and self-seal. Silver (Covering)

AF-5 (insulation thickness: 25.0mm - 33.0mm)

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	Insulation thickness [mm]	EAN	Content [metric]
18	AFSI-5-018	19,00	20,50	25	7612207339673	21 m
22	AFSI-5-022	23,00	24,50	25	7612207339680	18 m
28	AFSI-5-028	29,00	30,50	25	7612207339697	18 m
35	AFSI-5-035	36,00	38,00	27	7612207339703	12 m
42	AFSI-5-042	43,50	45,50	27	7612207339710	11 m
48	AFSI-5-048	49,50	51,50	27,5	7612207339727	8 m
54	AFSI-5-054	55,00	57,00	28,5	7612207339734	8 m
60	AFSI-5-060	61,50	63,50	29	7612207339741	6 m
64	AFSI-5-064	65,00	67,50	29	7612207339758	6 m
76	AFSI-5-076	77,00	79,50	30	7612207339765	5 m
89	AFSI-5-089	90,50	93,50	30,5	7612207339772	4 m
114	AFSI-5-114	116,00	120,00	31,5	7612207339789	3 m
140	AFSI-5-140	142,00	146,00	32	7612207339796	3 m
168	AFSI-5-168	170,00	176,00	33	7612207339802	2 m

Other information

Thickness tolerance		≤8mm: ±10mm 9 - 18mm: ±1.5mm 19 - 31mm: ±2.5mm >31mm: ±3.0mm				
Length tolerance		±1.5%				
Remarks		Some items have a self-adhesive seam achieved with a radial cut surface. Contact Armacell for more details.				

Covering. Silver. Covering without insulation

Item	Width [mm]	Length [m]	EAN	Content [quantity]	Content [metric]
ACH-SI25	1.040	25	7612207367133	2 roll	26 m ²
ACH-SI25-I	1.040	25	7612207410396	1 roll	26 m ²
ACH-SI25/100	100	25	7612207341867	4 roll	10 m ²

Roll – standard precovered. Silver (Covering)

Item	Insulation thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
AFSI-13MM/E	13	1.000	8	7612207339819	8 m ²
AFSI-19MM/E	19	1.000	6	7612207339833	6 m ²
AFSI-25MM/E	25	1.000	4	7612207339857	4 m ²

Roll – standard precovered. Silver (Covering)

Item	Insulation thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
AFSI-32MM/E	32	1.000	3	7612207339871	3 m ²
Other information					
Thickness tolerance		≤ 6 mm: ±1,0 mm 7 -19 mm: ±1,5 mm > 19 mm: ±2,0 mm			
Length tolerance		+/- 1,5%			

Roll – standard precovered self-adhesive. Silver (Covering). AF/ArmaFlex

Item	Insulation thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
AFSI-13MM/EA	13	1.000	8	7612207339826	8 m ²
AFSI-19MM/EA	19	1.000	6	7612207339840	6 m ²
AFSI-25MM/EA	25	1.000	4	7612207339864	4 m ²
AFSI-32MM/EA	32	1.000	3	7612207339888	3 m ²
Other information					
Thickness tolerance		≤ 6 mm: ±1,0 mm 7 -19 mm: ±1,5 mm > 19 mm: ±2,0 mm			
Length tolerance		+/- 1,5%			

Prefabricated part – 90° elbow. Silver. Elbow fitting (covering without insulation)

Outer diameter [mm]	Item	EAN	Content [quantity]
40	ACHB-040	7612207344097	1 piece
50	ACHB-050	7612207344103	1 piece
60	ACHB-060	7612207344110	1 piece
70	ACHB-070	7612207344127	1 piece
80	ACHB-080	7612207344134	1 piece
90	ACHB-090	7612207344141	1 piece
100	ACHB-100	7612207342116	1 piece
110	ACHB-110	7612207344158	1 piece
120	ACHB-120	7612207344165	1 piece
130	ACHB-130	7612207344172	1 piece
140	ACHB-140	7612207344189	1 piece
150	ACHB-150	7612207342123	1 piece
160	ACHB-160	7612207344196	1 piece
170	ACHB-170	7612207344202	1 piece
180	ACHB-180	7612207344219	1 piece
190	ACHB-190	7612207344226	1 piece
200	ACHB-200	7612207344233	1 piece
210	ACHB-210	7612207344240	1 piece
220	ACHB-220	7612207344257	1 piece
230	ACHB-230	7612207344264	1 piece
250	ACHB-250	7612207344288	1 piece
260	ACHB-260	7612207344295	1 piece
280	ACHB-280	7612207344318	1 piece

Prefabricated part – 90° elbow. Silver. Elbow fitting (covering without insulation)

Outer diameter [mm]	Item	EAN	Content [quantity]
Other information			
Thickness tolerance	AF-1, AF-2: ± 1.0 mm AF-3, AF-4: ± 1.5 mm AF-5: ± 2.5 mm AF-6: ± 3.0 mm		
Remarks	Other items can be made to order upon request.		

Prefabricated part – t-piece. Silver. T-piece fitting (covering without insulation)

Outer diameter [mm]	Item	EAN	Content [quantity]
52	ACHT-052	7612207344448	1 piece
57	ACHT-057	7612207344455	1 piece
61	ACHT-061	7612207344462	1 piece
67	ACHT-067	7612207344479	1 piece
73	ACHT-073	7612207344486	1 piece
82	ACHT-082	7612207344493	1 piece
88	ACHT-088	7612207344509	1 piece
93	ACHT-093	7612207344516	1 piece
100	ACHT-100	7612207344523	1 piece
102	ACHT-102	7612207344530	1 piece
108	ACHT-108	7612207344547	1 piece
116	ACHT-116	7612207344554	1 piece
120	ACHT-120	7612207344561	1 piece
128	ACHT-128	7612207344578	1 piece
130	ACHT-130	7612207344585	1 piece
136	ACHT-136	7612207344592	1 piece
140	ACHT-140	7612207344608	1 piece
149	ACHT-149	7612207344615	1 piece
156	ACHT-156	7612207344622	1 piece
169	ACHT-169	7612207344646	1 piece
176	ACHT-176	7612207344653	1 piece
182	ACHT-182	7612207344660	1 piece
189	ACHT-189	7612207344677	1 piece
194	ACHT-194	7612207344684	1 piece
214	ACHT-214	7612207344691	1 piece
245	ACHT-245	7612207344707	1 piece
268	ACHT-268	7612207344714	1 piece
Other information			
Thickness tolerance	AF-1, AF-2: ± 1,0 mm AF-3, AF-4: ± 1,5 mm AF-5: ± 2,5 mm AF-6: ± 3,0 mm		
Remarks	Other items can be made to order upon request.		

Tape – self-adhesive. Silver. Composite aluminium tape

Item	Description	Thickness [mm]	Width [mm]	Length [m]	Content [quantity]
ACH-PSATAPES-30	AL tape in width: 30mm, length: 25m, thickness: 0.08	0,08	30	25	10 roll
ACH-PSATAPES-50	AL tape in width: 50mm, length: 50m, thickness: 0.08	0,08	50	50	6 roll
ACH-PSATAPES-50-I	AL tape in width: 50mm, length: 50m, thickness: 0.08	0,08	50	50	2 roll
ACH-PSATAPES-75	AL tape in width: 75mm, length: 50m, thickness: 0.08	0,08	75	50	2 roll



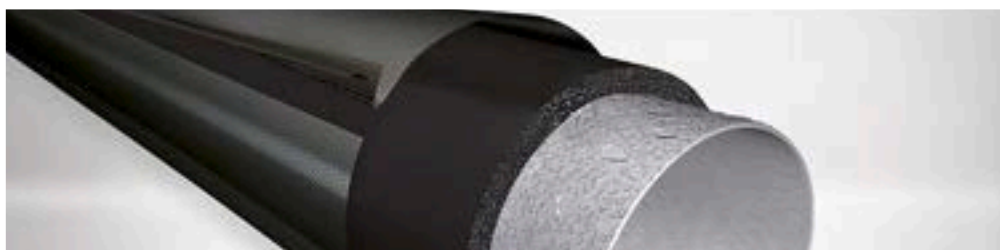
INSTALL IT. SAFEGUARD YOUR
EQUIPMENT.

Arma-Chek Juna

Durable protection on the high seas

- // IMO-certified insulation system for shipbuilding
- // Pre-covered flexible insulation system with black aluminium facing
- // Can be used on combustible and non-combustible pipes
- // Thin wall thicknesses due to very high surface emissivity factor

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Arma-Chek Juna

THE COST-EFFICIENT ONE-STEP SOLUTION

Technical installations which are subject to mechanical stress should be covered to protect them against damage. Armacell's flexible covering systems not only provide tough protection against weathering, mechanical impact and corrosion under insulation (CUI), but also save time and money. Unlike traditional insulation materials and coverings, the precovered products can be installed in a single step.

Arma-Chek Juna is UV-resistant and can be installed on combustible and non-combustible pipes.

// Optimal strength-to-weight ratio

The flexible incombustible covering is made of fibreglass fabric laminated with black aluminium. Thanks to its low bulk density and outstanding tear strength, Arma-Chek Juna is predestined for covering elastomeric and other insulation materials used in marine applications. In combination with ArmaFlex insulation it offers a perfect strength-to-weight ratio. Ships equipped with Armacell's lightweight solutions are less expensive to operate due to lower fuel demands.



// Highly flexible and space saving

Due to its high flexibility Arma-Chek Juna ensures easy installation even in tight spaces on board vessels. What's more, compared to aluminium-clad insulation the lightweight product allows space-saving installation. As the black surface of the covering is highly absorptive, thinner insulation thicknesses can be specified. The emissivity factor indicates the relative ability of a material to emit energy by radiation. The higher this factor, the smaller the insulation thickness needed. When a bright shiny surface is used, the wall thickness of the insulation has to be increased significantly.

// Ideal solution for python beverage tubing

Pythons are now state of the art for supplying beverages at low temperatures. They consist of a bundle of plastic tubes and cooling lines encased in insulation. The ArmaFlex insulation ensures that the desired medium temperature is maintained and prevents energy losses and condensation. The Arma-Chek Juna covering protects the surface of the python against mechanical impact, thus ensuring a long service life for the equipment.

TECHNICAL DATA - ARMA-CHEK JUNA

Brief description	Arma-Chek Juna innovative covering is, thanks to its low bulk density and outstanding tear strength, predestined for covering elastomeric insulations or other material types used in the ship industry. Arma-Chek Juna in combination with ArmaFlex insulation can be used on combustible and non-combustible substrates.
Material type	Highly flexible closed-cell elastomeric foam material based on synthetic rubber. Covering: made of fiberglass fabrics laminated with black coloured aluminium facing.
Product colour range	Black foam with black covering
Product range	Arma-Chek Juna is available in a range of pre-covered tubes & sheets, as well as single covering.
Applications	Insulation and mechanical protection on cold service pipework/fittings for refrigeration systems everywhere onboard, and for pipework, fittings, air ducts and tanks insulation in cargo areas, mail rooms, baggage rooms and refrigerated compartments of service spaces, and exterior locations.
Installation	The ArmaFlex and ArmaClad Arma-Chek installation manuals should be consulted before assembly. We offer special installation courses for the application of ArmaClad Arma-Chek. Certified and compatible adhesive for a long-term performing system is ArmaFlex 520.
Remarks	Rough handling of the material can cause puckering on the surface. Creases and micro-cracks of the surface don't affect the functional properties of the covering.

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature	Min. °C	Max. °C ¹	EN 14706, EN 14707
	-50	110	
	Remarks	+550 °C for the jacketing.	
Thermal conductivity			
Remarks	Depends on ArmaFlex substrate.		EN ISO 13787, EN 12667, EN ISO 8497
Fire Performance and Approvals			
Surface flammability ²	Pre-covered products: low-flammable - 2010 FTP-Code (MED 96/98/EC, Module D) Covering : low-flammable - 2010 FTP-Code (MED 96/98/EC, Module D)		IMO 2010 FTP Code, Part 5
Fire performance			
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames		
Resistance to water vapour			
Water vapour diffusion resistance factor	depends on used Armaflex material		EN 12667, EN 13469
Physical attributes			
Thickness	approx. 240 µm (0,24 mm)		EN 2286
Mechanical properties			
Resistance to mechanical impact	Good puncture and tear resistance.		
Weather and UV resistance			
UV resistance ³	excellent		
Other technical features			
Shelf life	Tape, self-adhesive: 1 year		
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).		

¹+85 °C, for products with a self-adhesive layer.²According to IMO 2010 FTP Code annex 2, clause 2.2 a fire technical test for smoke density and toxicity is not necessary.³In outdoor applications the colour may fade. This does not have any impact on the functionality of the covering or the insulation material.

Tube – precovered and self-seal. Black / Anthracite

AF-3					AF-5				
Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]
15	AFJ-3-015	14,0	7612207461268	54 m	18	AFJ-5-018	25,0	7612207461428	30 m
18	AFJ-3-018	14,0	7612207461275	48 m	22	AFJ-5-022	25,0	7612207461435	26 m
22	AFJ-3-022	14,5	7612207461282	42 m	28	AFJ-5-028	25,0	7612207461329	26 m
28	AFJ-3-028	15,5	7612207461299	30 m	35	AFJ-5-035	27,0	7612207461336	16 m
35	AFJ-3-035	16,0	7612207461220	20 m	42	AFJ-5-042	27,0	7612207461367	14 m
42	AFJ-3-042	16,5	7612207461237	20 m	54	AFJ-5-054	28,5	7612207461374	10 m
54	AFJ-3-054	17,0	7612207461244	12 m	60	AFJ-5-060	29,0	7612207461312	8 m
60	AFJ-3-060	17,0	7612207461251	12 m	76	AFJ-5-076	30,0	7612207461381	6 m
76	AFJ-3-076	17,5	7612207461305	8 m	89	AFJ-5-089	30,5	7612207461398	6 m
89	AFJ-3-089	18,0	7612207461343	8 m	114	AFJ-5-114	31,5	7612207461404	5 m
114	AFJ-3-114	18,5	7612207461350	6 m	140	AFJ-5-140	32,0	7612207461411	3 m

Tube – precovered and self-seal. Black / Anthracite

AF-6				
Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]
15	AFJ-6-015	32,0	7612207461169	22 m
18	AFJ-6-018	32,0	7612207461176	22 m
22	AFJ-6-022	33,5	7612207461183	20 m
28	AFJ-6-028	35,0	7612207461121	16 m
35	AFJ-6-035	35,0	7612207461138	14 m
42	AFJ-6-042	36,5	7612207461046	10 m
48	AFJ-6-048	37,5	7612207461053	8 m
54	AFJ-6-054	38,0	7612207461060	8 m
60	AFJ-6-060	39,0	7612207461114	6 m
76	AFJ-6-076	40,5	7612207461145	5 m
89	AFJ-6-089	41,5	7612207461152	4 m
114	AFJ-6-114	43,0	7612207461077	4 m
140	AFJ-6-140	44,5	7612207461084	2 m
168	AFJ-6-168	45,0	7612207461091	2 m

Sheet – standard. FEF: black / anthracite Covering: black. 2m length

Item	Insulation thickness [mm]	Width [mm]	EAN	Content [metric]
AFJ-13MM	13	500	7612207461107	9 m ²
AFJ-19MM	19	500	7612207461190	7 m ²
AFJ-25MM	25	500	7612207461206	5 m ²
AFJ-32MM	32	500	7612207461213	4 m

Covering. Black

Item	Width [mm]	Length [m]	EAN	Content [metric]	Content [quantity]
AJ-COAT	980	50	7612207455243	49 m ²	1 roll

Tape – self-adhesive. Black. For beverage pipes

Item	Thickness [mm]	Width [mm]	Length [m]	Content [quantity]
AJ-TAPE75-P	0,30	75,0	50	8 piece

Tape – self-adhesive. Black

Item	Thickness [mm]	Width [mm]	Length [m]	Content [quantity]
AJ-TAPE50	0,05	50,0	50	6 piece



INSTALL IT. SAFEGUARD YOUR EQUIPMENT.

Arma-Chek D

The durable pre-covered ArmaFlex system to withstand mechanical stress

- // Strongly reduces risk of damage and risk of corrosion under insulation (CUI)
- // Fast installation thanks to ready combination of insulation with covering
- // Resistant to UV, oil and chemicals

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TECHNICAL DATA - ARMA-CHEK D

Brief description	Arma-Chek D is a flexible, woven glass fibre covering system for long term mechanical protection of ArmaFlex substrates.
Product colour range	Black
Product range	Arma-Chek D is available in a range of pre-covered tubes & sheets, as well as single covering.
Applications	Insulation and protection of pipes, ducts, valves and vessels of refrigeration & air conditioning equipment, clean rooms etc.
Installation	The ArmaFlex and ArmaClad Arma-Chek installation manuals should be consulted before assembly. We offer special installation courses for the application of ArmaClad Arma-Chek.
Remarks	Declaration of Performance is available in accordance with Article 7(3) of Regulation (EU) No 305/2011 on our homepage.

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature ^{1,2}	Min. °C	Max. °C	EN 14304, EN 14706, EN 14707
	-50	110	
	Remarks	+85 °C if sheet or tape is glued to the object with its whole surface	
Thermal conductivity			
Remarks	Depends on ArmaFlex substrate.		EN ISO 13787, EN 12667, EN ISO 8497
Fire Performance and Approvals			
Reaction to fire	Arma-Chek D (AF) E		EN 13823, EN ISO 11925-2
Resistance to water vapour			
Water vapour diffusion resistance factor	Sheets and tubes $\mu \geq 15.000$.		EN 13469, EN 12086
Physical attributes			
Density	1200 kg/m³ (covering)		
Dimensions and tolerances	In acc. with EN 14304, Table 1 (ArmaFlex substrate)		EN 822, EN 823, EN 13467
Mechanical properties			
Resistance to mechanical impact	Good		
Weather and UV resistance			
UV resistance ³	Excellent		EN ISO 4892-2
Health and environment			
Health aspects	Dust- and fibre-free.		
Other technical features			
Shelf life	Tape, sheets, tubes, self-adhesive: 1 year		
Storage	To be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temp. [0°C–35°C].		

¹When there are fluctuations in temperature, the surface may wrinkle slightly, as elastomeric products expand and contract in these circumstances. However, these superficial changes do not have any impact on the performance of the material. The wrinkles usually disappear as soon as the plant is heated to its original operating temperature.

²For temperatures below -50 °C please contact our Customer Service Center to request for the corresponding technical information.

³In outdoor applications the colour may fade. This does not have any impact on the functionality of the covering or the insulation material.

Tube – precovered and self-seal. Black. Length: 1.0m

AF-2 (insulation thickness: 11.5mm - 16.0mm)					AF-4 (insulation thickness: 17.0mm - 25.0mm)				
Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]
15	AFD-2-015	11,5	7612207397338	65 m	15	AFD-4-015	17,0	7612207397536	44 m
18	AFD-2-018	11,5	7612207261882	60 m	18	AFD-4-018	17,5	7612207397758	35 m
22	AFD-2-022	12,0	7612207261899	50 m	22	AFD-4-022	18,0	7612207262001	30 m
28	AFD-2-028	12,5	7612207261905	42 m	28	AFD-4-028	19,0	7612207262018	24 m
35	AFD-2-035	13,0	7612207261912	31 m	35	AFD-4-035	19,5	7612207262025	18 m
42	AFD-2-042	13,5	7612207261929	24 m	42	AFD-4-042	20,5	7612207262032	16 m
48	AFD-2-048	13,5	7612207261936	22 m	48	AFD-4-048	21,0	7612207262049	12 m
54	AFD-2-054	13,5	7612207261943	18 m	54	AFD-4-054	21,0	7612207262056	12 m
60	AFD-2-060	14,0	7612207261950	16 m	60	AFD-4-060	21,5	7612207262063	10 m
76	AFD-2-076	14,0	7612207261967	14 m	76	AFD-4-076	22,0	7612207262070	8 m
89	AFD-2-089	14,5	7612207261974	11 m	89	AFD-4-089	22,5	7612207262087	6 m
114	AFD-2-114	15,0	7612207305456	8 m	114	AFD-4-114	23,5	7612207292015	5 m

Other information

Length tolerance ± 1.5 %

Remarks No self-seal fastening at the longitudinal seam.

Tube – precovered and self-seal. Black. Length: 1.0m

AF-5 (insulation thickness: 25.0mm - 33.0mm)				
Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [metric]
18	AFD-5-018	25,0	7612207262094	21 m
22	AFD-5-022	25,0	7612207262100	18 m
28	AFD-5-028	25,0	7612207262117	18 m
35	AFD-5-035	27,0	7612207262124	12 m
42	AFD-5-042	27,0	7612207262131	11 m
48	AFD-5-048	27,5	7612207262148	8 m
54	AFD-5-054	28,5	7612207262155	8 m
60	AFD-5-060	29,0	7612207262162	6 m
76	AFD-5-076	30,0	7612207262179	5 m
89	AFD-5-089	30,5	7612207262186	4 m
114	AFD-5-114	31,5	7612207309713	3 m

Other information

Length tolerance ± 1.5 %

Remarks No self-seal fastening at the longitudinal seam.

Sheet – precovered. Length: 2.0m

Item	Insulation thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
AFD-13MM	13	0,5	2,0	7612207262711	9 m ²
AFD-13MM-W	13	1,0	2,0	7612207281040	24 m ²
AFD-19MM	19	0,5	2,0	7612207262735	7 m ²
AFD-19MM-W	19	1,0	2,0	7612207281057	16 m ²
AFD-25MM	25	0,5	2,0	7612207262759	5 m ²

Sheet – precovered. Length: 2.0m

Item	Insulation thickness [mm]	Width [m]	Length [m]	EAN	Content [metric]
AFD-25MM-W	25	1,0	2,0	7612207281064	12 m ²
Other information					
Thickness tolerance		≤ 6 mm: ±1,0 mm 7 -19 mm: ±1,5 mm > 19 mm: ±2,0 mm			
Length tolerance		± 1,5 %			

Covering. Woven glass fibre

Item	Width [mm]	Length [m]	EAN	Content [metric]	Content [quantity]
ACH-D25	1.100	25	7612207118971	27.5 m ²	1 roll
ACH-D25/100	100	25	7612207118988	7.5 m ²	3 roll

Accessories. For Arma-Chek D

Item	Description	EAN	Content [quantity]
ACH-MASTICD	Black mastic. Sealing compound for installing Arma-Chek outdoors. 290 ml per piece.	7612207190519	12 piece

Tape – self-adhesive. Woven glass fibre

Item	Thickness [mm]	Width [mm]	Length [m]	Content [quantity]
ACH-TAPED10025	0,18	100	25	3 roll
ACH-TAPED2025	0,18	20	25	12 roll
ACH-TAPED5050	0,18	50	50	6 roll



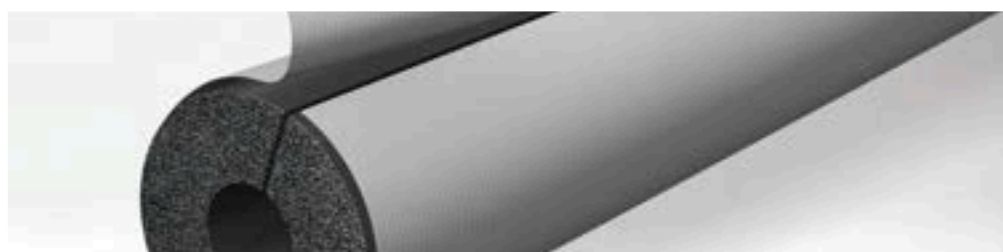
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EQUIPMENT.

Arma-Chek R

Flexible non-metallic covering for
industrial insulation

- // Flexible polymeric covering formulated with CSM (CSPE)
- // When combined with material is ISO 15665 compliant
- // Excellent mechanical and weathering protection
- // Specially developed for use in offshore and industrial environments
- // Reduces the risk of corrosion under insulation (CUI)
- // Resistant to UV, salt water and chemicals
- // In-built water vapour barrier $\mu > 50.000$
- // Works in harmony with ArmaFlex, expanding and contracting as required
- // IMO certified

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TECHNICAL DATA - ARMA-CHEK R

Brief description	Flexible covering system for elastomeric and other insulation material types. Especially developed for use in offshore and industrial environments.
Product colour range	Grey
Special features	Exceptional resistance to UV attack, salt water and mechanical impact. Reduces the risk of Corrosion Under Insulation (CUI). Excellent acoustic performance with natural dampening properties to reduce re-radiation effects.
Product range	Sheets in rolls, 1 and 2 mm thickness / width 700 and 1,400mm. Arma-Chek Mastic is available for sealing of joints and seams.
Applications	Mechanical and weathering protection of insulated pipework, fittings, vessels and equipment in offshore, heavy industry, chemical and petrochemical environments.
Installation	The ArmaFlex and ArmaClad Arma-Chek installation manuals should be consulted before assembly. We offer special installation courses for the application of ArmaClad Arma-Chek.

Approvals and compliance

Specification compliance	MED Module B (EC type examination certificate) by DNV-GL / IMO 2010 FTP (Fire Test Procedure) Code part 2 and part 5.

Property	Value / Assessment				Standard / Test method
Temperature range					
Service temperature ¹	Min. °C	Min. °F	Max. °C	Max. °F	
	-50	-58	100	212	
Fire Performance and Approvals					
Reaction to fire	B-s3, d0				EN 13501-1, EN 13823, EN ISO 11925-2
Surface burning characteristics	< 25 flame spread index				ASTM E84
Surface flammability ²	IMO Part 2 (smoke generation and toxicity) IMO Part 5 (surface flammability) M1				IMO 2010 FTP Code, Part 2, IMO 2010 FTP Code, Part 5, NF P 92-507
Corrosion mitigation					
Leachable (water-soluble) chlorides ⁴	≤ 100 ppm (mg/kg or µg/g)				EN 13468, ASTM C871 ⁵
Leachable (water-soluble) ammonia ions ⁴	≤ 100 ppm (mg/kg or µg/g)				EN 13468, ASTM C871 ⁵
Physical attributes					
Density	1,650 to 1,750 kg/m³ (103.00 to 109.25 lb/ft³)				ISO 845, ASTM D1622
Mechanical properties					
Tensile strength	≥ 4.5 MPa (≥ 653 psi) [MD]				ISO 37 ⁶
Elongation	≥ 200% [MD/CD]				ISO 37
Tear strength	≥ 7.0 N/mm (≥ 40 lbf/in) [MD/CD]				ISO 34-1 ⁷
Bursting strength ^{4,8}	582.72 N / 131 lbf Section 18.2 of the test standard Result for 2mm material only.				ASTM D751
Puncture resistance ⁴	104.44 N / 23.48 lbf Result for 2mm material only.				ASTM D751
Hydrostatic pressure of joints ⁴	No leak at 6.89 bar [70.4 m] (100 psi)				ASTM D5385
Resistance to mechanical impact	Good				

Property	Value / Assessment	Standard / Test method
Acoustic performance		
System acoustic insertion loss ⁹	When used as part of a system Arma-Chek R complies to ISO 15665 Classes A to C and Shell DEP 31.46.00.31-Gen Class D.	ISO 15665, ISO 3741 ¹⁰
Weather and UV resistance		
UV resistance ¹¹	Excellent	EN ISO 4892-2
Weather resistance	Excellent [Allunga Exposure Laboratory test]	
Resistance to ozone ¹²	Excellent	DIN 53509-1
Health and environment		
Fungal growth ⁴	No growth	ASTM C1338
Other technical features		
Additional remarks	When installation of Arma-Chek R covering is conducted under ambient temperatures that differ from the final site conditions, or where ambient temperatures are expected to fluctuate, slight wrinkling of the installed Arma-Chek R covering may be expected. Caused by the natural contraction and expansion of the the underlying Armaflex insulation material, this wrinkling is solely aesthetic and has no effect the technical performance or integrity of the installed insulation system. Please consult Technical Services for additional guidance.	
Adhesion and sealing	Armaflex Adhesive 520, Adhesive HT625, or Ultima 700 shall be used for reliable adhesion. Minimum overlap should be ensured. Arma-Chek Mastic shall be used for sealing of joints and seams in accordance with our application manual.	
Application conditions ^{13,14}	Application temperature: +5°C to +35°C (+41°F to +95°F) Max. relative humidity: 80%	
Shelf life ¹⁵	Maximum of 3 years.	
Storage	Material shall be stored indoors, in clean and dry conditions, away from direct sunlight and in no direct contact with ground.	

¹Service temperature determined based on thermal ageing behaviour.

²The product satisfies the criteria of surface flammability (Part 5) for bulkheads, ceilings and linings as required by IMO 2010 FTP Code for insulation of pipe fittings for cold service systems. Further to this mandatory requirement the product satisfies the criteria of surface flammability (Part 5) and smoke generation and toxicity (Part 2) for floor coverings and primary deck coverings.

³Water vapour diffusion resistance factor is based on actual net thickness.

⁴Based on single test results. Can be used for information / reference only.

⁵Specimen prepared according to EN 13486: neither cut, ground nor blended. Test temperature +100°C, leaching time 0.5 hours as specified in the standard for product maximum service temperature.

⁶Type 2 sample.

⁷Minimum value in Machine Direction (MD) and in Cross Direction (CD). Method B, procedure (b), angle test piece with a nick.

⁸Result for 2mm material only.

⁹For further information, please contact our Customer Service.

¹⁰Equivalent method to ASTM E1222.

¹¹1000h cracking, no visible discoloration, 3000 / 5000h cracking under microscope, slight discoloration.

¹²Tested at 48h / 25 ± 5 ppm / 20 ± 2 % elongation / no crack.

¹³Application temperature refers to the ambient temperature during installation and the surface temperature of the substrate (e.g. ArmaClad Arma-Chek R covering) to which the product is installed.

¹⁴For environmental conditions outside the given range, please contact Technical Services.

¹⁵Shelf life (maximum storage time) is limited to ensure that only currently manufactured products are installed on projects. This limitation is restricted solely to storage of the product and does not affect the lifetime of product after it has been installed.

Covering, endless

Item	Thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
RCS-R10/1-07-GY	1	700	10	7612207393705	7 m²
RCS-R10/1-14-GY	1	1.400	10	7612207383683	14 m²
RCS-R10/2-07-GY	2	700	10	7612207383676	7 m²
RCS-R20/1-07-GY	1	700	20	7612207383690	14 m²

Other information

Remarks	5m length rolls may be available under demand. Please, contact Customer Service for more information.



INSTALL IT. SAFEGUARD YOUR EQUIPMENT.

Arma-Chek Mastic Grey

Adhesive and sealing product to provide additional protection to all Arma-Chek R glued seams

- // Ensures durable, vapour tight bonding
- // Fast and precise application with convenient cartridges
- // Industrial grade sealant specially formulated for Arma-Chek R covering
- // Excellent UV and weathering resistance

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TECHNICAL DATA - ARMA-CHEK MASTIC GREY

Brief description	Arma-Chek Mastic Grey is an adhesive and a sealing product designed to give additional and long-life protection to all Arma-Chek R glued seams and joints in external environment.
Product colour range	Grey
Product range	290 ml cartridges
Applications	Before applying the mastic to all seams and joints, check that they are completely sealed with the correct type of ArmaFlex® adhesive, and securely fixed down. Check that the seams and joints are clean, dry and free from contamination before applying the mastic. All seams and joints shall have a minimum thickness of 10 mm wide and 3 mm thick mastic "beading" applied.
Installation	The ArmaFlex and ArmaClad Arma-Chek installation manuals should be consulted before assembly. We offer special installation courses for the application of ArmaClad Arma-Chek.
Remarks	The Arma-Chek Mastic should not be used on a stand-alone basis to fix and bond the coverings.

Property	Value / Assessment				Standard / Test method
Temperature range					
Service temperature	Min. °C	Min. °F	Max. °C	Max. °F	EN 14706 ¹
	-40	-40	120	248	
Corrosion mitigation					
Leachable (water-soluble) chlorides	≤ 30 ppm (mg/kg or µg/g)				EN 13468, ASTM C871 ²
Mechanical properties					
Tensile strength	≥ 2.9 MPa				ISO 37 ³
Elongation	≥ 200%				ISO 37 ³
Hardness (Shore A)	≥ 50				ISO 7619-1, ISO 48-4
Weather and UV resistance					
UV resistance ⁴	Excellent				EN ISO 4892-2
Weather resistance	Excellent				
Other technical features					
Additional remarks	Material type: Sealant based on silane modified polymers				
Application conditions ^{5,6,7}	Application temperature: +5°C to +35°C [+41°F to +95°F] Max. relative humidity: 80%				
Disposal and recycling	Please refer to Safety Data Sheet				
Shelf life	18 months				
Storage	Should be stored in cool and dry rooms. Recommended storage temperature 5 to 30°C. The container should be kept dry and sealed. Packaging must be emptied of all residues. Packaging with traces of cured product can be recycled. Packaging with uncured product must be disposed of in the same manner as the medium.				
Working time ⁸	Open time: < 15 min. Skin forming time: < 13 min. Curing rate after 24 hrs: appr. 3 mm The above data is valid at 23°C and 50% relative humidity.				

¹ Tested in a system comprising of ArmaFlex and ArmaClad Arma-Chek R covering.² Specimen prepared according to EN 13468: neither cut, ground nor blended. Test temperature +100°C, leaching time 0.5 hours as specified in the standard for product maximum service temperature.³ Dumb-bell type II test piece.⁴ Xenon-arc with 5000 hr exposure and +60 °C black panel temperature. 1000h: no cracking, no visible discoloration. 3000/5000h: cracking under microscope, slight discoloration.⁵ Application temperature refers to the ambient temperature during installation and the surface temperature of the substrate (e.g. ArmaClad Arma-Chek R covering) to which the product is installed.⁶ In some cases it may be necessary to avoid exposure of the substrate to strong sunlight.⁷ Please consult our Technical Services for further recommendations and guidance on the use of ArmaClad Arma-Chek Mastic.⁸ The application temperature shall not exceed +35°C for a period of 6 to 8 hours following application and shall not fall below +5°C for the entire duration of the cure. The cure duration depends on ambient air humidity and temperature and on the thickness of the bead.

Accessories

Item	Description	EAN	Content [quantity]
ACH-MASTICS	Sealing compound for installing Arma-Chek R, cartridge 290 ml	7612207422320	12 piece



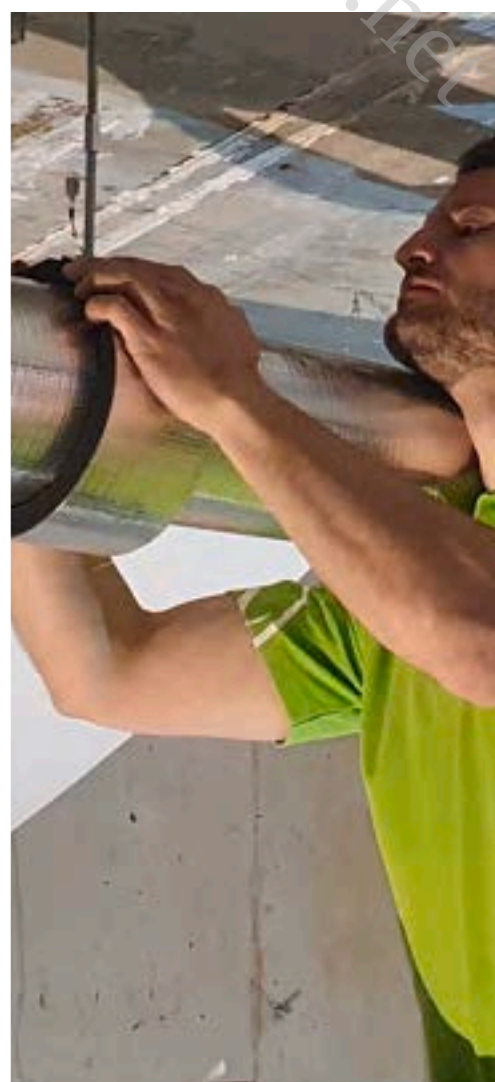
INSTALL IT. ENJOY QUIETNESS.

ArmaComfort AB Alu Plus

Excellent acoustic performance for
drainage. Very good fire performance.
Increases people's safety and prevents
corrosion.

- // Thin and excellent acoustic insertion loss solution
- // B-s1,d0
- // Prevent condensation
- // Easy to apply and maintain
- // Nice health and environmental features

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ArmaComfort AB



NOISE CONTROL KEY TERMS

// **Sound** is a mechanical vibration which is perceived by the human ear in the frequency range 16 Hz to 16.000 Hz.

// **Frequency** is the number of vibrations per second. The pitch rises as frequency increases. The most important range for building acoustics lies between 100 Hz and 3150 Hz.

// **Sound Insertion loss** is the difference in sound levels measured between the bare pipe and the pipe with insulation. Such a measurement of sound reduction in dB(A) provides a direct indication of the improvement due to an acoustic solution.

// **Bel (B) and decibel (dB)** are relative units and represent the ratio between two acoustic quantities on a logarithmic scale.

// **Decibel (A), dB (A)** weights the volume according to frequencies. In this way it is possible to achieve a measurable representation of noise as it is perceived. Depending on the frequency, the human ear perceives tones of the same sound pressure as being of different loudness.



TECHNICAL DATA - ARMACOMFORT AB ALU PLUS

Brief description	ArmaComfort AB Alu Plus combines excellent acoustic performance, fire performance B-s1,d0 to increase people safety and prevents corrosion.
Material type	Multi-layer acoustic insulation material consisting of an acoustic EPDM-EVA barrier of 2mm thickness with an aluminium foil and a 9mm thick decoupling elastomeric foam based on synthetic rubber.
Product colour range	Black Silver (Covering)
Special features	ArmaComfort AB Alu Plus offers outstanding durability.
Applications	ArmaComfort AB Alu Plus is used as an acoustical insulation of wastewater, rainwater and sewage pipes in residential and non-residential buildings
Installation	Certified and compatible adhesive for a long-term performing system is ArmaFlex 520. Please refer to the ArmaFlex application manual for advice.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature	Max. °C		EN 14304
	110		
Thermal conductivity			
Declared thermal conductivity	Øm	0	EN 12667, EN ISO 13787
	λd ≤ [W/(m·K)]	0,042	
	Formula	λ =[42 + 0.1 · Øm + 0.0009 · Øm²]/1000	
Fire Performance and Approvals			
Reaction to fire	B-s1,d0		EN 13501-1, EN 13823, EN ISO 11925-2
Resistance to water vapour			
Water vapour diffusion resistance factor	μ ≥ 10.000		EN 13469, EN 12086
Physical attributes			
Mass per unit area	11 mm thickness: 3.7 - 5.0 kg/m²		
Dimensions and tolerances	Thickness: 11 mm ± 1.5 mm Width: 1000 mm ± 1.5% Length: 2000 mm ± 1.5%		EN 13467, EN 822, EN 823
Acoustic performance			
System acoustic insertion loss	on Geberit Silent db 20 ≤ 18 dB(A) on NF PVC Diameter 110 mm ≤ 24.5 dB(A)		EN 14366
Health and environment			
Volatile organic compounds (VOC) content	Determination of emissions of VOC from the product in the climate chamber. Complies with the requirement: German Scheme AgBB French Class A+ US (California)		ISO 16000 Parts 3, 6 & 9
Environmental aspects	WELL compliance card		WELL Requirements
Other technical features			
Shelf life¹	Self-adhesive sheets: 1 year		
Storage	Can be stored in dry and clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0°C to 35°C).		

¹ Shelf life (maximum storage time) is limited to ensure that only currently manufactured products are installed on projects. This limitation is restricted solely to storage of the product and does not affect the lifetime of product after it has been installed.

Roll - standard. Black foam with silver facing. Roll packed in carton

Item	Thickness [mm]	Width [m]	Length [m]	EAN	Content [metric]
AO-11-99/E-AB-AL+	11	1	2	7612207410518	2 m ²

Other information

Remarks

Primary content available as a roll, parked in carton.
ArmaComfort AB Alu Plus must be applied with ArmaFlex 520 adhesive and ArmaComfort AB Alu tape AO-TAPE/50-AL-S-25M (ISATS50900600).

Roll - jumbo. Black foam with silver facing

Item	Thickness [mm]	Width [m]	Length [m]	EAN	Content [metric]
AO-11-99/E25-ABAL+	11	1	25	7612207410471	75 m ²

Other information

Remarks

ArmaComfort AB Alu Plus must be applied with ArmaFlex 520 adhesive and ArmaComfort AB Alu tape AO-TAPE/50-AL-S-25M (ISATS50900600).
The bobbins (25 m² each bobbin) are sold by 3 bobbins which are inseparable on one pallet. This means that the minimum order quantity is 75 m².

ArmaComfort Tape Alu

Item	Thickness [mm]	Width [mm]	Length [m]	Content [quantity]
AO-TAPE/50-AL-S-25	0,02	50	25	18 roll



INSTALL IT. ENJOY QUIETNESS.

ArmaComfort AB

Highly flexible acoustic comfort

- // Specially designed to reduce noise of rainwater and waste pipes
- // Thin acoustic lagging with high performances
- // Flexible, easy to apply and maintain
- // Free of lead, fiber, unrefined aromatic oils and bitumen

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TECHNICAL DATA - ARMACOMFORT AB

Brief description	ArmaComfort AB combines the acoustic performance of an excellent and flexible acoustic barrier of 2 mm thickness and 4 kg/m ² of weight with a damping ArmaFlex flexible elastomeric foam of 9 mm.
Material type	Multi-layer acoustic insulation material consisting of an acoustic EPDM-EVA barrier and an elastomeric foam based on synthetic rubber.
Product colour range	Black
Applications	ArmaComfort AB is widely used as an acoustical insulation of waste water, rain water and sewage pipes in residential and non-residential buildings.
Installation	Certified and compatible adhesive for a long-term performing system is ArmaFlex 520.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature ^{1,2}	Max. °C		EN 14304
	110		
Thermal conductivity			
Declared thermal conductivity	Øm	0 °C	EN ISO 13787, EN 12667, EN ISO 8497
	λd ≤ [W/(m·K)]	0,040	
	Formula	λ =[40 + 0.1· Øm + 0,0009 · Øm²]/1000	
Fire Performance and Approvals			
Reaction to fire	D-s2,d0		EN 13501-1, EN 13823, EN ISO 11925-2
Physical attributes			
Mass per unit area	11mm thickness: 3.7 - 5.0 kg/m²		
Dimensions and tolerances	Thickness: 11 mm ± 1.6 mm Width: 1000 mm ± 1.5% Length: 2000 mm ± 1.5%		EN 13467, EN 823, EN 822
Acoustic performance			
Weighted sound reduction index, Rw [C ; Ctr] (dB)	Rw = 26 dB [C;Ctr] = [-1;-3] dB		ISO 10140-2, ISO 10140-1, EN ISO 717-1
System acoustic insertion loss	on plastic waste water pipes ≤ 14 dB(A) on Geberit PE HD ≤ 16 dB(A) on Geberit Silent db 20 ≤ 18 dB(A)		EN 14366
Other technical features			
Shelf life ³	Self-adhesive sheets: 1 year		
Storage	Can be stored in dry and clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0°C to 35°C).		

¹ Minimum service temperature: as usual in heating and plumbing systems.² For rainwater pipes with the requirement of condensation prevention, please contact our Customer Service Centre.³ Shelf life (maximum storage time) is limited to ensure that only currently manufactured products are installed on projects. This limitation is restricted solely to storage of the product and does not affect the lifetime of product after it has been installed.

Roll - standard. Black

Item	Thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
AO-11-99/E-AB	11	1	2	7612207393736	2 m²
Other information					
Remarks		Primary content available as a roll, packed in carton. ArmaComfort AB must be applied with ArmaFlex 520 and ArmaComfort TAPE-PE-FE904 (IESIA00900923)			



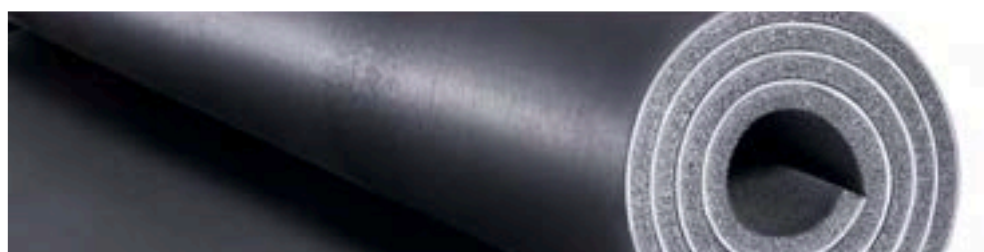
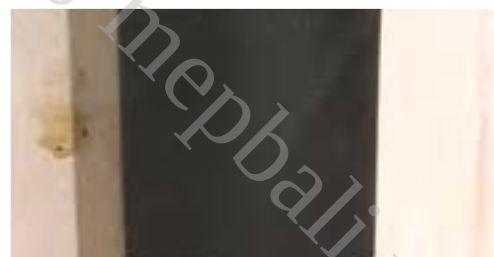
INSTALL IT. ENJOY QUIETNESS.

ArmaComfort AB Plus

Highly flexible acoustic comfort

- // Specially designed to reduce noise for rainwater and waste pipes
- // Thin acoustic lagging with high performance
- // Pre-cut self-adhesive sheets available
- // Easy to apply and maintain

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ArmaComfort®

TECHNICAL DATA - ARMACOMFORT AB PLUS

Brief description	ArmaComfort AB plus combines the acoustic performance of an excellent and flexible acoustic barrier of 2 mm thickness and 4 kg/m ² of weight with a damping ArmaFlex flexible elastomeric foam of 9 mm.
Material type	Multi-layer acoustic insulation material consisting of an acoustic EPDM-EVA barrier and an elastomeric foam based on synthetic rubber.
Product colour range	Black
Special features	ArmaComfort AB Plus offers outstanding durability.
Applications	ArmaComfort AB Plus is widely used as an acoustical insulation of wastewater, rainwater and sewage pipes in residential and non-residential buildings.
Installation	Certified and compatible adhesive for a long-term performing system is ArmaFlex 520.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Property	Value / Assessment	Standard / Test method
Temperature range		
Service temperature ^{1,2,3}	Max. °C 110	EN 14304
Thermal conductivity		
Declared thermal conductivity	$\varnothing m$ 0 °C $\lambda d \leq [W/(m \cdot K)]$ 0,042 Formula $\lambda = [42 + 0.1 \cdot \varnothing m + 0,0009 \cdot \varnothing m^2]/1000$	EN ISO 13787, EN 12667, EN ISO 8497
Fire Performance and Approvals		
Reaction to fire	C-s2,d0	EN 13501-1, EN 13823, EN ISO 11925-2
Resistance to water vapour		
Water vapour diffusion resistance factor	$\mu \geq 7.000$	EN 13469, EN 12086
Physical attributes		
Mass per unit area	11mm thickness: 3.7 - 5.0 kg/m ²	
Dimensions and tolerances	Thickness: 11 mm $\pm$ 1.6 mm Width: 1000 mm $\pm$ 1.5% Length: 2000 mm $\pm$ 1.5%	EN 822, EN 823, EN 13467
Acoustic performance		
Weighted sound reduction index, R_w (C ; Ctr) [dB]	$R_w = 26$ dB (C;Ctr) = (-1;-3) dB	EN ISO 717-1, ISO 10140-1, ISO 10140-2
System acoustic insertion loss	on plastic waste water pipes ≤ 14 dB(A) on Geberit PE HD ≤ 16 dB(A) on Geberit Silent db 20 ≤ 18 dB(A)	EN 14366
Other technical features		
Shelf life ⁴	Self-adhesive sheets: 1 year	
Storage	Can be stored in dry and clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0°C to 35°C).	

¹For use in temperatures below 0 °C, please contact our Customer Service Centre.²For rainwater pipes with the requirement of condensation prevention, please contact our Customer Service Centre.³Minimum service temperature: as usual in heating and plumbing systems.⁴Shelf life (maximum storage time) is limited to ensure that only currently manufactured products are installed on projects. This limitation is restricted solely to storage of the product and does not affect the lifetime of product after it has been installed.

Roll - standard. Black

Item	Thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
AO-11-99/E-AB+	11	1	2	7612207410525	2 m ²

Other information

Remarks

ArmaComfort AB Plus must be applied with ArmaFlex 520 and ArmaComfort Tape TAPE-PE-FE904 (IESIA00900923).
Primary content: roll in carton

Roll - standard self-adhesive. Black. Roll packed in carton

Item	Thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
AO-11-99/EA-AB+	11	1	2	7612207410532	2 m ²

Other information

Remarks

ArmaComfort AB Plus self-adhesive must be applied with ArmaComfort Tape TAPE-PE-FE904 (IESIA00900923).
Primary content: roll in carton

Sheet - self-adhesive. Black

Item	Thickness [mm]	Width [mm]	Length [m]	Outer diameter [mm]	EAN	Content [quantity]

Other information

Remarks

Primary content available as 10 sheets, packed in one carton.



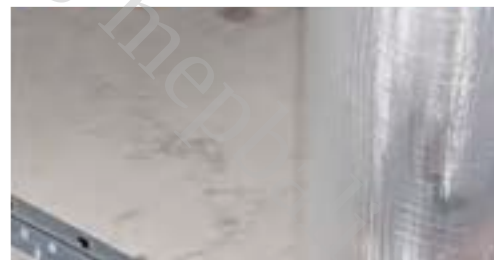
INSTALL IT. ENJOY QUIETNESS.

ArmaComfort AB Alu

Perfect thin sound lagging solution

- // Excellent fire performance
- // B-s1,d0
- // $R_w [C;Ctr] = 28 \text{ dB} (-1; -4) \text{ dB}$
- // Halogen-free
- // Nice aluminum silver colour foil covering

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TECHNICAL DATA - ARMACOMFORT AB ALU

Brief description	ArmaComfort AB Alu combines excellent acoustic performance and excellent fire performance B-s1,d0 to increase people safety.
Material type	Multi-layer acoustic insulation material consisting of an aluminium covered EPDM-EVA barrier of 2mm thickness and 4kg/m ² of weight and a decoupling polyurethane foam of 10mm thickness.
Product colour range	Black Silver (Covering)
Special features	Halogen-free (chloride, bromide) acc. to DIN / VDE 0472, part 815. ArmaComfort AB Alu offers outstanding durability.
Applications	ArmaComfort AB Alu is widely used as an acoustical insulation of waste water, rain water and sewage pipes. It has been specially designed for non-residential buildings such as office buildings, hotels, hospitals, school buildings, retirement residences, shopping centres and conference centres.
Installation	Certified and compatible adhesive for a long-term performing system is ArmaFlex 520.

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature	Max. °C		EN 14304 ¹
	100		
	Remarks	Minimum service temperature: As is usual in plumbing and heating installations.	
Fire Performance and Approvals			
Reaction to fire	B-s1,d0		EN 13823, EN ISO 11925-2
Physical attributes			
Mass per unit area	12 mm thickness: 4.5 to 6.9 kg/m²		
Dimensions and tolerances	Thickness: 12 mm ± 1.5 mm Width: 1000 mm ± 1.5% Length: 2000 mm ± 1.5%		EN 822, EN 823, EN 13467
Acoustic performance			
Weighted sound reduction index, Rw [C ; Ctr] [dB]	Rw = 28 dB [C;Ctr] = [-1;-4] dB		ISO 10140-2, ISO 10140-1, EN ISO 717-1
Health and environment			
Health aspects	Halogen-free		VDE 0472-815
Other technical features			
Shelf life ²	Self-adhesive sheets: 1 year		
Storage	Can be stored in dry and clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0°C to 35°C).		

¹For use in temperatures beyond the maximum and minimum service temperature range indicated in the technical data table, please contact our Customer Service Centre.

²Shelf life (maximum storage time) is limited to ensure that only currently manufactured products are installed on projects. This limitation is restricted solely to storage of the product and does not affect the lifetime of product after it has been installed.

Roll - standard. Silver (Covering). Roll packed in carton

Item	Thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
AO-12-99/E-AB-AL	12	1	2	7612207393743	2 m²

Other information

Remarks	Primary content available as a roll, packed in carton. ArmaComfort AB Alu must be applied with ArmaFlex 520 and ArmaComfort Tape AO-TAPE/50-AL-S-25M (ISATS50900600)

ArmaComfort Tape Alu

Item	Thickness [mm]	Width [mm]	Length [m]	Content [quantity]
AO-TAPE/50-AL-S-25	0,02	50	25	18 roll



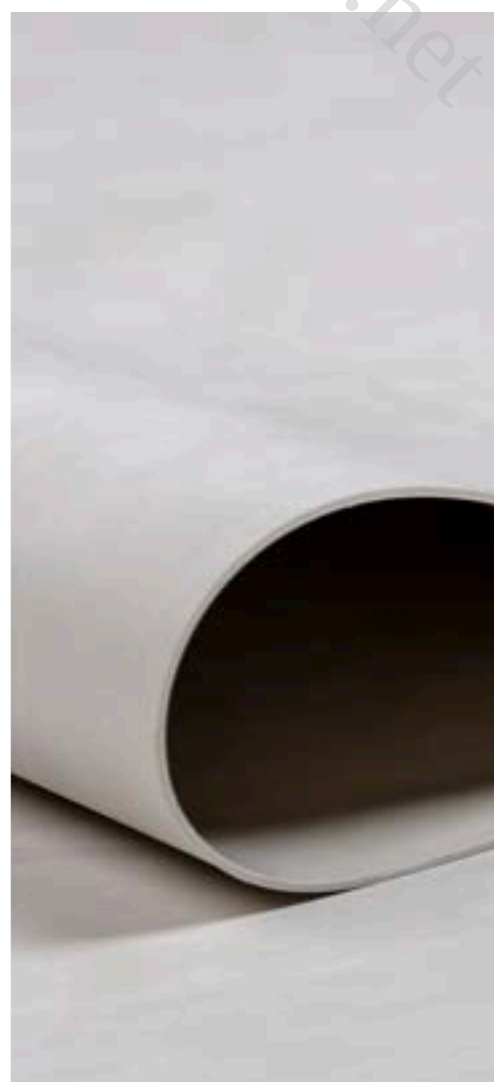
INSTALL IT. ENJOY QUIETNESS.

ArmaComfort Barrier P

High performance flexible fire and
acoustic pearly white mass loaded
barrier

- // Excellent at reducing the transmission of airborne sound with low thickness
- // Very good fire performance
- // IMO Part 2 and 5 (DNV - MED B&D)
- // Environmentally friendly: 100% recyclable
- // Halogen-free, lead-free, bitumen-free and phosphate-free
- // Self-adhesive
- // Easy to install

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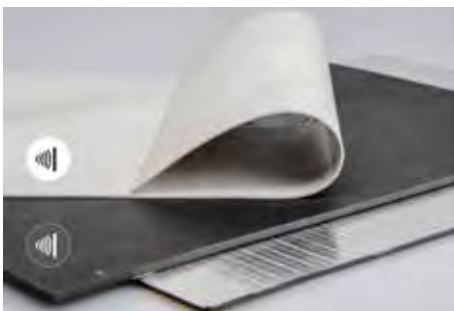
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ArmaComfort Barrier P and B

THE COMFORT OF SILENCE

Armacell's acoustic comfort solutions bring more quality of life to urban residents and commuters. They improve health and safety in the workplace by reducing noise. Creating quiet zones and noise corridors can minimise the harmful impact of noise exposure – in buildings, industrial environments and vehicles. Based on a unique EVA/EPM blend, ArmaComfort Barriers offer superior acoustic transmission reduction. This new sound attenuation technology allows you to add mass to walls and mechanical equipment without losing space – invisibly in constructions or visibly on existing partitions.



// (In) Visible Sound Protection

Discover Armacell's two new faces of silence: a black acoustic barrier for hidden applications in wall, ceiling and HVAC constructions; and a pearly-white sheet for visually appealing ad-hoc solutions. This premium selfadhesive product is B-s2,d0 classified and certified according to IMO and UL94. The sheets can remain visible or be painted over with water-based acrylic products. The self-adhesive foil-faced ArmaComfort Barrier ALU achieves the highest fire rating (B-s1,d0) for organic products. Explore a multitude of ways to reduce disturbing noise with just one product solution. Visible or invisible.



// Protection Screen

Air-conditioning compressors, heating pumps and plant rooms can cause unacceptable noise levels in buildings. In industrial environments generators, pumps, printing machines or other heavy equipment can induce hearing loss and endanger the health and safety of staff. Enclosures, protection screens, mobile partitions or fences can all be easily fabricated with ArmaComfort Barriers.



// Ceiling Plenum

When sound travels along elements shared by adjacent structures, flanking noise transmission occurs. Flanking noise can easily exceed direct transmission and the performance gained from acoustic barriers can be entirely lost. Fitted in the plenum space above suspended ceilings and partition walls, ArmaComfort Barriers minimise flanking noise.



// Cabin

The noise in factory halls or machine rooms often exceeds acceptable levels and can impair the communication and concentration of staff. With ArmaComfort Barriers you can easily convert meeting or control rooms into soundproof cabins and thus create a quiet, safe and comfortable workplace.



// New Partition

Changes in construction practice have led to an increased use of lightweight components in modern buildings. As the low-mass materials offer poor sound transmission loss, noise can easily travel through walls and floors. Fitted between plasterboard walls, ArmaComfort Barriers greatly reduce the sound transmission and improve the performance at critical frequencies generated from adjacent rooms and by environmental noise.



// Refurbished Partition

An easy, space-saving and cost-effective way to achieve a much improved acoustic performance in residential and nonresidential premises. The visually attractive self-adhesive ArmaComfort Barrier P sheets can simply be glued to existing walls and provide highly improved sound control within just a few hours.* To check the compatibility of a desired coating please contact our technical service.



// HVAC

HVAC systems create noise and carry it from one room to another. If not acoustically treated, pipe- and ductwork act as a path sound travels along, throughout buildings. Noise from fans and motors is transmitted through ducts and grilles whistle or rattle. With ArmaComfort Barriers the transmission loss of pipes and ducts can be greatly improved and breakout noise minimised.

*Local fire regulations (e.g. firewalls) have to be observed.

TECHNICAL DATA - ARMACOMFORT BARRIER P

Brief description	High performance mass loaded sound barrier for a quieter environment.
Material type	EVA/EPM
Product colour range	White
Special features	Does not contain lead, bitumen, halogen and phosphate. 100% recyclable material.
Applications	Flexible sheet to reduce airborne sound transmission.
Installation	The substrate must be dry and free of dust and grease. At temperatures below 5 °C or high humidity (> 80%) increased condensation may form on the surfaces to be glued or adhesive films resulting in poor adhesive bonds. Test this with a piece of absorbent paper (blotting or crepe paper).

Property	Value / Assessment	Standard / Test method
Temperature range		
Service temperature ¹	Min. °C	Max. °C
	-20	80
Fire Performance and Approvals		
Reaction to fire	B-s1,d0 B-s2,d0 (self-adhesive)	EN 13501-1, EN 13823, EN ISO 11925-2
Smoke generation and toxicity test	low-flammable - 2010 FTP-Code (MED 96/98/EC, Module B&D)	IMO 2010 FTP Code, Part 2, IMO 2010 FTP Code, Part 5
Physical attributes		
Density	2100 kg/m ³ [±100]	DIN 53479
Dimensions and tolerances	Thickness ±0,1 [mm] Width ±5 [mm] Length ±15 [mm] (sheet 1000 to 3000 mm) and ±0,15 [m] (sheet 3 to 100 m)	
Mechanical properties		
Tensile strength	>1 N/mm ²	ASTM D412 (Die A)
Elongation at break	20 %	ASTM D412 (Die A)
Hardness (Shore A)	85 ± 10	
Acoustic performance		
Weighted sound reduction index, Rw [C ; Ctr] [dB]	1mm: 23 dB [C;Ctr] = (-1;-4) dB 2mm: 27 dB [C;Ctr] = (-1;-3) dB 3mm: 30 dB [C;Ctr] = (-1;-4) dB 4mm: 32 dB [C;Ctr] = (-1;-3) dB 5mm: 34 dB [C;Ctr] = (-1;-3) dB	ISO 10140-1, ISO 10140-2, EN ISO 717-1
Other technical features		
Application conditions	Application temperature between 5°C and 30°C with relative humidity <80%.	
Shelf life ²	Self-adhesive sheets: 1 year	
Storage	Can be stored in dry and clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0°C to 35°C).	

¹For use in temperatures beyond the maximum and minimum service temperature range indicated in the technical data table, please contact our Customer Service Centre.

²Shelf life (maximum storage time) is limited to ensure that only currently manufactured products are installed on projects. This limitation is restricted solely to storage of the product and does not affect the lifetime of product after it has been installed.

Roll – standard self-adhesive. White

Item	Thickness [mm]	Density [kg/sqm]	Width [m]	Length [m]	EAN	Content [metric]
AO-BAR-P-01-A	1	2,1	1	4	7612207462265	4 m ²
AO-BAR-P-02-A	2	4,2	1	2	7612207462159	2 m ²

Other information

Remarks Primary content: one roll per carton.

Sheet – self-adhesive. White

Item	Thickness [mm]	Density [kg/sqm]	Width [m]	Length [m]	EAN	Content [metric]
AO-BAR-P-03-A	3	6,30	1	2	7612207462227	120 m ²
AO-BAR-P-04-A	4	8,4	1	2	7612207462173	100 m ²
AO-BAR-P-05-A	5	10,50	1	2	7612207462289	80 m ²

Other information

Remarks ArmaComfort Barrier P is individually sold on an indivisible pallet. Hence, the minimum order quantity is one pallet per item.



INSTALL IT. ENJOY QUIETNESS.

ArmaComfort Barrier B

Excellent safe, high acoustic performance and healthy flexible noise barrier

- // Excellent at reducing the transmission of airborne sound
- // Excellent fire performance
- // Environmentally friendly: 100% recyclable
- // Halogen-free, lead-free, bitumen-free and phosphate-free
- // Self adhesive
- // Flexible, easy to cut and install.

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TECHNICAL DATA - ARMACOMFORT BARRIER B

Brief description	Flexible, mass-loaded sheet that reduces airborne sound transmission for a quieter environment.
Material type	EVA/EPM
Product colour range	Black
Special features	Does not contain lead, bitumen, halogen and phosphate. 100% recyclable material.
Installation	The substrate must be dry and free of dust and grease. At temperatures below 5 °C or high humidity (> 80%) increased condensation may form on the surfaces to be glued or adhesive films resulting in poor adhesive bonds. Test this with a piece of absorbent paper (blotting or crepe paper).

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature ¹	Min. °C	Max. °C ²	
	-20	80	
Fire Performance and Approvals			
Reaction to fire	B-s1,d0 B-s2,d0 (self-adhesive)		EN 13501-1, EN 13823, EN ISO 11925-2
Physical attributes			
Density	1950 kg/m³ [±100]		DIN 53479
Dimensions and tolerances	Thickness ±0,1 [mm] Width ±5 [mm] Length ±15 [mm] (sheet 1000 to 3000 mm) and ±0,15 [m] (sheet 3 to 100 m)		
Mechanical properties			
Tensile strength	> 1 N/mm²		ASTM D412 (Die A)
Elongation at break	20 %		ASTM D412 (Die A)
Hardness (Shore A)	80 ± 10		
Acoustic performance			
Weighted sound reduction index, Rw [C ; Ctr] [dB]	1mm: 23 dB [C;Ctr] = [-1;-4] dB 2mm: 27 dB [C;Ctr] = [-1;-4] dB 3mm: 30 dB [C;Ctr] = [-1;-4] dB 4mm: 32 dB [C;Ctr] = [-1;-3] dB		ISO 10140-1, ISO 10140-2, EN ISO 717-1
Other technical features			
Application conditions	Application temperature between 5 °C and 30 °C with relative humidity <80%.		
Shelf life ³	Self-adhesive sheets: 1 year		
Storage	Can be stored in dry and clean rooms at normal relative humidity (50% to 70%) and ambient temperature [0°C to 35°C].		

¹For use in temperatures beyond the published value, please contact Technical Services.

²For use in temperatures beyond the maximum and minimum service temperature range indicated in the technical data table, please contact our Customer Service Centre.

³Shelf life (maximum storage time) is limited to ensure that only currently manufactured products are installed on projects. This limitation is restricted solely to storage of the product and does not affect the lifetime of product after it has been installed.

Sheet – self-adhesive. Black

Item	Thickness [mm]	Density [kg/sqm]	Width (m)	Length [m]	EAN	Content [metric]
AO-BAR-B-03-A	3	5,85	1	2	7612207462258	120 m²
AO-BAR-B-04-A	4	7,80	1	2	7612207462272	100 m²

Other information

Remarks	ArmaComfort Barrier B is individually sold on an indivisible pallet. Hence, the minimum order quantity is one pallet per item.

Roll - standard self-adhesive. Black

Item	Thickness [mm]	Density [kg/sqm]	Width (m)	Length [m]	EAN	Content [metric]
AO-BAR-B-02-A	2	3,90	1	2	7612207462302	2 m²

Other information

Remarks	Primary content: one roll per carton



INSTALL IT. ENJOY QUIETNESS.

ArmaComfort Barrier B Alu

Excellent safe and healthy flexible heavy
mass acoustic barrier

- // Excellent at reducing the transmission of airborne sound with low wall thickness
- // Excellent fire performance: B-s1,d0 with self-adhesive
- // Environmentally friendly: 100% recyclable
- // Halogen-free, lead-free, bitumen-free and phosphate-free
- // Natural aluminum colour
- // Easy to install

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TECHNICAL DATA - ARMACOMFORT BARRIER B ALU

Brief description	Flexible, mass-loaded sheet with aluminum foil that reduces airborne sound transmission.
Material type	EVA/EPM
Product colour range	Silver (Covering)
Special features	Does not contain lead, bitumen, halogen and phosphate.
Applications	Flexible sheet to reduce airborne sound transmission.
Installation	The substrate must be dry and free of dust and grease. Certified and compatible adhesive for a long-term performing system is ArmaFlex 520.

Property	Value / Assessment	Standard / Test method
Temperature range		
Service temperature ¹	Min. °C	Max. °C ²
	-20	80
Fire Performance and Approvals		
Reaction to fire	B-s1,d0	EN 13501-1, EN 13823, EN ISO 11925-2
Physical attributes		
Density	1950 kg/m ³ [±100]	DIN 53479
Dimensions and tolerances	Thickness ±0,1 [mm] Width ±5 [mm] Length ±15 [mm] (sheet 1000 to 3000 mm) and ±0,15 [m] (sheet 3 to 100 m)	
Mechanical properties		
Tensile strength	>1 N/mm ²	ASTM D412 (Die A)
Hardness (Shore A)	80 ± 10	
Acoustic performance		
Weighted sound reduction index, Rw (C ; Ctr) [dB]	2mm: 27 dB [C;Ctr] = (-1;-4) dB 3mm: 30 dB [C;Ctr] = (-1;-4) dB 4mm: 32 dB [C;Ctr] = (-1;-3) dB	ISO 10140-1, ISO 10140-2, EN ISO 717-1
Other technical features		
Application conditions	Application temperature between 5°C and 30°C with relative humidity <80%.	
Shelf life ³	Self-adhesive sheets: 1 year	
Storage	Can be stored in dry and clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0°C to 35°C).	

¹For use in temperatures beyond the published value, please contact Technical Services.²For use in temperatures beyond the maximum and minimum service temperature range indicated in the technical data table, please contact our Customer Service Centre.³Shelf life (maximum storage time) is limited to ensure that only currently manufactured products are installed on projects. This limitation is restricted solely to storage of the product and does not affect the lifetime of product after it has been installed.

Sheet – precovered and self-adhesive. Silver

Item	Thickness [mm]	Density [kg/sqm]	Width [m]	Length [m]	EAN	Content [metric]
AO-BAR-BAL02-A	2	3,90	1	2	7612207462180	200 m ²
AO-BAR-BAL03-A	3	5,85	1	2	7612207462326	120 m ²
AO-BAR-BAL04-A	4	7,8	1	2	7612207462197	100 m ²

Other information

Remarks ArmaComfort Barrier B Alu is individually sold on an indivisible pallet. Hence, the minimum order quantity is one pallet per item.

Accessories

Item	Content [quantity]
AO-TAPE/50-AL-S-25	18 roll



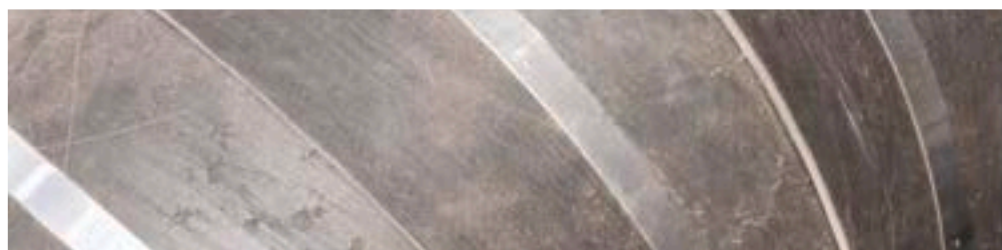
INSTALL IT. ENJOY QUIETNESS.

ArmaSound Barrier E

High performance noise barrier for
ArmaSound Industrial Systems

- // Excellent at reducing the transmission of airborne sound
- // Enhances the insertion loss performance of pipe insulation
- // Flexible, easy to install
- // Mean sound reduction index $R \geq 28$ dB
- // Free of lead, unrefined aromatic oils and bitumen
- // Integral component of ArmaSound Industrial Systems
- // Compliant to ISO 15665 Class C and Shell DEP 31.46.00.31-Gen Class D
- // Satisfies acoustic class B according to NORSOK M-004
- // Sound Transmission Class (STC) from 25 to 31 dB

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ArmaSound®

TECHNICAL DATA - ARMASOUND BARRIER E

Brief description	High performance mass loaded sound barrier for a quieter environment.
Material type	Vinyl sound barrier mat. Thermoplastic polymer compound.
Product colour range	Black
Special features	Does not contain lead, unrefined aromatic oils and bitumen.
Product range	Sheets / rolls in 2, 3 and 4 mm thickness (nominal values).
Applications	Flexible sheet for noise control in industrial applications - designed as an integral component of ArmaSound Industrial Systems.
Installation	Please refer to the ArmaSound Industrial Systems application manual before installation. Please contact Technical Services.

Property	Value / Assessment				Standard / Test method
Temperature range					
Service temperature	Min. °C	Min. °F	Max. °C	Max. °F	
	-20	-4	65	149	
Fire performance					
Practical fire behaviour	Self-extinguishing, burn rate (flame progression) < 100 mm/min.				FMVSS 302
Physical attributes					
Mass per unit area	2mm: 4.8 to 5.50 kg/m² [0,98 to 1.13 lb/ft²] 3mm: 7.2 to 8.25 kg/m² [1.47 to 1.69 lb/ft²] 4mm: 9.7 to 11.0 kg/m² [1.99 to 2.25 lb/ft²]				
Mechanical properties					
Tensile strength	≥ 1.8 MPa [≥ 261 psi]				ISO 37¹
Elongation	≥ 25%				ISO 37¹
Acoustic performance					
Reduction of structure-borne sound transmission²	for 2 mm thickness [5 kg/m²]*1: Mean sound reduction index Rw: ≥ 28 dB. for 3 mm thickness [7.5 kg/m²]*1: Mean sound reduction index Rw: ≥ 30 dB. for 4 mm thickness [10 kg/m²]*1: Mean sound reduction index Rw: ≥ 31 dB.				ISO 10140-2
Sound transmission class, STC²	2mm [5 kg/m²]: 28 dB 3mm [7.5 kg/m²]: 30 dB. 4mm [10 kg/m²]: 31 dB				ASTM E 413³
System acoustic insertion loss	When used as part of a system ArmaSound Barrier E complies to ISO 15665 Class C and Shell DEP 31.46.00.31 - Gen Class D.				ISO 3741, ASTM E1222, ISO 15665
Other technical features					
Adhesion and fixing	Adhesive 520 or Adhesive HT625 shall be used for reliable adhesion. 19mm wide stainless steel bands with wing clips (or blind rivets) shall be used for fixing and final securing. 50 mm long x 0.5 mm thick x 19 mm wide - stainless steel "S" clips are also required on vertical piping and vessels.				
Application conditions⁴,⁵	Application temperature: +5 to +35°C (+41 to 95°F) Max. relative humidity: 80%				
Shelf life⁶	Max. 3 years				
Storage	Material shall be stored indoors, in clean and dry conditions, away from direct sunlight.				

¹ Type 1 dumb-bell test piece. Maximum specimen thickness according to the test standard is 3mm.

² Nominal values.

³ Based on single test results. Can be used for information / reference only.

⁴ Application temperature refers to the ambient temperature during installation and the surface temperature of the substrate (e.g. ArmaClad Arma-Chek R covering) to which the product is installed.

⁵ For environmental conditions outside the given range, please contact Technical Services.

⁶ Shelf life (maximum storage time) is limited to ensure that only currently manufactured products are installed on projects. This limitation is restricted solely to storage of the product and does not affect the lifetime of product after it has been installed.

Sheet – standard. Black

Item	Thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
ASD-BAR-E-02	2	1,25	2	7612207323825	2.5 m ²
ASD-BAR-E-03	3	1,25	2	7612207323832	2.5 m ²
ASD-BAR-E-04	4	1,25	2	7612207323849	2.5 m ²

Roll - jumbo. Black

Item	Thickness [mm]	Density [kg/sqm]	Density [lbs/sqft]	Width [mm]	Width (m)	Length [m]	EAN	Content [metric]
ASD-BAR-E-02/E	2			625		140	7612207334722	87.5 m ²
ASD-BAR-E-03/E	3			625		93	7612207334739	116.26 m ²
ASD-BAR-E-04/E	4			625		70	7612207334746	43.75 m ²

Roll - jumbo. Black

Item	Thickness [mm]	Density [kg/sqm]	Density [lbs/sqft]	Width (m)	Length [m]

Other information

Remarks	Other dimensions can be supplied on request.



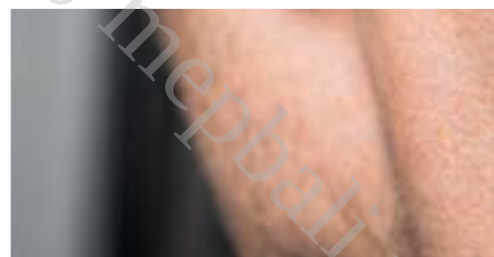
INSTALL IT. ENJOY QUIETNESS.

ArmaSound RD120

Excellent sound absorption performance

- // Retains acoustic properties throughout its service life
- // High acoustic performance with small wall thickness
- // Open-cell acoustic material highly flexible
- // Self-extinguishing, does not spread flames
- // Easy to apply and maintain

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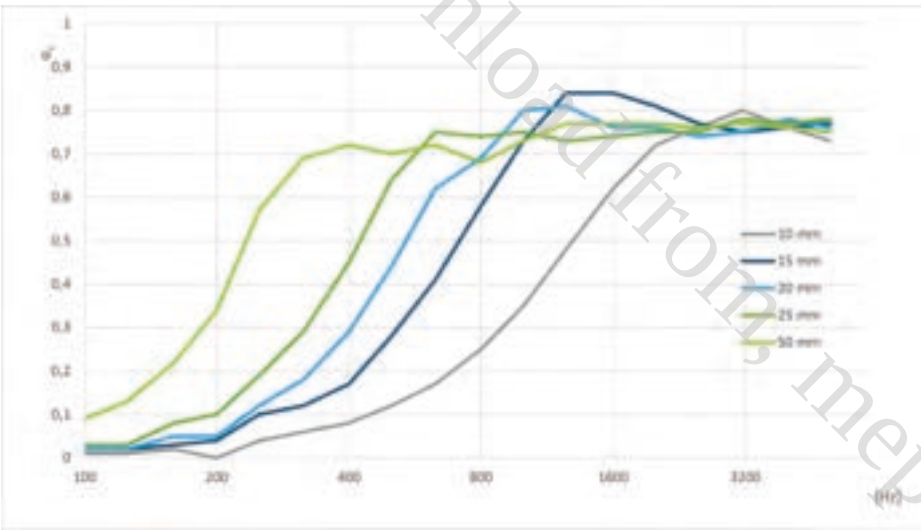


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ArmaSound®

TECHNICAL DATA - ARMASOUND RD120

Brief description	Highly flexible, hydrophobic, open-cell acoustic insulation material with complex pore geometry
Material type	Elastomeric foam based on synthetic rubber.
Product colour range	Black
Special features	Excellent sound absorption performance.
Applications	Acoustic insulating material with high sound absorption performance for use in a variety of different applications, e.g. fan-coil units, cabinet linings, chiller systems, enclosures, pipelines etc.
Installation	Use ArmaFlex HT625 adhesive for a reliable and seamless installation.

Property	Value / Assessment						Standard / Test method
Temperature range							
Service temperature	Range		Min. °C		Max. °C		
	Full range		-20		85		
Fire Performance and Approvals							
Reaction to fire	E						EN ISO 11925-2
Fire performance							
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames.						
Physical attributes							
Density	≥ 100 kg/m³						
Acoustic performance							
Sound absorption average	Thickness (mm)	10	15	20	25	50	
	SAA	0,20	0,35	0,40	0,50	0,75	
Noise reduction coefficient	Thickness (mm)	10	15	20	25	50	
	NRC	0,30	0,45	0,50	0,55	0,70	
Octave band sound absorption coefficient, α	Thickness	10mm	15mm	20mm	25mm	50mm	ISO 354, EN ISO 11654
	125 Hz	0,01	0,02	0,03	0,05	0,15	
	250 Hz	0,03	0,09	0,12	0,19	0,53	
	500 Hz	0,12	0,29	0,45	0,61	0,71	
	1000 Hz	0,36	0,72	0,77	0,74	0,73	
	2000 Hz	0,70	0,81	0,75	0,75	0,77	
	4000 Hz	0,76	0,76	0,76	0,78	0,76	

Property	Value / Assessment	Standard / Test method
Absorption coefficient graph		
Practical sound absorption coefficient, α_p	$\leq 0,80$ EN ISO 20354	
Weather and UV resistance		
Weather resistance	In all industrial applications, except for enclosures and other similar sound absorption applications, the outer layer of the material must be protected with an adequate covering e.g. Arma-Chek R, metal jacketing or preformed UV-cured GRP (Glass-Reinforced Plastic) cladding. For further information, please contact Technical Services.	
Other technical features		
Adhesion and sealing	In some configurations, 19mm wide stainless steel bands with wing clips (or blind rivets) shall be used for fixing and final securing.	
Application conditions ¹	Application temperature: +5°C to +35°C (+41F to +95F) Max. relative humidity: 80%	
Shelf life ²	Max. 3 years Self-adhesive: 1 year	
Storage ²	Material shall be stored indoors, in clean and dry conditions, away from direct sunlight.	

¹ Application temperature refers to the ambient temperature during installation and the surface temperature of the substrate (e.g. ArmaClad Arma-Chek R covering) to which the product is installed.

² Shelf life (maximum storage time) is limited to ensure that only currently manufactured products are installed on projects. This limitation is restricted solely to storage of the product and does not affect the lifetime of product after it has been installed.

Sheet – standard. Black

Item	Thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
ASD-120-06	6	1	1	7612207305234	8 m ²
ASD-120-10	10	1	1	7612207305258	5 m ²
ASD-120-15	15	1	1	7612207305272	3 m ²
ASD-120-20	20	1	1	7612207305296	2 m ²
ASD-120-25	25	1	1	7612207305319	2 m ²

Other information

Remarks	Primary content available in sheets packed in carton.

Sheet – self-adhesive. Black

Item	Thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
ASD-120-06/A	6	1	1	7612207305241	8 m ²
ASD-120-10/A	10	1	1	7612207305265	5 m ²
ASD-120-15/A	15	1	1	7612207305289	3 m ²
ASD-120-20/A	20	1	1	7612207305302	2 m ²
ASD-120-25/A	25	1	1	7612207305326	2 m ²

Other information

Remarks	Primary content available in sheets packed in carton.

INSTALL IT. ENJOY QUIETNESS.

ArmaSound RD240

Optimal performance at lower thickness

- // Excellent sound absorption behaviour
- // Highly hydrophobic, open-cell structure designed to resist water ingress
- // Air-flow resistivity and complex pore geometry for maximum acoustic benefit
- // Easy application and low maintenance
- // Designed for use in demanding environments

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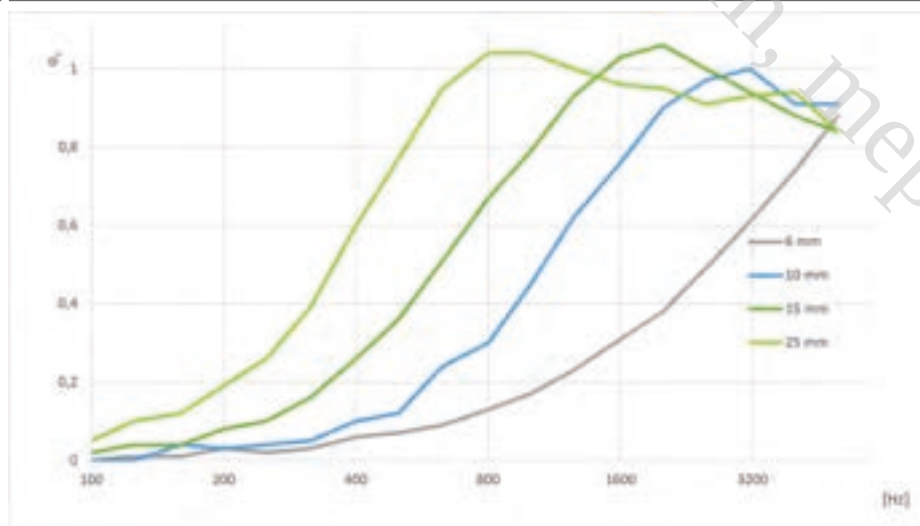
TECHNICAL DATA - ARMASOUND RD240

Brief description	Highly flexible, hydrophobic, open-cell acoustic insulation material with complex pore geometry.
Material type	Elastomeric foam based NBR/PVC synthetic rubber.
Product colour range	Black
Special features	Excellent sound absorption performance.
Product range	Sheets, 10, 15, 20, and 25mm thickness / width 500 and 1000 mm / length 1000 and 2000 mm.
Applications	In general applications ArmaSound RD240 is used as acoustic insulation material with excellent sound absorption performance in a variety of different applications, e.g. fan-coil units, duct linings, cabinet linings, chiller systems, enclosures, pipelines. In industrial applications ArmaSound RD240 is used as an important component of ArmaSound Industrial Systems to provide acoustic insulation on industrial pipework and vessels ensuring reduction of sound transmission. As part of system, compliant to ISO 15665 Classes A to D and satisfies acoustic classes 6, 7, and 8 according to NORSOK M-004. Further industrial application area is sound absorption performance of enclosures.
Installation	Please refer to the ArmaSound Industrial Systems application manual before installation. Please contact Technical Services.
Remarks	Certificate of Fire Approval by Lloyd's Register (Class 1, BS 476 part 7).

Property	Value / Assessment					Standard / Test method
Temperature range						
Service temperature	Min. °C	Min. °F	Max. °C	Max. °F	EN 14706, EN 14707, EN 14304	
	-20	-4	85	185		
Thermal conductivity						
Declared thermal conductivity	Øm		0 °C (32 °F)		EN 12667	
	λd ≤ [W/(m·K)]		0,062			
	k ≤ [Btu·in/(h·ft²·°F)]		0,430			
Fire Performance and Approvals						
Surface spread of flame	Class 1 Lloyds Register Approval				BS 476 Part 7	
Surface burning characteristics	< 25 flame spread index				ASTM E84	
Fire performance						
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames.					
Resistance to water						
Water absorption¹	≤ 10% by volume after 24 hours				AGI Q 136	
Physical attributes						
Density	220 to 360 kg/m³ 13.7 to 25.5 lb/ft³				ISO 845, ASTM D1622	
Mechanical properties						
Tensile strength	(MD) 70 to 190 kPa 10.2 to 27.6 psi				ISO 1798²	
Elongation	50 to 90 %				ISO 1798²	
Tear strength	0.4 to 1.4 kN/m 2.3 to 8.0 lbf/in				ISO 34-1³	
Acoustic performance						
Weighted sound absorption coefficient, αw¹	6 mm: 0.15 (H) Class E 10 mm: 0.25 (H) Class E 15 mm: 0.40 (MH) Class D 25 mm: 0.55 (MH) Class C				ISO 354, EN ISO 11654	
Noise reduction coefficient¹	Thickness (mm)	6	10	15	ASTM C423	
	NRC	0,15	0,40	0,60		

Property	Value / Assessment					Standard / Test method
Octave band sound absorption coefficient, α^1	Thickness	6mm	10mm	15mm	25mm	ISO 354, EN ISO 11654
	125 Hz	0,01	0,01	0,03	0,09	
	250 Hz	0,03	0,04	0,11	0,28	
	500 Hz	0,07	0,15	0,38	0,77	
	1000 Hz	0,18	0,46	0,80	1,03	
	2000 Hz	0,39	0,87	1,03	0,94	
	4000 Hz	0,74	0,94	0,89	0,90	

Absorption coefficient graph

**Weather and UV resistance**

Weather resistance	In all industrial applications, except for enclosures and other similar sound absorption applications, the outer layer of the material must be protected with an adequate covering like Arma-Chek R, metal jacketing or preformed UV-cured GRP (Glass-Reinforced Plastic) cladding. For further information please contact Technical Services.

Health and environment

Health aspects	Fibre dust free

Other technical features

Additional remarks	For environmental conditions outside the given range please contact Technical Services.
Adhesion and sealing	ArmaFlex Adhesive 520 or Adhesive HT625 shall be used for reliable adhesion of joints and seams. In some configurations 19 mm wide stainless steel bands with wing clips (or blind rivets) shall be used for fixing and final securing.
Application conditions ⁴	Application temperature: +5 °C to +35 °C (+41 °F to +95 °F) Maximum relative humidity: 80%
Shelf life ⁵	Max. 3 years
Storage	Material shall be stored indoors, in clean and dry conditions, away from direct sunlight.

¹ Based on single test results. Can be used for information / reference only.² Type 1 sample.³ Minimum value in Machine Direction (MD) and in Cross Direction (CD). Method B, procedure (b), angle test piece with a nick.⁴ Application temperature (temperature of installation) refers to the ambient temperature during application and the surface temperature of the substrate to which the product is installed.⁵ Shelf life (maximum storage time) is limited to ensure that only currently manufactured products are installed on projects. This limitation is restricted solely to storage of the product and does not affect the lifetime of product after it has been installed.

Sheet – standard. Black

Item	Thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
ASD-240-10	10	1	1	7612207304886	5 m ²
ASD-240-15	15	1	1	7612207304909	3 m ²
ASD-240-20	20	1	1	7612207304923	2 m ²
ASD-240-25	25	1	1	7612207304947	2 m ²

Other information

Remarks

Primary content available as sheet(s) packed in carton.

Sheet – self-adhesive. Black

Item	Thickness [mm]	Width (m)	Length [m]	EAN	Content [metric]
ASD-240-06/A	6	1	1	7612207304879	8 m ²
ASD-240-10/A	10	1	1	7612207304893	5 m ²
ASD-240-15/A	15	1	1	7612207304916	3 m ²
ASD-240-20/A	20	1	1	7612207304930	2 m ²
ASD-240-25/A	25	1	1	7612207304954	2 m ²

Other information

Remarks

Primary content available as sheet(s) packed in carton.



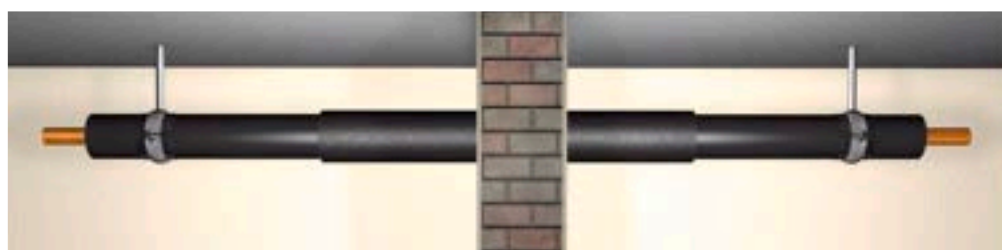
INSTALL IT. ENSURE SAFETY.

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
- // Fire resistance up to B-15
- // 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

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ArmaFlex®

INSTALL IT. ENSURE SAFETY.

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

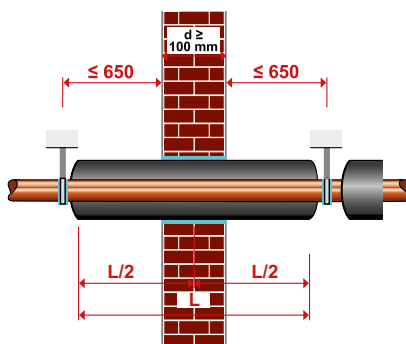
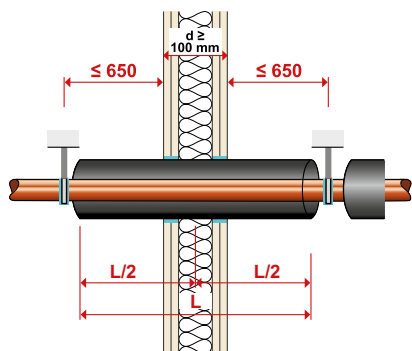
Pipe outer diameter	Line temperature / Ambient temperature			
	+6 °C / 23 °C	0 °C / 23 °C	-5 °C / 23 °C	-10 °C / 23 °C
≥ 10 mm ≤ 323,9 mm	Relative humidity ≤ 80 %	Relative humidity ≤ 75 %	Relative humidity ≤ 70 %	Relative humidity ≤ 65 %

// 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, A-60 and B-15).
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.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature	Min. °C	Max. °C	EN 14706, EN 14707, EN 14304
	-50	85	
Thermal conductivity			
Declared thermal conductivity	Øm	0 °C	EN 12667, EN ISO 8497
	λd ≤ [W/(m·K)]	0,056	
	Formula	λd = 0.056 + 0,0001 · Øm	
Fire Performance and Approvals			
Reaction to fire	E(L) for tubes E for sheets		EN 13501-1, EN ISO 11925-2
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))
Passive fire protection			
Fire resistance of elements of construction	up to EI 120		EN 13501-2, EN 1366-3
Fire performance			
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames		
Resistance to water vapour			
Water vapour diffusion resistance factor	μ ≥ 7,000		EN 12086, EN 13469
Health and environment			
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
Health aspects	Please refer to latest product Safety Datasheet (SDS).		
Emission of dangerous substances	No dangerous substances.		
Additional features	SCCP, MCCP-free		
Other technical features			
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	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
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
76	PRO-AX-25X076	ArmaFlex Protect tube (1 m, outer-Ø 76 mm, 25 mm insulation thickness)	25	7612207284454	4 m

Tube – standard. Black

Pipe Ø [mm]	Item	Description	Insulation thickness [mm]	EAN	Content [metric]
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	Content [metric]
PRO-AX-13MM/E	13	ArmaFlex Protect sheet (6 m x 0,5 m, 13 mm insulation thickness)	0,5	6	7612207335880	6 m ²



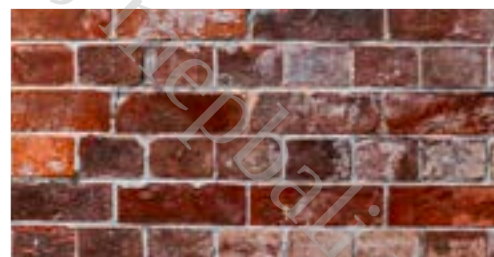
ENHANCING SAFETY LEVELS
TO PROTECT PROPERTY AND
SAVE LIVES.

ArmaProtect 1000

Firestop filler

- // Sealing annular gap in applications using ArmaFlex Protect
- // For pipe and cable penetrations in accordance with the German MLAR

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ArmaProtect®

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.
Product colour range	Light grey
Applications	Ideal system solution for sealing the annular gap in applications using ArmaFlex Protect. Furthermore, in accordance with the German MLAR 2020, ArmaProtect 1000 can be used for penetrations with individual pipes or even electricity cables. Only for indoor use.
Installation	The ready-to-use ArmaProtect 1000 Firestop Filler is supplied in buckets / handy plastic bag 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. The drying time per cm layer thickness is approx. 48 hours at room temperature. High humidity, low temperature and as well limited convection extend the drying time.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Property	Value / Assessment		Standard / Test method
Thermal conductivity			
Declared thermal conductivity	Øm	10 °C	EN 12667
	λd ≤ [W/(m·K)]	0,052	
	Remarks	λd is valid for the dry material.	
Fire Performance and Approvals			
Reaction to fire	Class A1 - non-combustible		EN 13501-1, EN ISO 1716, EN ISO 1182
Fire performance			
Melting point [°C]	≥ 1000		DIN 4102-17
Corrosion mitigation			
Leachable (water-soluble) chlorides	≤ 0,01%		EN 998-2
Physical attributes			
Density	approx. 180 kg/m³ (after drying)		
Mechanical properties			
Compressive strength	0,4 N/mm² (MPa)		EN 998-2
Health and environment			
Health aspects	Please refer to latest product Safety Datasheet (SDS).		
Other technical features			
Shelf life	24 months in sealed original container.		
Storage	In a cool and dry place. Protect from temperatures below +5 °C!		
Yield	1:1		

Fire protection compound

Item	Description	EAN	Content [quantity]
PRO-1000-0,5B	ArmaProtect 1000 Fire protection compound (0,5 l tube)	7612207364545	20 piece

Fire protection compound

Item	Description	EAN	Content [quantity]
PRO-1000-1,0	ArmaProtect 1000 Fire protection compound (1 l pail)	7612207317541	27 piece
PRO-1000-2,5	ArmaProtect 1000 Fire protection compound (2,5 l pail)	7612207317558	12 piece

Fire protection compound

Item	Description	EAN	Content [quantity]
PRO-1000-5,0	ArmaProtect 1000 Fire protection compound (5 l pail)	7612207317565	8 piece



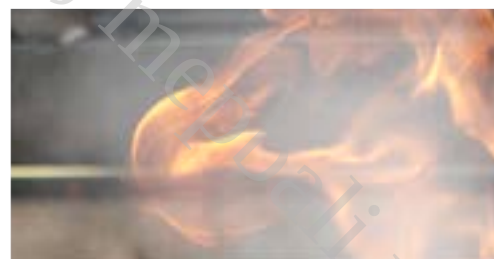
ENHANCING SAFETY LEVELS
TO PROTECT PROPERTY AND
SAVE LIVES.

ArmaProtect CM

Firestop mortar 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
- // Speed pipes
- // From medium to large firestop penetrations

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 **armacell**
ArmaProtect®

INSTALL IT. ENSURE SAFETY.

ArmaProtectTM

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 CM

Brief description	ArmaProtect CM is a cement-based firestop mortar used to maintain the fire resistance performance of fire penetrations in walls and floors.		
Material type	Cement-based firestop mortar.		
Additional material information	6 - 7 l water + 20 kg dry mortar ≈ 20 l ready-to-use wet mortar ≈ 20 l volume after hardening		
Product colour range	Grey		
Product range	Available as a 20 kg bag of mortar. 25 bags on a pallet.		
Applications	Firestop mortar 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	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .		
Approvals and compliance			
Specification compliance	• ETA-22/0064 acc. EN 1366-3		
Property	Value / Assessment		Standard / Test method
Operating temperature			
Operating temperature	5 °C to 200 °C (41 °F to 392 °F)		
Processing Temperature			
Processing temperature	5°C to 25°C (41°F to 77°F)		
Fire Performance and Approvals			
Reaction to fire	Class A1		EN 13501-1
Use category	Type Z1: intended for uses in internal conditions with high humidity (permanent, changing or temporary condensation) excluding temperatures below 0°C, without exposure to rain or UV.		EOTA TR 024
Passive fire protection			
Fire resistance of elements of construction	Drywall, concrete wall, aerated concrete wall, masonry wall, concrete floor: up to EI 240 UL approved system: FT-Rating - up to 3 hours		ANSI/UL 1479 (ASTM E814), EN 13501-2
Mechanical properties			
Dry bulk density	approx. 900 kg/m³		EN 998-2
Bulk density	1200 ± 100 kg/m³ (fresh mortar)		EN 998-2
Pressure resistance	M 2.5		EN 998-2
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			
Cure time	Fully cured after approximately 28 days.		
Shelf life	Can be kept for at least 12 months unopened if stored properly.		
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 mortar

Item	Description	EAN	Content [quantity]
PRO-CM-20KG	ArmaProtect CM Firestop mortar 20 kg bag	7612207503487	1 piece



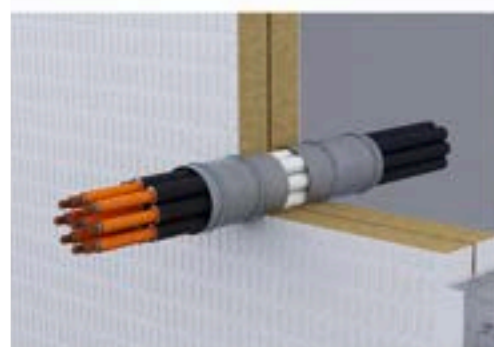
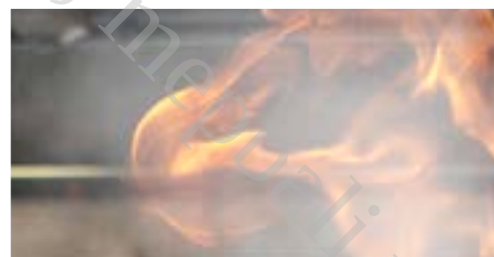
ENHANCING SAFETY LEVELS
TO PROTECT PROPERTY AND
SAVE LIVES.

ArmaProtect ABLC

Ablative coating for 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
- // From medium to large firestop penetrations

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TECHNICAL DATA - ARMAPROTECT ABLC

Brief description	ArmaProtect ABLC is an ablative firestop coating. In case of fire, the construction product forms a protective layer on the surfaces to be protected. ArmaProtect ABLC can also be used for fire protection application for cables.		
Material type	Ablative firestop coating.		
Additional material information	The coating is halogen and solvent-free.		
Product colour range	White		
Applications	ArmaProtect ABLC for use in penetration seals as well as for coating of ArmaProtect CB (mineral wool board). ArmaProtect ABLC can also be used for fire protection application to prevent flame spread on cables, cable bundles and cable trays.		
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 acc. UL 1479 (ASTM E814)	• DNV (IEC 60332)	• FM 3971
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)		
Fire Performance and Approvals			
Reaction to fire	Class E		EN 13501-1
Use category	Type X: intended for use in conditions exposed to weathering		EOTA TR 024
Passive fire protection			
Fire resistance of structural element	UL approved system: FT-Rating - up to 3 hours DNV approved system: protection of cable (test duration 60 minutes according IEC 60332-3-22, Category A: 2018) FM Approval Class 3971 (Fire Protective Coatings and Wraps for Grouped Cables): protection of cable		ANSI/UL 1479 (ASTM E814), IEC 60332-3-22 (Category A:2018)
Physical attributes			
Density	1.34 - 1.48 g/cm³ (at 20 °C)		
Health and environment			
Volatile organic compounds (VOC) content	< 50 g/l		GS-11, Green Seal Standard
Emission of dangerous substances	No dangerous substances.		
Other technical features			
Shelf life	Can be kept for at least 18 months unopened if stored properly.		
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 coating

Item	Description	EAN	Content [quantity]
PRO-ABLC-12.5KG	ArmaProtect ABLC Firestop coating in a 12,5 kg pail	7612207503234	1 piece
PRO-ABLC-15KG	ArmaProtect ABLC Firestop coating in a 15 kg pail	7612207503265	1 piece



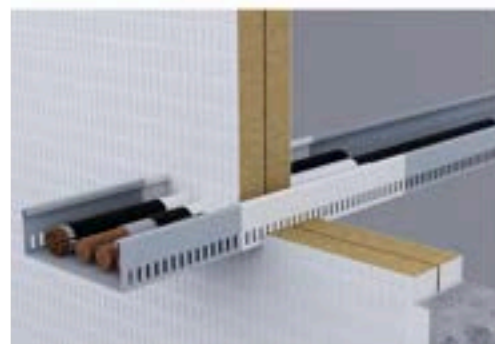
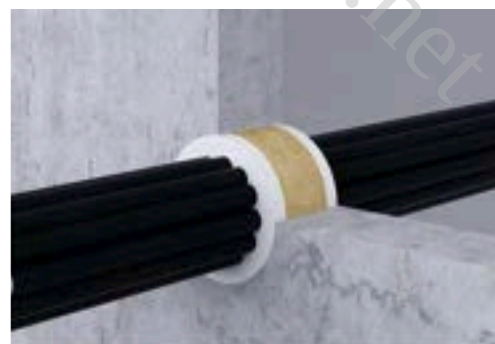
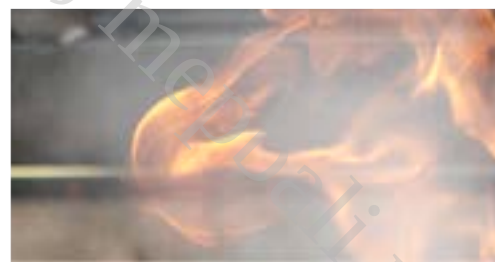
ENHANCING SAFETY LEVELS
TO PROTECT PROPERTY AND
SAVE LIVES.

ArmaProtect ABLF

Flexible acrylic firestop filler mastic for
mixed fire seals and joints 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
- // Structural joints in indoor and outdoor areas
- // For sealing connections and joints with moderate expansion stress and without constant exposure to moisture

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TECHNICAL DATA - ARMAPROTECT ABLF

Brief description	ArmaProtect ABLF is an ablative firestop filler mastic that maintains the fire resistance performance of fire penetrations in walls and floors.		
Material type	Ablative firestop filler mastic.		
Additional material information	ArmaProtect ABLF is halogen and solvent-free.		
Product colour range	White		
Applications	ArmaProtect ABLF use for linear joints and gap sealing as well as for coated mineral wool boards (ArmaProtect CB).		
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 acc. UL 1479 (ASTM E814)		
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)		
Fire Performance and Approvals			
Reaction to fire	Class E		EN 13501-1
Use category	Type X: intended for use in conditions exposed to weathering		EOTA TR 024
Passive fire protection			
Fire resistance of structural element	UL approved system: FT-Rating - up to 3 hours		ANSI/UL 1479 (ASTM E814)
Physical attributes			
Density	1.34 - 1.48 g/cm³ (at 20 °C)		
Health and environment			
Volatile organic compounds (VOC) content	< 50 g/l		
Other technical features			
Shelf life	Can be kept for at least 18 months unopened if stored properly.		
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 filler

Item	Description	EAN	Content [quantity]
PRO-ABLF-310ML	ArmaProtect ABLF Firestop filler mastic in a 310 ml cartridge	7612207503180	12 piece

Firestop filler

Item	Description	EAN	Content [quantity]
PRO-ABLF-12.5KG	ArmaProtect ABLF Firestop filler mastic in a 12,5 kg pail	7612207503272	1 piece
PRO-ABLF-15KG	ArmaProtect ABLF Firestop filler mastic in a 15 kg pail	7612207503289	1 piece



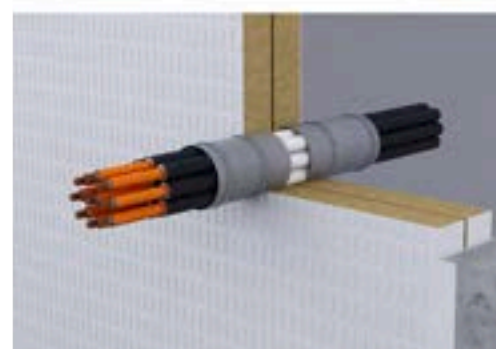
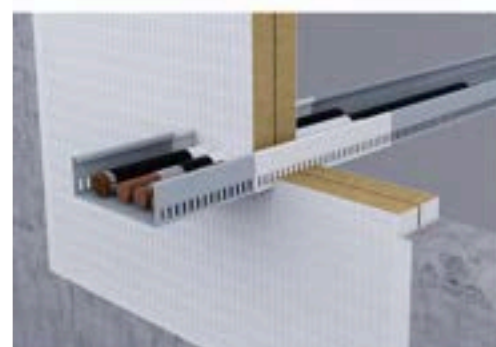
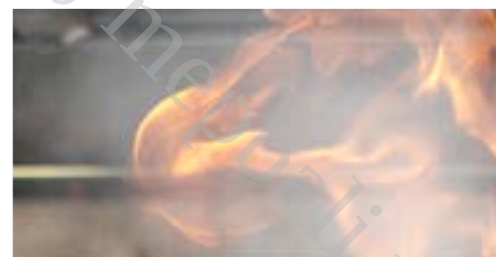
ENHANCING SAFETY LEVELS
TO PROTECT PROPERTY AND
SAVE LIVES.

ArmaProtect CB

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
- // From medium to large firestop penetrations

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TECHNICAL DATA - ARMAPROTECT CB

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 humidity, 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	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Approvals and compliance

Specification compliance	• ETA-22/0063 acc. EN 1366-3

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)	
Fire Performance and Approvals		
Reaction to fire	Class E	EN 13501-1
Use category	Type X: intended for use in conditions exposed to weathering	EOTA TR 024
Passive fire protection		
Fire resistance of structural element	Concrete wall, aerated concrete wall, masonry wall, concrete floor: up to EI 240 UL approved system: FT-Rating - up to 3 hours	ANSI/UL 1479 (ASTM E814), EN 13501-2
Physical attributes		
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)	
Health and environment		
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
Health aspects	Please refer to the safety data sheet available on our website.	
Emission of dangerous substances	No dangerous substances.	
Other technical features		
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)	EOTA TR 024
Shelf life ¹	Can be kept for at least 18 months if unopened and stored properly.	
Storage	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)	

Property	Value / Assessment	Standard / Test method
	ArmaProtect ABLF Firestop filler mastic: 5°C to 25°C (41°F to 77°F)	
	Store / Transport in a cool and dry place and protect from frost.	

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

Coated board system

Item	Description	EAN	Content [quantity]
PRO-CB-60S1	ArmaProtect CB Coated firestop board 1000 mm x 600 mm x 60 mm S1 (one-side coated board, dry-film thickness: 0.7 mm)	7612207503555	4 piece
PRO-CB-60S2	ArmaProtect CB Coated firestop board 1000 mm x 600 mm x 60 mm S2 (two-side coated board, dry-film thickness: 0.7 mm)	7612207503470	4 piece



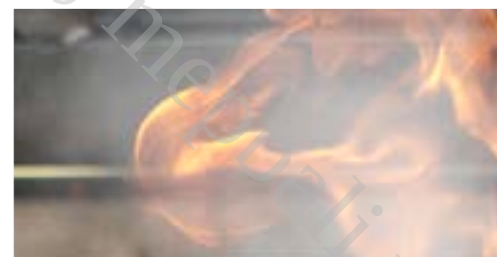
ENHANCING SAFETY LEVELS
TO PROTECT PROPERTY AND
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ArmaProtect EXPS

Intumescent firestop sealant for mixed
fire seals in walls and floors

- // Blank openings
- // Cables and cable bundles
- // Conduit and conduit bundles
- // Non-combustible and combustible pipes
- // For small firestop penetrations

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TECHNICAL DATA - ARMAPROTECT EXPS

Brief description	ArmaProtect EXPS is an intumescent firestop sealant used to maintain the fire resistance performance of fire penetrations in walls and floors.
Material type	Intumescent firestop sealant.
Additional material information	Paste-like consistency.
Product colour range	Grey
Product range	Available as 310 ml cartridges and packed as 12 cartridges in a carton.
Applications	Firestop sealant for fire seals in walls and floors for blank openings, cables, cable bundles, 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	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Approvals and compliance

Specification compliance	ETA-21 /1025 acc. EN 1366-3

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)	
Fire Performance and Approvals		
Reaction to fire	Class E	EN 13501-1
Volume expansion	15 - 26.5 times	
Use category	Type X: intended for use in conditions exposed to weathering.	EOTA TR 024
Passive fire protection		
Fire resistance of elements of construction	Up to EI 120	EN 13501-2
Physical attributes		
Density	1300 kg/m ³ ± 10%	
Mechanical properties		
Expansion pressure	1.0 - 1.9 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	Can be kept for at least 18 months unopened if stored properly.	
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 sealant

Item	Description	EAN	Content [quantity]
PRO-EXPS-310ML-GY	ArmaProtect EXPS Firestop sealant in a 310 ml cartridge	7612207503661	12 piece



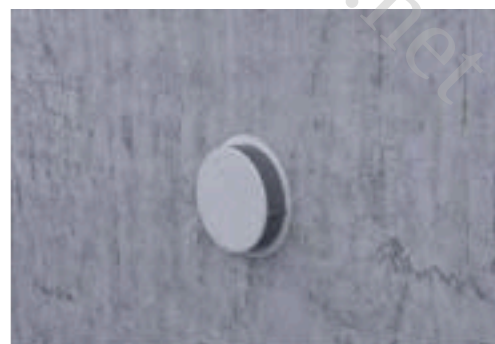
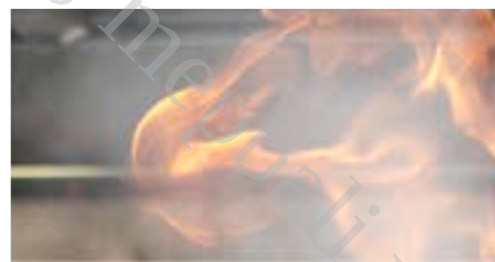
ENHANCING SAFETY LEVELS
TO PROTECT PROPERTY AND
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ArmaProtect CT

Cable tube for fire seals in walls and
floors

- // Blank openings
- // Cables and cable bundles
- // Conduit and conduit bundles
- // Combustible pipes
- // HVAC split-line combinations
- // Ideally for retrofitting applications
- // For small firestop penetrations

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TECHNICAL DATA - ARMAPROTECT CT

Brief description	ArmaProtect CT consists for two half shells with intumescent inlay and a soft foam plug. It is designed for use as small penetration seals in core drillings or as cast-in-solutions.
Material type	PVC cable tube half shells with intumescent fabric inlay. Closure are made of soft foam plugs.
Additional material information	Half-shells can be closed with a click lock.
Product colour range	Grey half shells with red inner lining
Special features	Ideal as a retrofitting device.
Product range	Cable tubes including soft foam plugs are available in lengths of 150 mm (foam plug diameter: 60 mm, 90 mm and 116 mm), 200 mm (foam plug diameter: 90 mm and 116 mm) and 300 mm (foam plug diameter: 90 mm and 116 mm).
Applications	Firestop device for fire seals in walls and floors for blank openings, cables, cable bundles, combustible pipes and HVAC split-line combinations.
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	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Approvals and compliance

Specification compliance	ETA-22/0062 acc. EN 1366-3

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)	
Fire Performance and Approvals		
Reaction to fire	Class E	EN 13501-1
Use category	Type X: intended for use in conditions exposed to weathering	EOTA TR 024
Passive fire protection		
Fire resistance of elements of construction	Drywall, concrete wall, aerated concrete wall, masonry wall, concrete floor: up to EI 120 UL approved system: FT-Rating - up to 3 hours	ANSI/UL 1479 (ASTM E814), EN 13501-2
Health and environment		
Health aspects	Please refer to the safety data sheet available on our website.	
Emission of dangerous substances	No dangerous substances.	
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.	

Firestop cable tube

Item	Description	EAN	Content [quantity]
PRO-CT-C060	ArmaProtect CT Firestop Cable tube plug Ø 60 mm packed as a set of 10 soft plugs	7612207503494	1 piece
PRO-CT-C090	ArmaProtect CT Firestop Cable tube plug Ø 90 mm packed as a set of 10 soft plugs	7612207503562	1 piece
PRO-CT-C116	ArmaProtect CT Firestop Cable tube plug Ø 116 mm packed as a set of 10 soft plugs	7612207503579	1 piece
PRO-CT-L090	ArmaProtect CT Firestop Cable tube 300 mm / Ø 90 mm packed as 1 cable tube with 2 soft plugs	7612207503586	6 piece
PRO-CT-L116	ArmaProtect CT Firestop Cable tube 300 mm / Ø 116 mm packed as 1 cable tube with 2 soft plugs	7612207503593	12 piece
PRO-CT-M090	ArmaProtect CT Firestop Cable tube 200 mm / Ø 90 mm packed as 1 cable tube with 2 soft plugs	7612207503609	8 piece
PRO-CT-M116	ArmaProtect CT Firestop Cable tube 200 mm / Ø 116 mm packed as 1 cable tube with 2 soft plugs	7612207503616	18 piece
PRO-CT-S060	ArmaProtect CT Firestop Cable tube 150 mm / Ø 60 mm packed as 1 cable tube with 2 soft plugs	7612207503623	30 piece
PRO-CT-S090	ArmaProtect CT Firestop Cable tube 150 mm / Ø 90 mm packed as 1 cable tube with 2 soft plugs	7612207503630	12 piece
PRO-CT-S116	ArmaProtect CT Firestop Cable tube 150 mm / Ø 116 mm packed as 1 cable tube with 2 soft plugs	7612207503647	24 piece



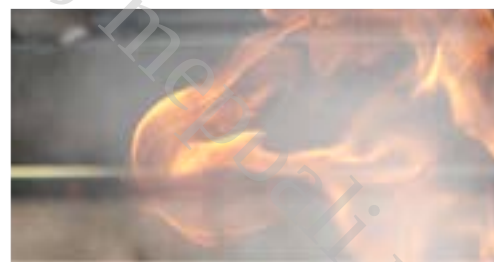
ENHANCING SAFETY LEVELS
TO PROTECT PROPERTY AND
SAVE LIVES.

ArmaProtect FW1

Firestop wrap for fire seals in walls and
floors

- // Non-combustible pipes up to Ø 323.9mm with
combustible insulation
- // Composite pipes
- // Conduits and conduit bundles

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TECHNICAL DATA - ARMAPROTECT FW1

Brief description	ArmaProtect FW1 is a fabric-based firestop wrap that helps to maintain the fire resistance performance of fire penetrations in walls and floors.		
Material type	Glass filament fabric composite with insulation layer forming coating on the inside and the outside.		
Product colour range	Red on the outside, anthracite on the inside		
Special features	Flexible and tear-resistant.		
Product range	Firestop wrap roll with dimensions of 10m x 100mm x 1.5mm in a cardboard box.		
Applications	Firestop wrap for fire seals in walls and floors for cable bundles, conduit bundles 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.		
Approvals and compliance			
Specification compliance	ETA-22/0063 and ETA-22/0064 acc. EN 1366-3	UL acc. UL 1479 (ASTM E814)	
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)		
Fire Performance and Approvals			
Reaction to fire	Class E		EN 13501-1
Use category	Type X: intended for use in conditions exposed to weathering. Type Y1: intended for use at temperatures below 0°C with exposure to UV but no exposure to rain Type Y2: intended for use at temperatures below 0°C, but with no exposure to rain or UV. Type Z1: intended for use in internal conditions with humidity equal to or higher than 85% RH excluding temperatures below 0°C, without exposure to rain or UV. Type Z2: intended for uses in internal conditions with humidity lower than 85 % RH excluding temperatures below 0°C, without exposure to rain or UV.		EOTA TR 024
Passive fire protection			
Fire resistance of elements of construction	UL approved system: FT-Rating - up to 3 hours		ANSI/UL 1479 (ASTM E814)
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.		

Firestop wrap

Item	Description	EAN	Content [quantity]
PRO-FW1-10M	ArmaProtect FW1 Firestop wrap (10 m x 100 mm x 1,5 mm)	7612207503760	1 piece



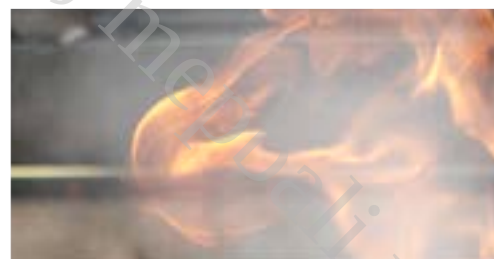
ENHANCING SAFETY LEVELS
TO PROTECT PROPERTY AND
SAVE LIVES.

ArmaProtect FW2

Firestop wrap for fire seals in walls and
floors

- // Non-combustible pipes up to Ø 323.9mm with
combustible insulation
- // Composite pipes
- // Conduits and conduit bundles

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TECHNICAL DATA - ARMAPROTECT FW2

Brief description	ArmaProtect FW2 is a fabric-based firestop wrap that helps to maintain the fire resistance performance of fire penetrations in walls and floors.
Material type	Glass filament fabric composite with insulation layer forming coating on the inside.
Product colour range	Grey on the outside, anthracite on the inside
Special features	Flexible and tear-resistant.
Product range	Firestop wrap roll with dimensions of 10m x 125mm x 1.5mm in a cardbox.
Applications	Firestop wrap for fire seals in walls and floors for non-combustible pipes with combustible insulation, multi-layer composite pipes, conduits and conduit bundles.
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	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Approvals and compliance

Specification compliance	• ETA-21/1026 acc. EN 1366-3 • UL acc. UL 1479 (ASTM E814)

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)	
Fire Performance and Approvals		
Reaction to fire	Class B-s1,d0	EN 13501-1
Use category	Type X: intended for use in conditions exposed to weathering	EOTA TR 024
Passive fire protection		
Fire resistance of elements of construction	Drywall, concrete wall, aerated concrete wall, masonry wall, shaft wall, concrete floor: up to EI 120 UL approved system: FT-Rating - up to 3 hours	EN 13501-2, ANSI/UL 1479 (ASTM E814)
Health and environment		
Health aspects	Please refer to the safety data sheet available on our website.	
Emission of dangerous substances	No dangerous substances.	
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.	

Firestop wrap

Item	Description	EAN	Content [quantity]
PRO-FW2-10M	ArmaProtect FW2 Firestop wrap (10 m x 125 mm x 1,5 mm)	7612207503777	1 piece



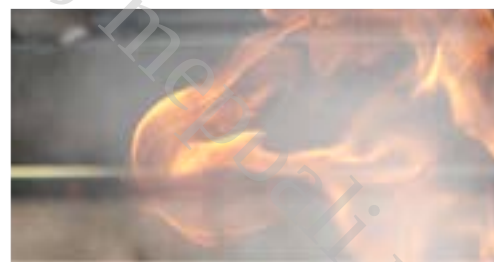
ENHANCING SAFETY LEVELS
TO PROTECT PROPERTY AND
SAVE LIVES.

ArmaProtect FW3

Firestop wrap for fire seals in walls and
floors

- // Combustible pipes $\varnothing \leq 160\text{mm}$ (without combustible insulation)
- // Combustible pipes $\varnothing \leq 110\text{mm}$ (with combustible insulation)
- // Multi-layer composite pipes $\varnothing \leq 110\text{mm}$

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 **armacell**
ArmaProtect®

TECHNICAL DATA - ARMAPROTECT FW3

Brief description	ArmaProtect FW3 is a flexible firestop wrap.		
Material type	Halogen-free intumescent material based on blowing graphite technology.		
Product colour range	Dark red		
Special features	Easy visual inspection, self-adhesive strip.		
Product range	Firestop wrap roll with self-adhesive strip and dimensions of 12.5m x 50mm x 2mm.		
Applications	Firestop wrap for fire seals in walls and floors for combustible pipes (with and without insulation) and multi-layer composite 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	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .		
Approvals and compliance			
Specification compliance	ETA-21/1099 acc. EN 1366-3		
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)		
Fire Performance and Approvals			
Reaction to fire	Class E		EN 13501-1
Use category	Type X: intended for use in conditions exposed to weathering		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	1.2 g/cm³ ± 10%		
Mechanical properties			
Expansion ratio	18 to 38 times		
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.		

Firestop wrap

Item	Description	EAN	Content [quantity]
PRO-FW3-12.5M	ArmaProtect FW3 Firestop wrap (12,5 m x 50 mm x 2 mm)	7612207503784	1 piece



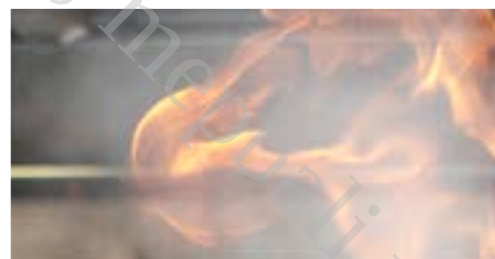
ENHANCING SAFETY LEVELS
TO PROTECT PROPERTY AND
SAVE LIVES.

ArmaProtect FC1

Firestop collar for fire seals in walls and
floors

// For sealing of combustible pipes without insulation up
to 160 mm diameter

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ArmaProtect®

TECHNICAL DATA - ARMAPROTECT FC1

Brief description	ArmaProtect FC1 is a solid metal sleeve equipped with several layers of intumescent material to maintain the fire resistance performance of fire penetrations in walls and floors.		
Material type	Galvanised sheet steel housing with flexible intumescent strip.		
Product colour range	Housing: silver grey Intumescent material: anthracite		
Special features	Easy visual inspection.		
Product range	50 mm to 160 mm diameter.		
Applications	Firestop collar for sealing combustible pipes without 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.		
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .		
Approvals and compliance			
Specification compliance	ETA-21/1024 acc. EN 1366-3		
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)		
Fire Performance and Approvals			
Reaction to fire	Housing: Class A1 Inlay: Class E	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 ¹	Drywall, concrete wall, aerated concrete wall, masonry wall: up to EI 120 Concrete floors: up to EI 240		EN 13501-2
Physical attributes			
Thickness	2 mm ± 0,2mm (sheets)		EOTA TR 024
Density	Inlay: 1.02 -1.42 g/cm³ (thickness 2 mm)		EOTA TR 024
Mechanical properties			
Expansion pressure	Inlay: > 0.6 N/mm²		EOTA TR 024
Weight loss on heating	Inlay: 52 - 62% (at 550°C, 30 minutes)		EOTA TR 024
Expansion ratio	Inlay: 12 - 22.5 times		EOTA TR 024
Health and environment			
Health aspects	Please refer to the safety data sheet available on our website.		
Emission of dangerous substances	No dangerous substances.		
Other technical features			
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.		

¹ See ETA 21/1024 for further installation details.

Firestop collar

Item	Description	EAN	Content [quantity]
PRO-FC1-050	ArmaProtect FC1 Firestop collar Ø 50 mm	7612207503210	50 piece
PRO-FC1-063	ArmaProtect FC1 Firestop collar Ø 63 mm	7612207503227	50 piece
PRO-FC1-075	ArmaProtect FC1 Firestop collar Ø 75 mm	7612207503241	50 piece
PRO-FC1-090	ArmaProtect FC1 Firestop collar Ø 90 mm	7612207503258	40 piece
PRO-FC1-110	ArmaProtect FC1 Firestop collar Ø 110 mm	7612207503296	25 piece
PRO-FC1-125	ArmaProtect FC1 Firestop collar Ø 125 mm	7612207503302	20 piece
PRO-FC1-140	ArmaProtect FC1 Firestop collar Ø 140 mm	7612207503319	16 piece
PRO-FC1-160	ArmaProtect FC1 Firestop collar Ø 160 mm	7612207503326	12 piece



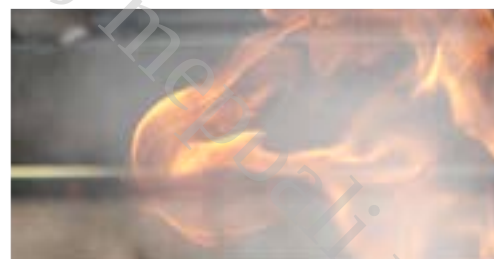
ENHANCING SAFETY LEVELS
TO PROTECT PROPERTY AND
SAVE LIVES.

ArmaProtect FC2

Firestop collar for fire seals in walls and
floors

// For sealing of combustible pipes without insulation up
to 400 mm diameter

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 **armacell**
ArmaProtect®

TECHNICAL DATA - ARMAPROTECT FC2

Brief description	ArmaProtect FC2 is a solid metal sleeve equipped with several layers of intumescent material to maintain the fire resistance performance of fire penetrations in walls and floors.
Material type	Powder-coated sheet steel housing (Ø up to 200mm) / galvanised sheet steel housing (Ø ≥ 225mm) with flexible intumescent strip.
Product colour range	Housing: grey Intumescent material: anthracite
Special features	Easy visual inspection.
Product range	32 mm to 400 mm diameter.
Applications	Firestop collar for sealing combustible pipes without 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.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Approvals and compliance

Specification compliance	ETA-22/0060 acc. EN 1366-3

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)	
Fire Performance and Approvals		
Reaction to fire	Housing: Class A1 Inlay: Class E	EN 13501-1
Use category	Type X: intended for use in conditions exposed to weathering	EOTA TR 024
Passive fire protection		
Fire resistance of elements of construction	Drywall, concrete wall, aerated concrete wall, masonry wall, concrete floors: up to EI 120	EN 13501-2
Physical attributes		
Thickness	1,0 mm up to 8,0 mm	EOTA TR 024
Density	1200 kg/m³ ± 10 %	EOTA TR 024
Mechanical properties		
Expansion ratio	Inlay: 18 to 38 times	EOTA TR 024
Health and environment		
Health aspects	Please refer to the safety data sheet available on our website.	
Emission of dangerous substances	No dangerous substances.	
Other technical features		
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	EAN	Content [quantity]
PRO-FC2-032	ArmaProtect FC2 Firestop collar Ø 32 mm	7612207503333	50 piece
PRO-FC2-040	ArmaProtect FC2 Firestop collar Ø 40 mm	7612207503340	50 piece
PRO-FC2-050	ArmaProtect FC2 Firestop collar Ø 50 mm	7612207503357	50 piece
PRO-FC2-063	ArmaProtect FC2 Firestop collar Ø 63 mm	7612207503364	50 piece
PRO-FC2-075	ArmaProtect FC2 Firestop collar Ø 75 mm	7612207503371	50 piece
PRO-FC2-090	ArmaProtect FC2 Firestop collar Ø 90 mm	7612207503388	40 piece
PRO-FC2-110	ArmaProtect FC2 Firestop collar Ø 110 mm	7612207503401	25 piece
PRO-FC2-125	ArmaProtect FC2 Firestop collar Ø 125 mm	7612207503418	20 piece
PRO-FC2-140	ArmaProtect FC2 Firestop collar Ø 140 mm	7612207503425	16 piece
PRO-FC2-160	ArmaProtect FC2 Firestop collar Ø 160 mm	7612207503395	12 piece
PRO-FC2-180	ArmaProtect FC2 Firestop collar Ø 180 mm	7612207503432	5 piece
PRO-FC2-200	ArmaProtect FC2 Firestop collar Ø 200 mm	7612207503449	5 piece
PRO-FC2-225	ArmaProtect FC2 Firestop collar Ø 225 mm	7612207503456	1 piece
PRO-FC2-250	ArmaProtect FC2 Firestop collar Ø 250 mm	7612207503463	1 piece
PRO-FC2-280	ArmaProtect FC2 Firestop collar Ø 280 mm	7612207503500	1 piece
PRO-FC2-300	ArmaProtect FC2 Firestop collar Ø 300 mm	7612207503517	1 piece
PRO-FC2-315	ArmaProtect FC2 Firestop collar Ø 315 mm	7612207503524	1 piece
PRO-FC2-355	ArmaProtect FC2 Firestop collar Ø 355 mm	7612207503531	1 piece
PRO-FC2-400	ArmaProtect FC2 Firestop collar Ø 400 mm	7612207503548	1 piece



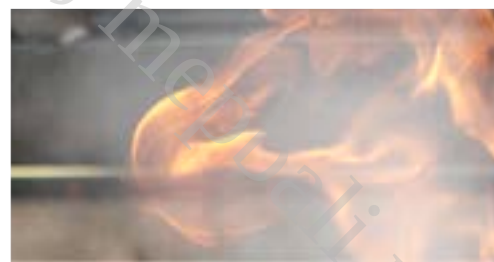
ENHANCING SAFETY LEVELS
TO PROTECT PROPERTY AND
SAVE LIVES.

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

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 **armacell**
ArmaProtect®

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.		
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .		
Approvals and compliance			
Specification compliance	• ETA-22/0061 acc. EN 1366-3		
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	Øm	0 °C	
	λd ≤ [W/(m·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/m³		
Mechanical properties			
Start of reaction / Volume expansion	> 190 °C / 18 to 34 times		
Expansion pressure	> 0.8 N/mm²		
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.		

Firestop collar

Item	Description	EAN	Content [quantity]
PRO-EFC1-3M	ArmaProtect EFC1 Endless Firestop collar comprised of 10m firestop wrap and 3m stainless steel strap	7612207503722	1 piece
PRO-EFC2-3M	ArmaProtect EFC2 Endless Firestop collar comprised of 10m firestop wrap and 3m stainless steel strap	7612207503739	1 piece

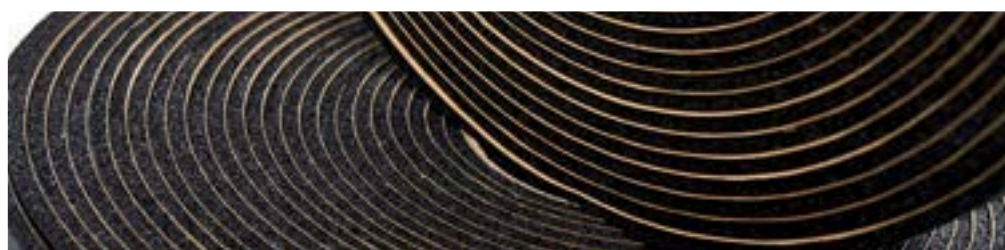
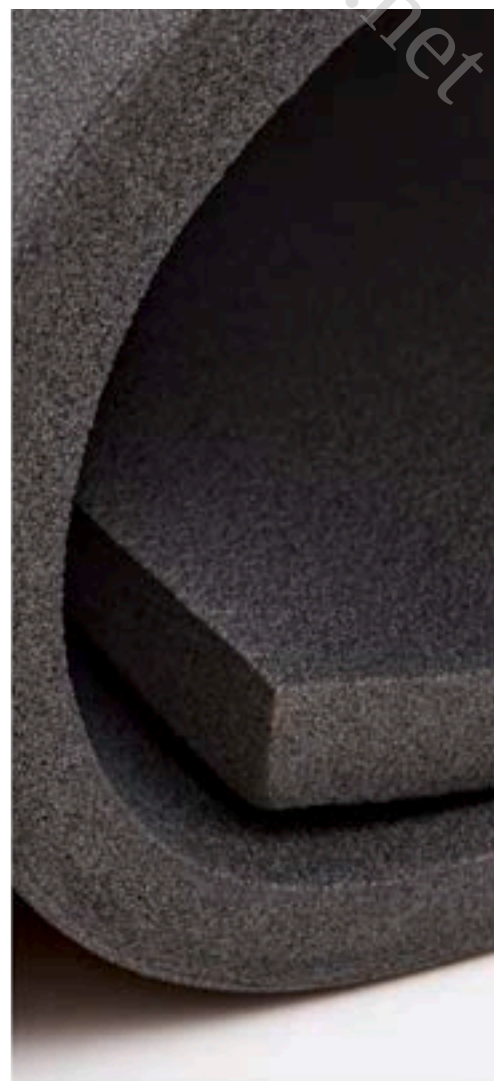


FOR IDENTIFICATION AND
DOCUMENTATION

ArmaProtect Accessories

Firestop identification plate

// For identification and documentation of fire seals



 **armacell**
ArmaProtect®

Property	Value / Assessment	Standard / Test method

Download from, mepbali.net

Identification Plate Set

Item	Description	EAN	Content [quantity]	Content [quantity]
PRO-ID-SET	ArmaProtect ID identification plate set. 14 pieces in a set.	7612207533309	70 piece	5 set



INSTALL IT. SAFEGUARD YOUR EQUIPMENT.

Okabell

Bespoke high quality metal cladding with 40 years of experience

- // Highest corrosion resistance
- // Protects insulated pipes against mechanical impact
- // Suitable for long-life outdoor applications
- // Individual order production

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 **armacell**
ArmaClad™

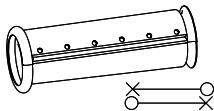
OKABELL SHEET METAL JACKET

Pipe- outer-Ø in mm	Insulation thickness in mm							
	20	30	40	50	60	80	100	120
	jacket- Ø in mm							
17	80	90	110	130	150	190	230	270
21	80	90	110	130	150	190	230	270
27	80	100	120	140	160	200	240	280
34	80	100	120	140	160	200	240	280
42	90	110	130	150	170	210	250	290
48	100	120	140	160	180	220	260	300
57/60	110	130	150	170	190	230	270	310
64	110	130	150	170	190	230	270	310
70	120	140	160	180	200	240	280	320
76	130	150	170	190	210	250	290	330
89	140	160	180	200	220	260	300	340
108	160	180	200	220	240	280	320	360
114	160	180	200	220	240	280	320	360
127	180	200	220	240	260	300	340	380
133	180	200	220	240	260	300	340	380
140	190	210	230	250	270	310	350	390
159	210	230	250	270	290	330	370	410
168	220	240	260	280	300	340	380	420
178	230	250	270	290	310	350	390	430
194	240	260	280	300	320	360	400	440
219	270	290	310	330	350	390	430	470
245	300	320	340	360	380	420	460	500
267	320	340	360	380	400	440	480	520
273	320	340	360	380	400	440	480	520
318	370	390	410	430	450	490	530	570
324	370	390	410	430	450	490	530	570
356	410	430	450	470	490	530	570	600
368	420	440	460	480	500	540	580	620

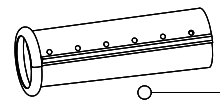
OKABELL - TECHNICAL EXPLANATIONS

Sheet-metal jacket

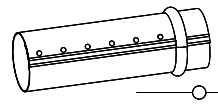
PNLR standard
pos.-neg. corrugation, left-/
right increasing or falling



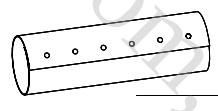
PGR special
pos. corrugation, right
increasing or falling



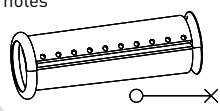
GP50R special
corrugation 50 mm shifted,
right increasing or falling



GR special
smooth, right increasing or
falling

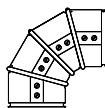


PNR10 special
pos.-neg. corrugation, right
increasing or falling 10
holes

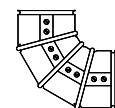


Sheet-metal blend

(A) E1



(D) E4



(B) E2

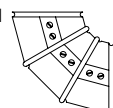


(C) E3

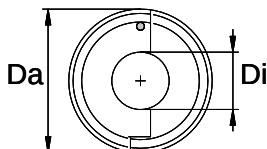


Other dimesions, constructions and special materials on request.

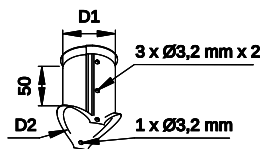
Economy bend



Front slices



Sheet-metal connection piece



This information refers to the following material types (standard qualities):
L = galvanized steel sheet + protective varnish sealing
Z = aluminium zinc 185
S = aluminium sea-water resistant ALMg2Mn0,8
M = aluminium sea-water resistant anodizing

Date:

Company: _____
wholesaler: _____
Kom / code: _____

☐ order ☐ enquiry

delivery address: _____

delivery time: _____

BV:

- ☐ galvanized steel = L ☐ alu, sea-water resistant = S ☐ alu, sea-water resistant+protective varnish sealing = M ☐ aluminium zinc 185 = Z ☐ stainless steel VA = X ☐ _____
- ☐ ornament corrugation ☐ adhesion ☐ mat. thickness DIN ☐ blunted ☐ _____

[illegible]

Note: Overall length L= eff. length: between cover and cover / outside length + ca. 12 mm

OKABELL MEASURING UP VESSELS

Date: _____

Answer to Armacell Customer-Service-Center

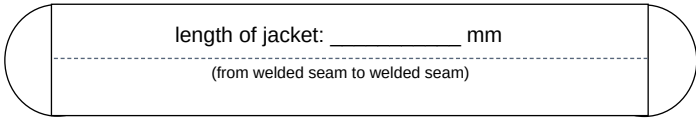
Company: _____ _____ _____ For the accuracy of the dimensions / signature: _____	☐ order ☐ enquiry delivery address: _____ _____ _____ delivery time: _____

Vessel position:	Type of metal:	mat. thickness:
☐ standing ☐ lying	☐ galvanized steel protective varnish sealing ☐ alu, see-water resistant ☐ _____	in mm: _____

Vessel-Ø (without insulation):	Insulation thickness:	totally-Ø:	quantity:
_____ mm	_____ mm	_____ mm	_____ pc.

Vessel jacket:

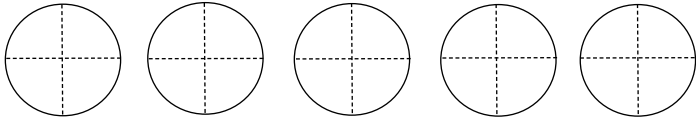
above / left ►



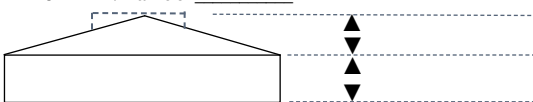
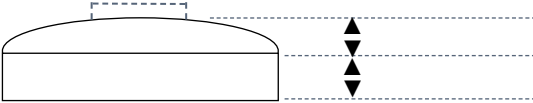
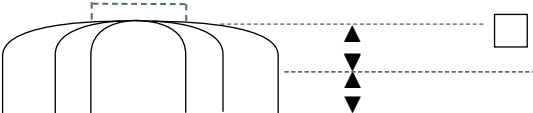
length of jacket: _____ mm
(from welded seam to welded seam)

Position of longitudinal seam:
Example





Overlap of round seam:	Overlap of longitudinal seam:
☐ standard ☐ special dimension _____ mm	☐ standard ☐ special dimension _____ mm

Vessel heads:			
Construction	Shape of head: all measurements in mm 1) incl. insulation: flat, funnel-shaped, calotte-shaped 2) excl. insulation: zeppelin-shaped	quantity per vessel	division segment
☐ overlapping standard ☐ overlapping _____ mm	flat surface ☐ looser cover ☐ impact cap 		☐ standard
☐ overlapping standard ☐ overlapping _____ mm	funnel-shaped ☐ D / manhole: _____ 		☐ standard
☐ overlapping standard ☐ overlapping _____ mm	calotte-shaped ☐ D / manhole: _____ ☐ D = standard 		☐ standard
corrugation on corrugation	zeppelin-shaped ☐ D=standard ☐ torospherical  ☐ basket-shaped		☐ standard

OKABELL FORM FOR MEASUREMENT

Date: _____

Answer to Armacell Customer-Service-Center

company: _____

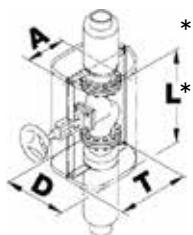
wholesaler: _____

Kom / code: _____

☐ order☐ enquiry

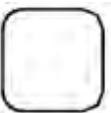
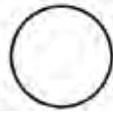
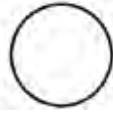
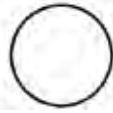
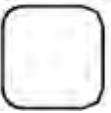
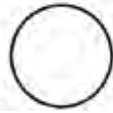
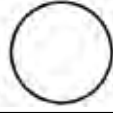
delivery address: _____

delivery time: _____



BV: _____

☐ galvanized steel
organment☐ alu, sea-water
resistant☐ alu, sea-water resistant +
protective varnish sealing=M☐ alu zinc
185☐ V2A☐ _____☐ corrugation☐ adhesion☐ mat. thickness DIN☐ blunted☐ _____

position no.:	pc.	design (form)	diameter D	depth / $T = A + D/2$	or overhang A	overall length L	other
		  					
		  					
		  					
		  					
		  					
		  					
		  					
		  					
		  					
		  					

Note: Overall length L=eff. length: between cover and cover / outside length + ca. 12 mm

TECHNICAL DATA - OKABELL

Brief description	Jacket-system for the professional. Smooth surface, suitable for outside application. Industrial series production.
Material type	Aluminium saltwater-proof with or without Eloxal. Aluzinc 185 with protective varnish sealing. Hot-dip galvanised steel sheets, zinc coated on both sides [275 g/m²] with protective varnish sealing.
Additional material information	Quality: EN AW 5049 (Al Mg 2 Mn 0,8) Quality: DX51D + Aluzinc 185 Quality: DX51D + Z275-MA + SLV
Product range	Pipes, segment bends, flange and fitting caps, trunk caps, connection pieces, front slices.
Applications	Jacket for insulated pipes (including bends, fittings, flanges, etc.) to protect against mechanical stress. Particularly suitable for outdoor applications.
Remarks	Bends and pipes with double-sided corrugations.

Property	Value / Assessment	Standard / Test method
Operating temperature		
Operating temperature	-196 °C up to +250°C (Aluminium, Aluzinc) resp. +320 °C (Hot dip)	
Fire Performance and Approvals		
Reaction to fire	Non-combustible - A1	DIN 4102
Physical attributes		
Thickness	0,5 mm - 1,0 mm (Aluminium, Aluzinc) 0,4 mm - 1,0 mm (Hot dip)	
Mass per unit area	1350 - 2700 g/m² (Aluminium) 3925 - 7850 g/m² (Aluzinc) 3140 - 7850 g/m² (Hot dip)	
Dimensions and tolerances	Thickness: According to DIN EN 485-4 (Aluminium) According to DIN EN 10143 (AluZinc, Hot dip)	
Other technical features		
Additional remarks	Structure: Smooth	
Chemical resistance	Very good resistance to sea water, salty air and in industrial environments. (Aluminium) Very good resistance in usual applications and in industrial environments (Aluzinc). Very good resistance in usual applications (Hot dip)	

Bend (aluminium eloxal seawater-resistant)

Outer diameter [mm]	Item	Bend radius [mm]	Thickness [mm]	EAN	Content [quantity]
70	BBM7005	55	0,5	7612207320107	24 piece
80	BBM8005	60	0,5	7612207320114	30 piece
90	BBM9005	65	0,5	7612207320121	24 piece
100	BBM10005	75	0,5	7612207320138	24 piece
110	BBM11005	80	0,5	7612207320145	24 piece
120	BBM12005	85	0,5	7612207320152	24 piece
130	BBM13006	85	0,6	7612207191462	20 piece
140	BBM14006	95	0,6	7612207194883	20 piece
150	BBM15006	100	0,6	7612207194890	20 piece
160	BBM16006	105	0,6	7612207194906	16 piece
170	BBM17006	110	0,6	7612207194913	24 piece
180	BBM18006	150	0,6	7612207194920	17 piece
190	BBM19006	120	0,6	7612207194937	14 piece
200	BBM20006	125	0,6	7612207194944	12 piece
210	BBM21006	130	0,6	7612207194951	16 piece
220	BBM22006	135	0,6	7612207194968	14 piece
230	BBM23006	140	0,6	7612207194975	13 piece
240	BBM24006	145	0,6	7612207194982	12 piece
250	BBM25006	155	0,6	7612207194999	12 piece
260	BBM26008	160	0,8	7612207195132	12 piece
270	BBM27008	170	0,8	7612207195149	11 piece
280	BBM28008	175	0,8	7612207195156	10 piece
290	BBM29008	180	0,8	7612207195163	10 piece
300	BBM30008	185	0,8	7612207195170	9 piece
310	BBM31008	190	0,8	7612207195187	8 piece
320	BBM32008	190	0,8	7612207195194	8 piece
330	BBM33008	195	0,8	7612207195200	7 piece
340	BBM34008	200	0,8	7612207195217	6 piece
350	BBM35008	210	0,8	7612207195224	6 piece
360	BBM36008	215	0,8	7612207195231	6 piece
370	BBM37008	230	0,8	7612207195248	5 piece
380	BBM38008	270	0,8	7612207195255	5 piece
390	BBM39008	270	0,8	7612207484021	1 piece
400	BBM40008	300	0,8	7612207484038	1 piece
410	BBM41008	305	0,8	7612207484014	1 piece
420	BBM42008	305	0,8	7612207484090	1 piece
430	BBM43008	310	0,8	7612207484083	1 piece
440	BBM44008	320	0,8	7612207484045	1 piece
450	BBM45008	320	0,8	7612207483802	1 piece
460	BBM46008	340	0,8	7612207483819	1 piece
470	BBM47008	360	0,8	7612207483826	1 piece
480	BBM48008	380	0,8	7612207483512	1 piece

Bend (aluminium seawater-resistant)

Outer diameter [mm]	Item	Bend radius [mm]	Thickness [mm]	EAN	Content [quantity]
70	BBS7005	55	0,5	7612207320169	24 piece
80	BBS8005	60	0,5	7612207320176	30 piece
90	BBS9005	65	0,5	7612207320183	24 piece
100	BBS10005	75	0,5	7612207320190	24 piece
110	BBS11005	80	0,5	7612207320206	24 piece
120	BBS12005	85	0,5	7612207320213	24 piece
130	BBS13006	85	0,6	7612207163254	20 piece
140	BBS14006	90	0,6	7612207163261	20 piece
150	BBS15006	100	0,6	7612207163278	20 piece
160	BBS16006	105	0,6	7612207163285	16 piece
170	BBS17006	110	0,6	7612207163292	24 piece
180	BBS18006	115	0,6	7612207163308	17 piece
190	BBS19006	120	0,6	7612207163315	14 piece
200	BBS20006	125	0,6	7612207163322	12 piece
210	BBS21006	130	0,6	7612207163339	16 piece
220	BBS22006	135	0,6	7612207163346	14 piece
230	BBS23006	140	0,6	7612207163353	13 piece
240	BBS24006	145	0,6	7612207163360	12 piece
250	BBS25006	155	0,6	7612207163377	12 piece
260	BBS26008	160	0,8	7612207163506	12 piece
270	BBS27008	170	0,8	7612207163513	11 piece
280	BBS28008	175	0,8	7612207163520	10 piece
290	BBS29008	180	0,8	7612207163537	10 piece
300	BBS30008	185	0,8	7612207163544	9 piece
310	BBS31008	190	0,8	7612207163551	8 piece
320	BBS32008	190	0,8	7612207163568	8 piece
330	BBS33008	195	0,8	7612207163575	7 piece
340	BBS34008	200	0,8	7612207163582	6 piece
350	BBS35008	210	0,8	7612207163599	6 piece
360	BBS36008	215	0,8	7612207163605	6 piece
380	BBS38008	270	0,8	7612207163629	1 piece
390	BBS39008	270	0,8	7612207483642	1 piece
400	BBS40008	300	0,8	7612207483659	1 piece
410	BBS41008	305	0,8	7612207483734	1 piece
420	BBS42008	305	0,8	7612207483741	1 piece
430	BBS43008	310	0,8	7612207483758	1 piece
440	BBS44008	320	0,8	7612207483765	1 piece
450	BBS45008	330	0,8	7612207483772	1 piece
460	BBS46008	340	0,8	7612207483574	1 piece
470	BBS47008	360	0,8	7612207483581	1 piece
480	BBS48008	380	0,8	7612207483598	1 piece

Bend (galvanised steel)

Outer diameter [mm]	Item	Bend radius [mm]	Thickness [mm]	EAN	Content [quantity]
70	BBL7005	55	0,5	7612207162608	24 piece
80	BBL8005	60	0,5	7612207162615	30 piece
90	BBL9005	65	0,5	7612207162622	24 piece
100	BBL10005	75	0,5	7612207162639	24 piece
110	BBL11005	80	0,5	7612207162646	24 piece
120	BBL12005	85	0,5	7612207162653	24 piece
130	BBL13006	85	0,6	7612207162707	20 piece
140	BBL14006	95	0,6	7612207162714	20 piece
150	BBL15006	100	0,6	7612207162721	20 piece
160	BBL16006	105	0,6	7612207162738	16 piece
170	BBL17006	110	0,6	7612207162745	24 piece
180	BBL18006	115	0,6	7612207162752	17 piece
190	BBL19006	120	0,6	7612207162769	14 piece
200	BBL20006	125	0,6	7612207162776	12 piece
210	BBL21006	130	0,6	7612207162783	16 piece
220	BBL22006	135	0,6	7612207162790	14 piece
230	BBL23006	140	0,6	7612207162806	13 piece
240	BBL24006	145	0,6	7612207162813	12 piece
250	BBL25006	155	0,6	7612207162820	12 piece
260	BBL26007	160	0,7	7612207162936	12 piece
270	BBL27007	170	0,7	7612207162943	11 piece
280	BBL28007	175	0,7	7612207162950	10 piece
290	BBL29007	180	0,7	7612207162967	10 piece
300	BBL30007	185	0,7	7612207162974	9 piece
310	BBL31007	190	0,7	7612207162981	8 piece
320	BBL32007	190	0,7	7612207162998	8 piece
330	BBL33007	195	0,7	7612207163001	7 piece
340	BBL34007	200	0,7	7612207163018	6 piece
350	BBL35007	210	0,7	7612207163025	6 piece
360	BBL36007	215	0,7	7612207163032	6 piece
370	BBL37007	230	0,7	7612207163049	5 piece
380	BBL38007	270	0,7	7612207163056	5 piece
390	BBL39007	270	0,7	7612207483505	1 piece
400	BBL40007	300	0,7	7612207483833	1 piece
410	BBL41007	305	0,7	7612207483840	1 piece
420	BBL42007	305	0,7	7612207483871	1 piece
430	BBL43007	310	0,7	7612207483888	1 piece
440	BBL44007	320	0,7	7612207483895	1 piece
450	BBL45007	330	0,7	7612207483857	1 piece
460	BBL46007	340	0,7	7612207483864	1 piece
470	BBL47007	360	0,7	7612207483901	1 piece
480	BBL48007	360	0,7	7612207483918	1 piece

Front slice (aluminium eloxal seawater-resistant)

Outer diameter [mm]	Item	Thickness [mm]	EAN	Content [quantity]
70	BEM7006	0,5	7612207195361	120 piece
80	BEM8006	0,5	7612207195378	120 piece
90	BEM9006	0,5	7612207195385	120 piece
100	BEM10006	0,5	7612207195392	120 piece
110	BEM11006	0,5	7612207195408	100 piece
120	BEM12006	0,5	7612207195415	100 piece
130	BEM13006	0,6	7612207195422	60 piece
140	BEM14006	0,6	7612207195439	60 piece
150	BEM15006	0,6	7612207195446	60 piece
160	BEM16006	0,6	7612207195453	60 piece
170	BEM17006	0,6	7612207195460	50 piece
180	BEM18006	0,6	7612207195477	50 piece
190	BEM19006	0,6	7612207195484	50 piece
200	BEM20006	0,6	7612207195491	60 piece
210	BEM21006	0,6	7612207195507	60 piece
220	BEM22006	0,6	7612207195514	60 piece
230	BEM23006	0,6	7612207195521	50 piece
240	BEM24006	0,6	7612207195538	50 piece
250	BEM25008	0,6	7612207195545	40 piece
260	BEM26008	0,8	7612207195552	40 piece
270	BEM27008	0,8	7612207195569	40 piece
280	BEM28008	0,8	7612207195576	40 piece
290	BEM29008	0,8	7612207195583	30 piece
300	BEM30008	0,8	7612207195590	30 piece
310	BEM31008	0,8	7612207195606	30 piece
320	BEM32008	0,8	7612207195613	30 piece
330	BEM33008	0,8	7612207195620	30 piece
340	BEM34008	0,8	7612207195637	30 piece
350	BEM35008	0,8	7612207195644	30 piece
360	BEM36008	0,8	7612207195651	30 piece
370	BEM37008	0,8	7612207195668	30 piece
380	BEM38008	0,8	7612207195675	30 piece
390	BEM39008	0,8	7612207485554	1 piece
400	BEM40008	0,8	7612207485561	1 piece
410	BEM41008	0,8	7612207485578	1 piece
420	BEM42008	0,8	7612207485585	1 piece
430	BEM43008	0,8	7612207485592	1 piece
440	BEM44008	0,8	7612207485608	1 piece
450	BEM45008	0,8	7612207485615	1 piece
460	BEM46008	0,8	7612207485622	1 piece
470	BEM47008	0,8	7612207485639	1 piece
480	BEM48008	0,8	7612207485646	1 piece

Front slice (aluminium seawater-resistant). Front Slice

Outer diameter [mm]	Item	Thickness [mm]	EAN	Content [quantity]
70	BES7006	0,5	7612207166101	120 piece
80	BES8006	0,5	7612207166118	120 piece
90	BES9006	0,5	7612207166125	120 piece
100	BES10006	0,5	7612207166132	120 piece
110	BES11006	0,5	7612207166149	100 piece
120	BES12006	0,5	7612207166156	100 piece
130	BES13006	0,6	7612207166163	60 piece
140	BES14006	0,6	7612207166170	60 piece
150	BES15006	0,6	7612207166187	60 piece
160	BES16006	0,6	7612207166194	60 piece
170	BES17006	0,6	7612207166200	50 piece
180	BES18006	0,6	7612207166217	50 piece
190	BES19006	0,6	7612207166224	50 piece
200	BES20006	0,6	7612207166231	60 piece
210	BES21006	0,6	7612207166248	60 piece
220	BES22006	0,6	7612207166255	60 piece
230	BES23006	0,6	7612207166262	50 piece
240	BES24006	0,6	7612207166279	50 piece
250	BES25008	0,6	7612207166286	40 piece
260	BES26008	0,8	7612207166293	40 piece
270	BES27008	0,8	7612207166309	40 piece
280	BES28008	0,8	7612207166316	40 piece
290	BES29008	0,8	7612207166323	30 piece
300	BES30008	0,8	7612207166330	30 piece
310	BES31008	0,8	7612207166347	30 piece
320	BES32008	0,8	7612207166354	30 piece
330	BES33008	0,8	7612207166361	30 piece
340	BES34008	0,8	7612207166378	30 piece
350	BES35008	0,8	7612207166385	30 piece
360	BES36008	0,8	7612207166392	30 piece
370	BES37008	0,8	7612207166408	30 piece
380	BES38008	0,8	7612207166415	30 piece
390	BES39008	0,8	7612207485776	1 piece
400	BES40008	0,8	7612207485783	1 piece
410	BES41008	0,8	7612207485790	1 piece
420	BES42008	0,8	7612207485806	1 piece
430	BES43008	0,8	7612207485813	1 piece
440	BES44008	0,8	7612207485820	1 piece
450	BES45008	0,8	7612207485837	1 piece
460	BES46008	0,8	7612207485844	1 piece
470	BES47008	0,8	7612207485851	1 piece
480	BES48008	0,8	7612207485868	1 piece

Front slice (galvanised steel). Front Slice

Outer diameter [mm]	Item	Thickness [mm]	EAN	Content [quantity]
70	BEL7005	0,5	7612207165654	120 piece
80	BEL8005	0,5	7612207165661	120 piece
90	BEL9005	0,5	7612207165678	120 piece
100	BEL10005	0,5	7612207165685	120 piece
110	BEL11005	0,5	7612207165692	100 piece
120	BEL12005	0,5	7612207165708	100 piece
130	BEL13006	0,6	7612207165777	60 piece
140	BEL14006	0,6	7612207165784	60 piece
150	BEL15006	0,6	7612207165791	60 piece
160	BEL16006	0,6	7612207165807	60 piece
170	BEL17006	0,6	7612207165814	50 piece
180	BEL18006	0,6	7612207165821	50 piece
190	BEL19006	0,6	7612207165838	50 piece
200	BEL20006	0,6	7612207165845	60 piece
210	BEL21006	0,6	7612207165852	60 piece
220	BEL22006	0,6	7612207165869	60 piece
230	BEL23006	0,6	7612207165876	50 piece
240	BEL24006	0,6	7612207165883	50 piece
250	BEL25006	0,6	7612207165890	40 piece
260	BEL26007	0,7	7612207165913	40 piece
270	BEL27007	0,7	7612207165920	40 piece
280	BEL28007	0,7	7612207165937	40 piece
290	BEL29007	0,7	7612207165944	30 piece
300	BEL30007	0,7	7612207165951	30 piece
310	BEL31007	0,7	7612207165968	30 piece
320	BEL32007	0,7	7612207165975	30 piece
330	BEL33007	0,7	7612207165982	30 piece
340	BEL34007	0,7	7612207165999	30 piece
350	BEL35007	0,7	7612207166002	30 piece
360	BEL36007	0,7	7612207166019	30 piece
370	BEL37007	0,7	7612207166026	30 piece
380	BEL38007	0,7	7612207166033	30 piece
390	BEL39007	0,7	7612207484762	1 piece
400	BEL40007	0,7	7612207484793	1 piece
410	BEL41007	0,7	7612207484809	1 piece
420	BEL42007	0,7	7612207484830	1 piece
430	BEL43007	0,7	7612207484847	1 piece
440	BEL44007	0,7	7612207484595	1 piece
450	BEL45007	0,7	7612207484601	1 piece
460	BEL46007	0,7	7612207484649	1 piece
470	BEL47007	0,7	7612207484656	1 piece
480	BEL48007	0,7	7612207484687	1 piece

Cut-out (aluminium eloxal seawater-resistant). Jacket

Outer diameter [mm]	Item	Thickness [mm]	EAN	Content [quantity]
70	BRM7005	0,5	7612207191349	48 piece
80	BRM8005	0,5	7612207191356	64 piece
90	BRM9005	0,5	7612207191363	60 piece
100	BRM10005	0,5	7612207191400	45 piece
110	BRM11005	0,5	7612207191417	45 piece
120	BRM12005	0,5	7612207191424	30 piece
130	BRM13006	0,6	7612207191479	25 piece
140	BRM14006	0,6	7612207194401	25 piece
150	BRM15006	0,6	7612207194418	25 piece
160	BRM16006	0,6	7612207194425	20 piece
170	BRM17006	0,6	7612207194432	20 piece
180	BRM18006	0,6	7612207194449	20 piece
190	BRM19006	0,6	7612207194456	20 piece
200	BRM20006	0,6	7612207194463	20 piece
210	BRM21006	0,6	7612207194470	20 piece
220	BRM22006	0,6	7612207194487	15 piece
230	BRM23006	0,6	7612207194494	15 piece
240	BRM24006	0,6	7612207194500	15 piece
250	BRM25006	0,6	7612207194517	1 piece
260	BRM26008	0,8	7612207194654	1 piece
270	BRM27008	0,8	7612207194661	1 piece
280	BRM28008	0,8	7612207194678	1 piece
290	BRM29008	0,8	7612207194685	1 piece
300	BRM30008	0,8	7612207194692	1 piece
310	BRM31008	0,8	7612207194708	1 piece
320	BRM32008	0,8	7612207194715	1 piece
330	BRM33008	0,8	7612207194722	1 piece
340	BRM34008	0,8	7612207194739	1 piece
350	BRM35008	0,8	7612207194746	1 piece
360	BRM36008	0,8	7612207194753	1 piece
370	BRM37008	0,8	7612207194760	1 piece
380	BRM38008	0,8	7612207194777	1 piece
390	BRM39008	0,8	7612207484205	1 piece
400	BRM40008	0,8	7612207484137	1 piece
410	BRM41008	0,8	7612207484144	1 piece
420	BRM42008	0,8	7612207484151	1 piece
430	BRM43008	0,8	7612207484236	1 piece
440	BRM44008	0,8	7612207484243	1 piece
450	BRM45008	0,8	7612207484960	1 piece
460	BRM46008	0,8	7612207485073	1 piece
470	BRM47008	0,8	7612207485080	1 piece
480	BRM48008	0,8	7612207485097	1 piece

Cut-out (aluminium seawater-resistant). Jacket

Outer diameter [mm]	Item	Thickness [mm]	EAN	Content [quantity]
70	BRS7005	0,5	7612207175295	48 piece
80	BRS8005	0,5	7612207175301	64 piece
90	BRS9005	0,5	7612207175318	60 piece
100	BRS10005	0,5	7612207175325	45 piece
110	BRS11005	0,5	7612207175332	45 piece
120	BRS12005	0,5	7612207175349	30 piece
130	BRS13006	0,6	7612207175424	25 piece
140	BRS14006	0,6	7612207175431	25 piece
150	BRS15006	0,6	7612207175448	25 piece
160	BRS16006	0,6	7612207175455	20 piece
170	BRS17006	0,6	7612207175462	20 piece
180	BRS18006	0,6	7612207175479	20 piece
190	BRS19006	0,6	7612207175486	20 piece
200	BRS20006	0,6	7612207175493	20 piece
210	BRS21006	0,6	7612207175509	20 piece
220	BRS22006	0,6	7612207175516	15 piece
230	BRS23006	0,6	7612207175523	15 piece
240	BRS24006	0,6	7612207175530	15 piece
250	BRS25006	0,6	7612207175547	110 piece
260	BRS26008	0,8	7612207175684	110 piece
270	BRS27008	0,8	7612207175691	80 piece
280	BRS28008	0,8	7612207175707	80 piece
290	BRS29008	0,8	7612207175714	80 piece
300	BRS30008	0,8	7612207175721	80 piece
310	BRS31008	0,8	7612207175738	60 piece
320	BRS32008	0,8	7612207175745	60 piece
330	BRS33008	0,8	7612207175752	60 piece
340	BRS34008	0,8	7612207175769	60 piece
350	BRS35008	0,8	7612207175776	60 piece
360	BRS36008	0,8	7612207175783	60 piece
370	BRS37008	0,8	7612207175790	60 piece
380	BRS38008	0,8	7612207175806	50 piece
390	BRS39008	0,8	7612207484816	1 piece
400	BRS40008	0,8	7612207484823	1 piece
410	BRS41008	0,8	7612207484618	1 piece
420	BRS42008	0,8	7612207484625	1 piece
430	BRS43008	0,8	7612207484632	1 piece
440	BRS44008	0,8	7612207484663	1 piece
450	BRS45008	0,8	7612207484670	1 piece
460	BRS46008	0,8	7612207484700	1 piece
470	BRS47008	0,8	7612207484717	1 piece
480	BRS48008	0,8	7612207484564	1 piece

Cut-out (galvanised steel). Jacket

Outer diameter [mm]	Item	Thickness [mm]	EAN	Content [quantity]
70	BRL7004	0,4	7612207174540	270 piece
80	BRL8004	0,4	7612207174557	288 piece
90	BRL9004	0,4	7612207174564	280 piece
100	BRL10004	0,4	7612207174571	240 piece
110	BRL11005	0,5	7612207174656	210 piece
120	BRL12005	0,5	7612207174663	180 piece
130	BRL13005	0,5	7612207174670	150 piece
140	BRL14005	0,5	7612207174687	125 piece
150	BRL15005	0,5	7612207174694	125 piece
160	BRL16006	0,6	7612207174779	100 piece
170	BRL17006	0,6	7612207174786	100 piece
180	BRL18006	0,6	7612207174793	80 piece
190	BRL19006	0,6	7612207174809	80 piece
200	BRL20006	0,6	7612207174816	60 piece
210	BRL21006	0,6	7612207174823	60 piece
220	BRL22006	0,6	7612207174830	60 piece
230	BRL23006	0,6	7612207174847	75 piece
240	BRL24006	0,6	7612207174854	70 piece
250	BRL25006	0,6	7612207174861	65 piece
260	BRL26007	0,7	7612207174885	60 piece
270	BRL27007	0,7	7612207174892	55 piece
280	BRL28007	0,7	7612207174908	55 piece
290	BRL29007	0,7	7612207174915	40 piece
300	BRL30007	0,7	7612207174922	40 piece
310	BRL31007	0,7	7612207174939	40 piece
320	BRL32007	0,7	7612207174946	35 piece
330	BRL33007	0,7	7612207174953	35 piece
340	BRL34007	0,7	7612207174960	30 piece
350	BRL35007	0,7	7612207174977	30 piece
360	BRL36007	0,7	7612207174984	30 piece
370	BRL37007	0,7	7612207174991	30 piece
380	BRL38007	0,7	7612207175004	30 piece
390	BRL39007	0,7	7612207175011	30 piece
400	BRL40007	0,7	7612207175028	25 piece
410	BRL41007	0,7	7612207186710	25 piece
420	BRL42007	0,7	7612207175035	20 piece
430	BRL43007	0,7	7612207175042	20 piece
440	BRL44007	0,7	7612207175059	15 piece
450	BRL45007	0,7	7612207186727	15 piece
460	BRL46007	0,7	7612207175066	15 piece
470	BRL47007	0,7	7612207175073	15 piece
480	BRL48007	0,7	7612207175080	15 piece

Nozzle (aluminium eloxal seawater-resistant)

Outer diameter [mm]	Item	Thickness [mm]	EAN	Content [quantity]
70	BSM7070	0,5	7612207314557	18 piece
80	BSM8080	0,5	7612207314571	24 piece
90	BSM9090	0,5	7612207314595	30 piece
110	BSM110110	0,5	7612207314632	21 piece
130	BSM130130	0,6	7612207314670	15 piece
140	BSM140140	0,6	7612207314694	15 piece
150	BSM150150	0,6	7612207314717	21 piece
160	BSM160160	0,6	7612207314731	15 piece
170	BSM170170	0,6	7612207314755	15 piece
180	BSM180180	0,6	7612207314779	15 piece
190	BSM190190	0,6	7612207314793	15 piece
200	BSM200200	0,6	7612207314816	15 piece
210	BSM210210	0,6	7612207314830	15 piece
220	BSM220220	0,6	7612207314854	15 piece
230	BSM230230	0,6	7612207314878	15 piece
240	BSM240240	0,6	7612207314892	15 piece
250	BSM250250	0,6	7612207314915	15 piece
260	BSM260260	0,7	7612207486766	1 piece
270	BSM270270	0,8	7612207486773	1 piece
280	BSM280280	0,8	7612207486780	1 piece
290	BSM290290	0,8	7612207486797	1 piece
300	BSM300300	0,8	7612207486803	1 piece
310	BSM310310	0,8	7612207486810	1 piece
320	BSM320320	0,8	7612207486827	1 piece
330	BSM330330	0,8	7612207486834	1 piece
340	BSM340340	0,8	7612207486841	1 piece
350	BSM350350	0,8	7612207486858	1 piece
360	BSM360360	0,8	7612207486865	1 piece
370	BSM370370	0,8	7612207486872	1 piece
380	BSM380380	0,8	7612207486889	1 piece
390	BSM390390	0,8	7612207486896	1 piece
400	BSM400400	0,8	7612207486902	1 piece
410	BSM410410	0,8	7612207486919	1 piece
420	BSM420420	0,8	7612207486926	1 piece
430	BSM430430	0,8	7612207486933	1 piece
440	BSM440440	0,8	7612207486940	1 piece
450	BSM450450	0,8	7612207486957	1 piece
460	BSM460460	0,8	7612207486964	1 piece
470	BSM470470	0,8	7612207486971	1 piece
480	BSM480480	0,8	7612207486988	1 piece

Nozzle (aluminium seawater-resistant)

Outer diameter [mm]	Item	Thickness [mm]	EAN	Content [quantity]
80	BSS8080	0,5	7612207177657	24 piece
90	BSS9090	0,5	7612207177664	30 piece
100	BSS100100	0,5	7612207177671	24 piece
110	BSS110110	0,5	7612207177688	21 piece
120	BSS120120	0,5	7612207177695	21 piece
130	BSS130130	0,6	7612207177701	15 piece
140	BSS140140	0,6	7612207177718	15 piece
150	BSS150150	0,6	7612207177725	21 piece
160	BSS160160	0,6	7612207177732	15 piece
170	BSS170170	0,6	7612207177749	15 piece
180	BSS180180	0,6	7612207177756	15 piece
190	BSS190190	0,6	7612207177763	15 piece
200	BSS200200	0,6	7612207177770	15 piece
210	BSS210210	0,6	7612207177787	15 piece
220	BSS220220	0,6	7612207177794	15 piece
230	BSS230230	0,6	7612207276046	15 piece
240	BSS240240	0,6	7612207177800	15 piece
250	BSS250250	0,6	7612207177817	15 piece
260	BSS260260	0,8	7612207486995	1 piece
270	BSS270270	0,8	7612207487008	1 piece
280	BSS280280	0,8	7612207487015	1 piece
310	BSS310310	0,8	7612207487022	1 piece
320	BSS320320	0,8	7612207487039	1 piece
330	BSS330330	0,8	7612207487046	1 piece
340	BSS340340	0,8	7612207487053	1 piece
350	BSS350350	0,8	7612207487060	1 piece
360	BSS360360	0,8	7612207487077	1 piece
370	BSS370370	0,8	7612207487084	1 piece
380	BSS380380	0,8	7612207487091	1 piece
390	BSS390390	0,8	7612207487107	1 piece
400	BSS400400	0,8	7612207487114	1 piece
410	BSS410410	0,8	7612207487121	1 piece
420	BSS420420	0,8	7612207487138	1 piece
430	BSS430430	0,8	7612207487145	1 piece
440	BSS440440	0,8	7612207487152	1 piece
450	BSS450450	0,8	7612207487169	1 piece
460	BSS460460	0,8	7612207487176	1 piece
470	BSS470470	0,8	7612207487183	1 piece
480	BSS480480	0,8	7612207487190	1 piece

Nozzle (galvanised steel)

Outer diameter [mm]	Item	Thickness [mm]	EAN	Content [quantity]
70	BSL7070	0,5	7612207177404	18 piece
80	BSL8080	0,5	7612207177411	24 piece
90	BSL9090	0,5	7612207177428	30 piece
100	BSL100100	0,5	7612207177435	24 piece
110	BSL110110	0,5	7612207177442	21 piece
120	BSL120120	0,5	7612207177459	21 piece
130	BSL130130	0,6	7612207177466	15 piece
140	BSL140140	0,6	7612207177473	15 piece
150	BSL150150	0,6	7612207177480	21 piece
160	BSL160160	0,6	7612207177497	15 piece
170	BSL170170	0,6	7612207177503	15 piece
180	BSL180180	0,6	7612207177510	15 piece
190	BSL190190	0,6	7612207177527	15 piece
200	BSL200200	0,6	7612207177534	15 piece
210	BSL210210	0,6	7612207177541	15 piece
220	BSL220220	0,6	7612207177558	15 piece
230	BSL230230	0,6	7612207177565	15 piece
240	BSL240240	0,6	7612207177572	15 piece
250	BSL250250	0,6	7612207177589	15 piece
260	BSL260260	0,7	7612207486537	1 piece
270	BSL270270	0,7	7612207486544	1 piece
280	BSL280280	0,7	7612207486551	1 piece
290	BSL290290	0,7	7612207486568	1 piece
300	BSL300300	0,7	7612207486575	1 piece
310	BSL310310	0,7	7612207486582	1 piece
320	BSL320320	0,7	7612207486599	1 piece
330	BSL330330	0,7	7612207486605	1 piece
340	BSL340340	0,7	7612207486612	1 piece
350	BSL350350	0,7	7612207486629	1 piece
360	BSL360360	0,7	7612207486636	1 piece
370	BSL370370	0,7	7612207486643	1 piece
380	BSL380380	0,7	7612207486650	1 piece
390	BSL390390	0,7	7612207486667	1 piece
400	BSL400400	0,7	7612207486674	1 piece
410	BSL410410	0,7	7612207486681	1 piece
420	BSL420420	0,7	7612207486698	1 piece
430	BSL430430	0,7	7612207486704	1 piece
440	BSL440440	0,7	7612207486711	1 piece
450	BSL450450	0,7	7612207486728	1 piece
460	BSL460460	0,7	7612207486735	1 piece
470	BSL470470	0,7	7612207486742	1 piece
480	BSL480480	0,7	7612207486759	1 piece



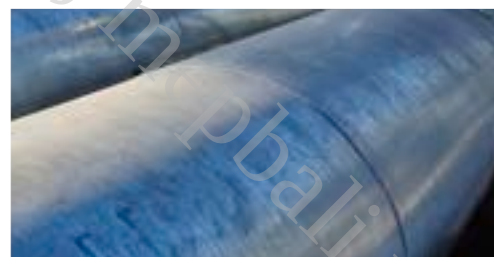
INSTALL IT. SAFEGUARD YOUR EQUIPMENT.

Okafix

Quick fixing pins for multiple insulation sheet materials

- // Range matches all common insulation thicknesses
- // Self-adhesive bottom
- // Various lengths, from 23 mm to 115 mm

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TECHNICAL DATA - OKAFIX

Brief description	Self-adhesive mounting pins.
Material type	Pin: galvanised steel. Base plate: galvanised steel DX 51 D and zinc coating 275 g/m ² on both sides. Adhesive tape: cross-linked polyethylene (PE) foam laminated on both sides with pressure-sensitive, cross-linked synthetic rubber resin adhesive.
Product colour range	Silver grey
Special features	Pin length to match all common insulation thicknesses, optimal adhesion corresponding to the technical data for the adhesive tape when installation instructions are heeded. Industrial serial production.
Product range	Pin: Length 23 to 115 mm
Applications	Mounting method for fitting insulation materials on smooth surfaces e.g. air-conditioning ducts made of galvanised steel. The pins are not suitable for plastic substrates.

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature	Min. °C	Max. °C	
	-40	70	
Processing Temperature			
Minimum processing temperature	10 °C		
Maximum processing temperature	30 °C		
Mechanical properties			
Tensile strength	1.3 KN/m ATM.13 (tape)		ASTM D 882
Shear strength	600 ks FTM.2 Finat.8 PSTC.7		
Permitted constant load	0,3 N/cm² (Recommendation: 6 N/pin = approx. 600 g max.)		
Other technical features			
Storage	24 month at +21 °C and 50% relative humidity. Direct sunlight should be avoided.		

Caps

Item	Description	EAN	Content [quantity]	Content [quantity]
XBSK26	Inner diameter: 2.3 mm	7612207182934	250 piece	1 bag

Pin. Fixing Pins

Item	Description	EAN	Content [quantity]
XBST115	Pins with 115mm length	7612207182910	250 piece
XBST23	Pins with 23mm length	7612207182842	250 piece
XBST33	Pins with 33mm length	7612207182859	250 piece
XBST43	Pins with 43mm length	7612207182866	250 piece
XBST53	Pins with 53mm length	7612207182873	250 piece
XBST65	Pins with 65mm length	7612207182880	250 piece
XBST85	Pins with 85mm length	7612207182897	250 piece
XBST95	Pins with 95mm length	7612207182903	250 piece

Clips

Item	Description	EAN	Content [quantity]
XHC20	Clips with outer diameter of 40mm	7612207182941	2000 piece



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Okapak

Full range, impact resistant and easy to clean PVC coverings for professional solutions

- // Long lifetime
- // Extensive range with tailor-made bends, T-pieces and tape
- // Up to eight combinations possible with one Okapak bend
- // Manufactured without the use of silicone, unplasticized
- // Impact resistant hard PVC foil

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ArmaClad Okapak



// Okapak 90° two-piece bends

Two piece bends with strengthening welded back for perfect fitting. Overview of different application areas, depending on pipe radius and type:

Okapak S bends: Bends for standard application S shaped seamless stell pipe according to EN 10253-1, type 3 (1,5d) with insulation ≤ 100 .

Okapak W bends: Bends for standard application W shaped angled tempered cast fittings according to EN 10242, A1, A4 with insulation ≤ 50 mm.

Okapak D bends: Bends for application D shaped short tempered cast fittings according to EN 10242, D1, D4 with insulation ≤ 50 mm.

Okapak SML: Bends for application of cast iron pipes with insulation ≤ 40 mm.



// Okapak 90° one-piece bends

Overview of different application areas, depending on pipe radius and type:

Okapak S bends: Bends for standard application S shaped seamless stell pipe according to EN 10253-1, type 3 (1,5d) with insulation ≤ 100 mm.

Okapak W bends: Bends for standard application W shaped angled tempered cast fittings according to EN 10242, A1, A4 with insulation ≤ 50 mm.

Okapak D bends: Bends for application D shaped short tempered cast fittings according to EN 10242, D1, D4 with insulation ≤ 60 mm.

Okapak 5D bends: Bends for application 5D shaped long insulated tempered cast fittings according to DIN2605-1 with insulation ≤ 50 mm.



// Okapak flexible T-pieces

Patented solution for cladding branch pipes. With our new Okapak T-pieces, you can cover 100 percent of all common applications with just eight items. A manageable range for more efficient storekeeping.



// Rivet Tool for PVC Claddings

Install PVC rivets straight or at an angle with one single tool. Even in tight spots. New stainless steel tips prevent the rivets from falling off. Grooved surfaces ensure a secure and firm hold. Fits perfectly in your hand.

OVERVIEW ONE-PIECE ELBOWS

Ø	20 mm	25 mm	30 mm	35 mm	40 mm	45 mm	50 mm	60 mm	80 mm	100 mm
15										
17	    	 	    		    		    			
21	    	 	    		    		    			
27	    	 	    		    		    			
33	  	 	    		    		    			
38										
42	    	 	    		    		    	 		
44	    	 	    		    		    	 		
48	    	 	    		    		    	 		
57										
60	    	 	    		    		    	 		
64										
70										
76	 	 	   		   		   			
83										
89	 	 	  		  					
102										
108										
114	 									
127										
133										
140										
159										
168										
194										
219										
267										

 Se  Wa  De  Ge  ED

OVERVIEW TWO-PIECE (WELDED) ELBOWS

Ø	20 mm	25 mm	30 mm	35 mm	40 mm	45 mm	50 mm	60 mm	80 mm	100 mm
15										
17										
21										
27										
33										
38										
42										
44										
48										
57										
60										
64										
70										
76										
83										
89										
102										
109										
114										
127										
133										
160										
159										
168										
194										
219										
267										

S
 W
 D
 G
 SML
 45°

TECHNICAL DATA - OKAPAK

Brief description	Economic coating system according to DIN 4140. Sheeting calender method, extruding; straight vacuum forming. Manufactured without metals cadmium, lead, mercury, chrome and their compound, without use of silicone, unplasticised.
Material type	Shock resistant hard PVC foil with fire protection equipment.
Product colour range	Light grey
Special features	No weakening of insulating thickness of bends.
Product range	Rolls, bends, fitting caps, valve caps, flange caps, front caps, cut-outs and complete accessories.
Applications	Jacket for insulated pipes (including bends, branches, fittings, flanges, o.s.) for protection of damages of mechanical stress.

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature ¹	Min. °C	Max. °C	
	-20	60	
Operating temperature			
Operating temperature	-20 °C up to +60 °C If the object is correctly insulated and no direct contact exists to the jacket, the medium temperature can essentially be higher or lower.		
Fire Performance and Approvals			
Reaction to fire	Okapak SE: low flammability (DIN 4102-B1) Okapak: moderately flammable (DIN 4102-B2)		DIN 4102
Physical attributes			
Density	Okapak SE: 1,43 ± 0,02 g/cm³ Okapak: 1,39 ± 0,02 g/cm³		EN ISO 1183
Mechanical properties			
Tensile strength	> 35 N/mm²		EN ISO 527-3
Tensile impact strength	≥ 400 KJ/m²		EN ISO 8256
Health and environment			
Health aspects	Physiologically harmless, even when used in food processing plants. Odourless.		
Other technical features			
Chemical resistance	Aging resistance: good. Stability against usual building materials: very good. Against chemicals: see separate list.		
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35°C).		

¹ If the object is correctly insulated and no direct contact exists to the jacket, the medium temperature can essentially be higher or lower.

End cap. Rosette Endcapping

Item	Description	EAN	Content [quantity]
PEMBA18B	Length: 5 m; Lamella length: 18 mm; Insulation thickness: 20 mm; Colour: Alu (Silver)	7612207180886	10 roll
PEMBA28B	Length: 5 m; Lamella length: 28 mm; Insulation thickness: 30 mm; Colour: Alu (Silver)	7612207180909	10 roll
PEMBA38B	Length: 5 m; Lamella length: 38 mm; Insulation thickness: 40 mm; Colour: Alu (Silver)	7612207180923	10 roll
PEMBA48B	Length: 5 m; Lamella length: 48 mm; Insulation thickness: 50 mm; Colour: Alu (Silver)	7612207180947	10 roll
PEMBA58B	Length: 5 m; Lamella length: 58 mm; Insulation thickness: 60 mm; Colour: Alu (Silver)	7612207180961	10 roll
PEMBG18B	Length: 5 m; Lamella length: 18 mm; Insulation thickness: 20 mm; Colour: Grey	7612207181036	10 roll
PEMBG28B	Length: 5 m; Lamella length: 28 mm; Insulation thickness: 30 mm; Colour: Grey	7612207181050	10 roll
PEMBG38B	Length: 5 m; Lamella length: 38 mm; Insulation thickness: 40 mm; Colour: Grey	7612207181074	10 roll
PEMBG48B	Length: 5 m; Lamella length: 48 mm; Insulation thickness: 50 mm; Colour: Grey	7612207181098	10 roll
PEMBG58B	Length: 5 m; Lamella length: 58 mm; Insulation thickness: 60 mm; Colour: Grey	7612207181111	10 roll

Accessories. rivets

Item	Description	EAN	Content [quantity]
PMN W	Rivets, white	7612207181173	1000 piece
PMNG	Rivets, grey	7612207181180	1000 piece

Accessories. Tooling for closing PVC - Single

Item	Description	EAN	Content [quantity]
PMNWG	Tooling for closing PVC covering - straight	7612207181197	15 piece
PMNWW	Tooling for closing PVC covering - angular	7612207181203	15 piece

Bend – 45°, two-piece (welded)

Pipe Ø [mm]	Item	EAN	Content [quantity]
21	PB452120	7612207180091	400 piece
27	PB452725	7612207180114	250 piece
27	PB452720	7612207180107	300 piece
27	PB452730	7612207180121	250 piece
33	PB453320	7612207180138	260 piece
33	PB453325	7612207180145	200 piece
33	PB453340	7612207180152	160 piece
42	PB454225	7612207180169	140 piece
42	PB454230	7612207180176	160 piece
48	PB454840	7612207180190	160 piece
48	PB454825	7612207180183	180 piece
60	PB456030	7612207180213	160 piece

Bend – 45°, two-piece (welded)

Pipe Ø [mm]	Item	EAN	Content [quantity]
60	PB456025	7612207180206	160 piece
60	PB456050	7612207180237	140 piece
60	PB456040	7612207180220	160 piece
76	PB457650	7612207180268	100 piece
76	PB457630	7612207180244	140 piece
76	PB457640	7612207180251	120 piece
89	PB458930	7612207180275	140 piece
89	PB458950	7612207180299	100 piece
89	PB458940	7612207180282	100 piece

Other information

Remarks Dimensions can be ordered in smaller quantities

Bend – 90°, one-piece

Pipe Ø [mm]	Item	Application angle type	EAN	Content [quantity]
15	PBS1740E	W	7612207178159	300 piece
15	PBS1750E	W	7612207178166	200 piece
17	PBS1720E	S, W, D, G, 5D	7612207178135	500 piece
21	PBS2120E	S, W, D, G, 5D	7612207178180	400 piece
21	PBS2140E	W	7612207178234	300 piece
21	PBS2125E	W	7612207178197	500 piece
21	PBS2150E	W	7612207178241	200 piece
21	PBS2130E	S, W, D, G	7612207178210	300 piece
27	PBS2740E	S	7612207178326	200 piece
27	PBS2730E	W	7612207178302	300 piece
27	PBS2725E	S	7612207178289	400 piece
27	PBS2750E	W	7612207178333	200 piece
27	PBS2720E	S, W, D, G, 5D	7612207178265	450 piece
33	PBS3350E	W	7612207178425	180 piece
33	PBS3340E	W	7612207178401	200 piece
33	PBS3330E	S	7612207178388	300 piece
33	PBS3320E	S, D, G	7612207178357	450 piece
38	PBS4230E	S	7612207178449	400 piece
38	PBS4250E	W	7612207178463	100 piece
42	PBW4250E	D G	7612207230253	100 piece
42	PBS4220E	S, D, G	7612207178432	500 piece
42	PBS4260E	W	7612207178470	100 piece
42	PBS4830E	S	7612207178548	300 piece
44	PBS4850E	W	7612207178609	100 piece
44	PBS4860E	W	7612207178623	100 piece
48	PBW4850E	S	7612207230260	100 piece
48	PBS4840E	S	7612207178579	200 piece
48	PBS4820E	S, D	7612207178500	300 piece

Bend – 90°, one-piece

Pipe Ø [mm]	Item	Application angle type	EAN	Content [quantity]
57	PBS6030E	S	7612207178678	300 piece
57	PBS6020E	S	7612207178647	200 piece
57	PBS6050E	S	7612207178715	100 piece
60	PBW6050E	W	7612207178722	100 piece
60	PBW6040E	W	7612207230277	180 piece
60	PBS6040E	S	7612207178692	180 piece
60	PBS6060E	S	7612207178739	100 piece
70	PBS7650E	S	7612207178913	100 piece
70	PBS7020E	S	7612207178784	300 piece
70	PBS7630E	S	7612207178852	180 piece
70	PBS7660E	S	7612207178920	100 piece
70	PBS7670E	S	7612207178951	100 piece
70	PBS7640E	S	7612207178890	100 piece
76	PBS7625E	S	7612207178838	200 piece
83	PBS8980E	S	7612207179125	60 piece
83	PBS8950E	S	7612207179095	100 piece
83	PBS8960E	S	7612207179101	100 piece
89	PBS8925E	S	7612207179002	180 piece
89	PBS8920E	S	7612207178982	180 piece
89	PBS8940E	S	7612207179057	100 piece
89	PBS8930E	S	7612207179019	180 piece
102	PBS10280E	S	7612207179194	50 piece
102	PBS10240E	S	7612207179163	100 piece
102	PBS10250E	S	7612207179170	50 piece
102	PBS10220E	S	7612207179149	100 piece
102	PBS102100E	S	7612207298024	30 piece
102	PBS10260E	S	7612207179187	50 piece
102	PBS10230E	S	7612207179156	100 piece
108	PBS11440E	S	7612207179323	100 piece
108	PBS114100E	S	7612207179439	30 piece
114	PBS11480E	S	7612207179415	50 piece
114	PBS11450E	S	7612207179361	50 piece
114	PBS11460E	S	7612207179392	50 piece
114	PBS11420E	S	7612207179286	100 piece
114	PBS11430E	S	7612207179293	100 piece
133	PBS140100E	S	7612207179644	25 piece
133	PBS14025E	S	7612207179538	100 piece
133	PBS14060E	S	7612207179606	25 piece
133	PBS14080E	S	7612207179620	25 piece
133	PBS14050E	S	7612207179583	25 piece
140	PBS14030E	S	7612207179545	50 piece
140	PBS14040E	S	7612207179552	50 piece

Bend – 90°, one-piece

Pipe Ø [mm]	Item	Application angle type	EAN	Content [quantity]
159	PBS15940E	S	7612207179675	50 piece
159	PBS15925E	S	7612207179668	50 piece
168	PBS16825E	S	7612207179750	50 piece
168	PBS16830E	S	7612207179767	50 piece
168	PBS16840E	S	7612207179774	25 piece
168	PBS168100E	S	7612207179828	50 piece

Other information

Remarks

Alternative application size: pipe diameter/insulation thickness (e.g. 17/20)
Dimensions can be ordered in smaller quantities

Bend – 90°, two-piece, welded

Pipe Ø [mm]	Item	Application angle type	EAN	Content [quantity]
15	PB1740	S, W	7612207178142	180 piece
17	PB7670	S	7612207178944	40 piece
17	PB1720	S, W	7612207178128	440 piece
17	PBW1730	W	7612207203073	240 piece
17	PB2120	G	7612207178173	360 piece
21	PB2140	S, W	7612207178227	160 piece
21	PBW2130	W	7612207203080	260 piece
21	PB2130	S	7612207178203	260 piece
27	PB2725	S, W, D, G	7612207178272	240 piece
27	PB2720	S, W, D, G	7612207178258	300 piece
27	PB2730	S, W	7612207178296	260 piece
27	PB2740	S, W	7612207178319	160 piece
33	PB3320	S, W, D	7612207178340	240 piece
33	PB3325	S, W, D	7612207178364	220 piece
33	PB3330	S, W, D	7612207178371	220 piece
33	PB3350	S, W	7612207178418	80 piece
33	PB3340	S, W	7612207178395	160 piece
38	PB4430	S	7612207178487	160 piece
42	PB4250	S, W	7612207178456	80 piece
42	PB4240	S, W, D	7612207210453	120 piece
48	PB4820	S, W	7612207178494	240 piece
48	PBW4840	W	7612207178593	120 piece
48	PB4830	S, W, D	7612207178531	160 piece
48	PB4840	W	7612207178562	120 piece
48	PBS4850	S	7612207178616	60 piece
48	PB4825	S, W, D	7612207178524	180 piece
57	PB6030	S	7612207178661	160 piece
57	PB6050	S	7612207178708	60 piece
57	PB6020	S	7612207178630	180 piece
57	PBS6060	S	7612207178746	60 piece
57	PB6025	S	7612207178654	160 piece

Bend – 90°, two-piece, welded

Pipe Ø [mm]	Item	Application angle type	EAN	Content [quantity]
60	PB6040	W	7612207178685	80 piece
60	PB6425	D	7612207256284	160 piece
60	PB6420	D	7612207178753	160 piece
64	PBS7045	S	7612207258738	40 piece
64	PBS6430	S	7612207178760	140 piece
64	PBS6460	S	7612207178777	40 piece
64	PBS7035	S	7612207258721	80 piece
64	PBS7050	S	7612207178821	60 piece
64	PBS7040	S	7612207178814	80 piece
70	PBS7020	S	7612207178791	140 piece
70	PBS7680	S	7612207178968	40 piece
70	PB7025	S	7612207178807	120 piece
70	PBS7660	S	7612207178937	40 piece
70	PBS7630	S	7612207178869	80 piece
76	PBW7630	W	7612207178876	100 piece
76	PB7650	S, W	7612207178906	40 piece
76	PB7640	S, W	7612207178883	60 piece
76	PBS7625	S	7612207178845	120 piece
83	PBS8980	S	7612207179132	40 piece
83	PB8950	S	7612207179088	40 piece
83	PBS8935	S	7612207179040	80 piece
83	PBS8325	S	7612207178975	120 piece
83	PBS8940	S	7612207179064	40 piece
83	PBS8960	S	7612207179118	40 piece
83	PBS8930	S	7612207179026	80 piece
89	PBW8930	W	7612207179033	80 piece
89	PBW8940	W	7612207179071	40 piece
89	PB8925	S	7612207178999	80 piece
102	PBS10820	S	7612207179200	60 piece
102	PBS108100	S	7612207179279	40 piece
102	PBS10840	S	7612207179231	40 piece
102	PBS10850	S	7612207179248	40 piece
102	PBS10880	S	7612207179262	40 piece
102	PBS10830	S	7612207179217	80 piece
102	PBS10835	S	7612207179224	40 piece
102	PBS10860	S	7612207179255	40 piece
108	PBS11445	S	7612207179354	40 piece
114	PBW11450	W	7612207179385	40 piece
114	PBW11440	W	7612207179347	40 piece
114	PBS11440	S	7612207179330	40 piece
114	PBS11450	S	7612207179378	40 piece
114	PBS11435	S	7612207179316	40 piece

Bend – 90°, two-piece, welded

Pipe Ø [mm]	Item	Application angle type	EAN	Content [quantity]
114	PBS11460	S	7612207179408	40 piece
114	PBS11480	S	7612207179422	40 piece
114	PBS114100	S	7612207179446	40 piece
127	PBS13350	S	7612207179491	60 piece
127	PBS13340	S	7612207179477	40 piece
127	PBS13330	S	7612207179453	40 piece
127	PBS133100	S	7612207179521	40 piece
127	PBS13380	S	7612207179514	40 piece
127	PBS13335	S	7612207179460	40 piece
127	PBS13360	S	7612207179507	40 piece
127	PBS13345	S	7612207179484	40 piece
140	PBS14045	S	7612207179576	40 piece
140	PBS14050	S	7612207179590	60 piece
140	PBS14080	S	7612207179637	40 piece
140	PBS14060	S	7612207179613	40 piece
140	PBS140100	S	7612207179651	40 piece
140	PBS14040	S	7612207179569	30 piece
159	PBS15945	S	7612207179699	60 piece
159	PBS15980	S	7612207179729	40 piece
159	PBS15940	S	7612207179682	60 piece
159	PBS15960	S	7612207179712	40 piece
159	PBS159100	S	7612207179743	40 piece
159	PBS15950	S	7612207179705	40 piece
168	PBS16840	S	7612207179781	60 piece
168	PBS16850	S	7612207179798	40 piece
168	PBS16880	S	7612207179811	40 piece
168	PBS168100	S	7612207179835	40 piece
168	PBS16860	S	7612207179804	40 piece
194	PBS19460	S	7612207179859	40 piece
194	PBS19480	S	7612207179866	40 piece
194	PBS194100	S	7612207179873	20 piece
194	PBS19450	S	7612207179842	40 piece
219	PBS21960	S	7612207179897	40 piece
219	PBS21950	S	7612207179880	40 piece
219	PBS21980	S	7612207179903	20 piece
219	PBS219100	S	7612207179910	20 piece
267	PBS26780	S	7612207179934	20 piece
267	PBS267100	S	7612207179941	20 piece
267	PBS26760	S	7612207179927	40 piece

Other information

Remarks

Alternative application size: pipe diameter/insulation thickness (e.g. 17/20)
Dimensions can be ordered in smaller quantities

Prefabricated part – t-piece

Pipe Ø [mm]	Item	Description	Main pipe outer diameter [mm]	Branch pipe outer diameter [mm]	EAN	Content [quantity]
27	PBA2721	20mm insulation thickness	27	21	7612207179958	1 pack
33	PBA3333	20mm insulation thickness	33	33	7612207179989	1 pack
33	PBA3327	20mm insulation thickness	33	27	7612207179972	1 pack
33	PBA3321	20mm insulation thickness	33	21	7612207179965	1 pack
42	PBA4221	20mm insulation thickness	42	21	7612207179996	1 pack
42	PBA4233	20mm insulation thickness	42	33	7612207180015	1 pack
42	PBA4227	20mm insulation thickness	42	27	7612207180008	1 pack
48	PBA4827	20mm insulation thickness	48	27	7612207180022	1 pack
48	PBA4833	20mm insulation thickness	48	33	7612207180039	1 pack
48	PBA4842	20mm insulation thickness	48	42	7612207180046	1 pack
60	PBA6033	20mm insulation thickness	60	33	7612207180060	1 pack
60	PBA6042	20mm insulation thickness	60	42	7612207180077	1 pack
60	PBA6027	20mm insulation thickness	60	27	7612207180053	1 pack
60	PBA6048	20mm insulation thickness	60	48	7612207180084	1 pack

Other information

Remarks 1 pack = 10 pieces

Prefabricated part – t-piece (flexible)

Item	Description	EAN	Content [quantity]
PBT 105	Flexible T-Piece: Main pipe = 100-156mm; branch pipe = 100-108mm	7612207463439	1 pack
PBT 125	Flexible T-Piece: Main pipe = 116-182mm; branch pipe = 116-128mm	7612207463446	1 pack
PBT 145	Flexible T-Piece: Main pipe = 136-194mm; branch pipe = 136-149mm	7612207463460	1 pack
PBT 160	Flexible T-Piece: Main pipe = 156-218mm; branch pipe = 156-169mm	7612207463453	1 pack
PBT 65	Flexible T-Piece: Main pipe = 57-67mm; branch pipe = 67-100mm	7612207463415	1 pack
PBT 75	Flexible T-Piece: Main pipe = 74-108mm; branch pipe = 74mm	7612207463392	1 pack
PBT 85	Flexible T-Piece: Main pipe = 83-120mm; branch pipe = 83-88mm	7612207463422	1 pack
PBT 95	Flexible T-Piece: Main pipe = 94-140mm; branch pipe = 94mm	7612207463408	1 pack

Other information

Remarks 1 pack = 10 pieces

Foil cut-outs

Outer diameter [mm]	Item	Description	Cut-out length [mm]	EAN	Content [quantity]
60	PZA22	PZA - latch effect	220	7612207181500	1 pack
60	PZB22	PZB self-adhesive - latch effect	220	7612207181517	1 pack
65	PZA24	PZA - latch effect	240	7612207181524	1 pack
65	PZB24	PZB self-adhesive - latch effect	240	7612207181531	1 pack
70	PZB26	PZB self-adhesive - latch effect	260	7612207181555	1 pack
70	PZA26	PZA - latch effect	260	7612207181548	1 pack
82	PZB29	PZB self-adhesive - latch effect	290	7612207181579	1 pack
82	PZA29	PZA - latch effect	290	7612207181562	1 pack
89	PZB31	PZB self-adhesive - latch effect	310	7612207181593	1 pack
89	PZA31	PZA - latch effect	310	7612207181586	1 pack
95	PZA33	PZA - latch effect	330	7612207181609	1 pack
95	PZB33	PZB self-adhesive - latch effect	330	7612207181616	1 pack
100	PZB35	PZB self-adhesive - latch effect	350	7612207181630	1 pack
100	PZA35	PZA - latch effect	350	7612207181623	1 pack
105	PZA36	PZA - latch effect	360	7612207181647	1 pack
105	PZB36	PZB self-adhesive - latch effect	360	7612207181654	1 pack
110	PZB38	PZB self-adhesive - latch effect	380	7612207181678	1 pack
124	PZA42	PZA - latch effect	420	7612207181708	1 pack
124	PZB42	PZB self-adhesive - latch effect	420	7612207181715	1 pack
130	PZB44	PZB self-adhesive - latch effect	440	7612207181739	1 pack
136	PZB46	PZB self-adhesive - latch effect	460	7612207181753	1 pack
150	PZA50	PZA - latch effect	500	7612207181760	1 pack
165	PZA55	PZA - latch effect	550	7612207181784	1 pack
165	PZB55	PZB self-adhesive - latch effect	550	7612207181791	1 pack
180	PZB60	PZB self-adhesive - latch effect	600	7612207181814	1 pack
195	PZB65	PZB self-adhesive - latch effect	650	7612207181838	1 pack
229	PZA75	PZA - latch effect	750	7612207255812	1 pack
308	PZB100	PZB self-adhesive - latch effect	1.000	7612207181920	1 pack

Other information

Remarks

Cut outs width: 1,000 mm, 1 pack = 10 pieces (≤ 82 mm diameter), 1 pack = 5 pieces (≥ 89 mm diameter)
All cut outs have 30mm overlapping

Covering. endless

Item	Thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
PF251 B2	0,35	1.000	25	7612207180329	1250 m ²

Covering, endless

Item	Thickness [mm]	Width [mm]	Length [m]	EAN	Content [metric]
PFSE251 B1	0,35	1.000	25	7612207180350	1250 m ²

Tape – PVC. Grey

Item	Thickness [mm]	Width [mm]	Length [m]	EAN	Content [quantity]
PSKB19	0,15	19	25	7612207181210	32 roll
PSKB25	0,15	25	25	7612207181234	24 roll
PSKB30	0,15	30	25	7612207181258	20 roll



INSTALL IT. SAFEGUARD YOUR EQUIPMENT.

Okatherm

Alu jacketing system for professional use

- // Non combustibile
- // Good resistance against saltwater
- // Easy-to-install
- // Pure aluminium (AL 99,5)
- // Alu-stucco or coarse-grained surface

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TECHNICAL DATA - OKATHERM

Brief description	ArmaClad Okatherm Alu 2-piece welded bends, 4-piece segment bends, foils and end cappings are jacketing system for professional use.
Material type	Pure aluminium. Quality: EN AW 1050 (AL 99.5). Structure: alu-coarse-grained surface. Structure: alu-stucco (4-piece segment bend).
Applications	Jacketing of insulated materials/bends. Welded two-piece type, without insulation layer. Bend-types for welded bends according to EN 10253-1, type 3 (=1,5 · da). Four-piece type, with round corrugation (without beginning and final corrugation) and boreholes, for bolting and riveting, without insulation layer.

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature	Min. °C	Max. °C	
	-193	250	
Fire Performance and Approvals			
Reaction to fire	non-combustible - A1		DIN 4102
Resistance to water vapour			
Water vapour diffusion resistance factor	parctically vapour-tight		VDI 2055
Physical attributes			
Thickness	2-piece bend: 0.2 mm resp. 0.3 mm 4-piece bend: 0.5 mm S200 foil: 0,2 mm		
Mass per unit area	2-piece bend: 540 - 810 g/m² 4-piece bend: 1350 g/m² S200 foil: 540 g/m²		
Dimensions and tolerances	Thickness: 2-piece bend: ± 0.016 mm - ± 0.024 mm 4-piece bend: ± 0.03 mm S200 foil: ± 0.016 mm		
Mechanical properties			
Resistance to mechanical impact	Very good resistance in case of normal use.		

Accessories

Item	Description	EAN	Content [quantity]
TMN	Rivets, cadmium coated. 1000 rivets/bag.	7612207182569	1 piece
TMNW	Riveting tool magnetized	7612207182576	1 piece

Prefabricated part – 90° elbow. Silver (Covering)

Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [quantity]
17	TB1720	20	7612207181937	120 piece
17	TB1730	30	7612207181944	90 piece
21	TB2130	30	7612207181968	80 piece
21	TB2120	20	7612207181951	120 piece
21	TB2140	40	7612207181975	50 piece
27	TB2740	40	7612207182002	40 piece
27	TB2720	20	7612207181982	100 piece
27	TB2730	30	7612207181999	65 piece
33	TB3330	30	7612207182026	55 piece
33	TB3320	20	7612207182019	100 piece
33	TB3340	40	7612207182033	80 piece
42	TB4220	20	7612207182040	65 piece
42	TB4230	30	7612207182057	50 piece
42	TB4240	40	7612207182064	80 piece
48	TB4820	20	7612207182071	65 piece
48	TB4830	30	7612207182088	80 piece
48	TB4850	50	7612207182101	30 piece
48	TB4840	40	7612207182095	80 piece
60	TB6060	60	7612207182163	20 piece
60	TB6040	40	7612207182149	40 piece
60	TB6050	50	7612207182156	20 piece
60	TB6020	20	7612207182125	80 piece
60	TB6030	30	7612207182132	40 piece
64	TB6440	40	7612207182194	40 piece
64	TB6430	30	7612207182187	60 piece
64	TB6420	20	7612207182170	80 piece
70	TB7040	40	7612207182224	40 piece
70	TB7030	30	7612207182217	40 piece
76	TB7660	60	7612207182262	20 piece
76	TB7670	70	7612207182279	15 piece
76	TB7640	40	7612207182248	20 piece
76	TB7650	50	7612207182255	20 piece
76	TB7630	30	7612207182231	40 piece
89	TB8930	30	7612207182286	20 piece
89	TB8950	50	7612207182309	20 piece
89	TB8980	80	7612207182323	20 piece
89	TB8960	60	7612207182316	20 piece

Prefabricated part – 90° elbow. Silver (Covering)

Pipe Ø [mm]	Item	Insulation thickness [mm]	EAN	Content [quantity]
89	TB8940	40	7612207182293	20 piece
108	TB10830	30	7612207182330	20 piece
108	TB10880	80	7612207182378	10 piece
108	TB10840	40	7612207182347	20 piece
108	TB10850	50	7612207182354	10 piece
108	TB10860	60	7612207182361	10 piece
114	TB11460	60	7612207182422	10 piece
114	TB11440	40	7612207182408	10 piece
114	TB114100	100	7612207182439	10 piece
114	TB11450	50	7612207182415	10 piece
114	TB11430	30	7612207182392	25 piece
127	TB127100	100	7612207182484	10 piece
127	TB12740	40	7612207182453	15 piece
127	TB12760	60	7612207182477	10 piece
140	TB14040	40	7612207182491	15 piece
140	TB14060	60	7612207182514	10 piece
159	TB159100	100	7612207182521	10 piece
169	TB16950	50	7612207182545	10 piece

Foil cut-outs

Outer diameter [mm]	Item	Cut-out length [mm]	EAN	Content [quantity]
Other information				
Remarks	Outer diameter with 30mm overlapping. Width: 1,000 mm, Thickness: 0.2 mm			

Foil. Silver

Item	Thickness [mm]	Length [mm]	EAN	Content [metric]
TFR20025	0,2	1.000	7612207564501	25 m ²



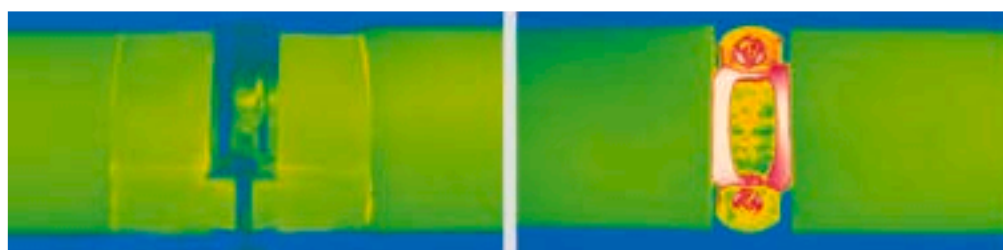
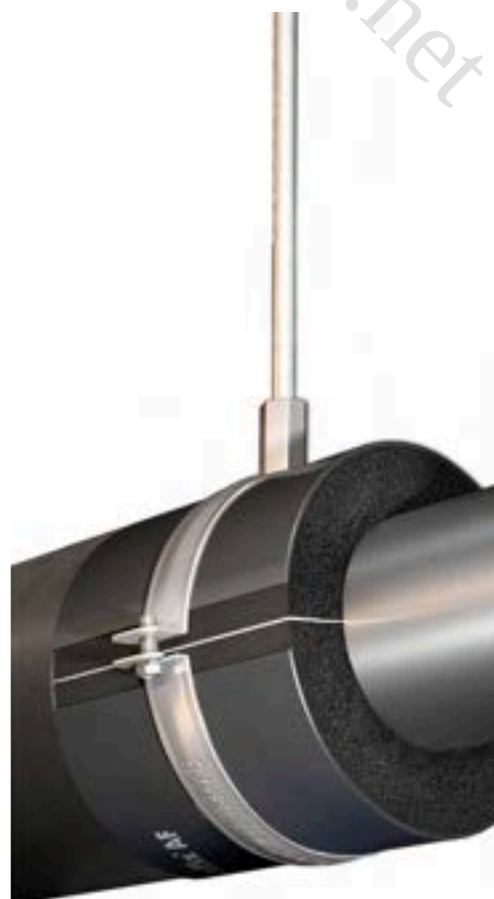
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ArmaFix Clamps

The reliable partner for a secure fix

- // Quick release
- // Combination nut for mounting

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TECHNICAL DATA - ARMAFIX CLAMPS

Brief description	Pipe clamp with a quick release and a combination nut for mounting.
Material type	Steel with an electrolytic zinc coating.
Additional material information	The clamps are supplied with a nut for fixing.
Product colour range	Silver
Applications	Where thermal bridging should be avoided in refrigeration and air-conditioning installations, which are intended to be insulated with appropriate ArmaFlex type and ArmaFix pipe-hanger.

Property	Value / Assessment	Standard / Test method
Fire performance		
Others	No insulation layer in clamp / pipe fastener to affect fire performance of the clamp itself.	
Other technical features		
Additional remarks	Screw connections: M 8 / M 10 combination nut Tension screws: M 6 and M 8 Clamp Width: 20 to 30 mm; Thickness 1,5 to 3,0 mm	

Clamp

Item	EAN	Content [quantity]
PCX 025/030	7612207373301	25 piece
PCX 033/037	7612207372366	25 piece
PCX 038/041	7612207382112	25 piece
PCX 042/046	7612207372373	25 piece
PCX 047/052	7612207372380	25 piece
PCX 054/058	7612207372397	25 piece
PCX 059/063	7612207372403	25 piece
PCX 063/068	7612207369762	25 piece
PCX 068/073	7612207372427	10 piece
PCX 072/080	7612207369779	10 piece
PCX 082/085	7612207369786	10 piece
PCX 088/092	7612207369793	10 piece
PCX 092/099	7612207369809	10 piece
PCX 099/103	7612207369816	10 piece
PCX 108/112	7612207369823	10 piece
PCX 112/118	7612207369830	10 piece
PCX 125/130	7612207372434	10 piece
PCX 133/137	7612207369847	10 piece
PCX 137/142	7612207382129	10 piece
PCX 145/152	7612207382174	10 piece
PCX 159/164	7612207382143	10 piece
PCX 164/169	7612207382150	10 piece
PCX 168/173	7612207382235	10 piece
PCX 190	7612207382167	10 piece
PCX 199	7612207382181	10 piece
PCX 206	7612207382198	10 piece
PCX 222	7612207382242	10 piece
PCX 231	7612207382204	10 piece
PCX 249	7612207382211	10 piece
PCX 259	7612207388343	10 piece



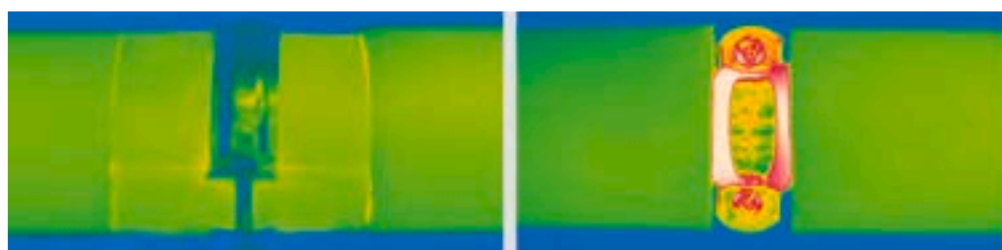
INSTALL IT. TRUST IT.

ArmaFix WS

The pipe support solution for heating and plumbing

- // Made out of recycled and recyclable PET
- // Aligned to the standard thicknesses of mineral wool
- // Prevents energy losses
- // High mechanical resistance for lower quantity of pipe supports per installation

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 **armacell**
ArmaFix™

TECHNICAL DATA - ARMAFIX VVS

Brief description	Pipe and duct support for heating and plumbing installations to prevent heat losses at fixing points. Two ArmaFORM PET foam sections fixed with a tape.
Material type	PET-foam stand alone bearing segments. Outside bearing shells made of grey painted aluminium sheeting 0.8mm thick, which simultaneously serves as a vapour barrier for the PET bearing segments.
Product colour range	Grey
Applications	Mounting aid for heating and plumbing applications, insulated with e.g. mineral fibre.

Property	Value / Assessment		Standard / Test method
Temperature range			
Service temperature ¹	Max. °C		EN 14706, EN 14707
	110		
	Remarks	Minimum service temperature: As is usual in plumbing and heating installations.	
Thermal conductivity			
Declared thermal conductivity	Øm	23 °C	EN ISO 13787, EN ISO 8497, EN 12667
	λd ≤ [W/(m·K)]	0,034	
	Range	PET foam	
Fire Performance and Approvals			
Reaction to fire	Euroclass: E The fire classification may change in combination with other insulation materials. For example: BL-s1,d0 in combination with alu-covered mineral wool.		EN 13501-1, EN 13823, EN ISO 11925-2
Physical attributes			
Density	100 kg/m³		
Health and environment			
Additional features	SCCP, MCCP, LCCP-free		
Other technical features			
Shelf life	3 years		
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).		

¹ For further information, please contact our Customer Service.

Pipe support – combi pack

20 mm					30 mm				
Pipe Ø [mm]	Maximum permissible distance [m]	Item	EAN	Content [quantity]	Pipe Ø [mm]	Maximum permissible distance [m]	Item	EAN	Content [quantity]
15	2,0	WVS-20-015	7612207489651	24 piece	15	2,0	WVS-30-015	7612207489682	18 piece
18	2,0	WVS-20-018	7612207489767	24 piece	18	2,0	WVS-30-018	7612207489811	18 piece
22	2,0	WVS-20-022	7612207489774	18 piece	22	2,0	WVS-30-022	7612207489729	18 piece
28	3,0	WVS-20-028	7612207489781	18 piece	28	3,0	WVS-30-028	7612207489828	18 piece
35	3,0	WVS-20-035	7612207489798	18 piece	35	3,0	WVS-30-035	7612207489736	18 piece
42	3,0	WVS-20-042	7612207489668	18 piece	42	3,0	WVS-30-042	7612207489743	12 piece
48	4,0	WVS-20-048	7612207489804	18 piece	48	4,0	WVS-30-048	7612207489835	12 piece
54	4,0	WVS-20-054	7612207489675	18 piece	54	4,0	WVS-30-054	7612207489750	12 piece
60	4,0	WVS-20-060	7612207489712	12 piece	60	4,0	WVS-30-060	7612207489842	12 piece
-	-	-	-	-	76	5,0	WVS-30-076	7612207489699	12 piece
-	-	-	-	-	89	6,0	WVS-30-089	7612207489859	12 piece
-	-	-	-	-	102	6,0	WVS-30-102	7612207489866	6 piece
-	-	-	-	-	108	6,0	WVS-30-108	7612207489873	6 piece
-	-	-	-	-	114	6,0	WVS-30-114	7612207489705	6 piece

Pipe support – combi pack

40 mm					50 mm				
Pipe Ø [mm]	Maximum permissible distance [m]	Item	EAN	Content [quantity]	Pipe Ø [mm]	Maximum permissible distance [m]	Item	EAN	Content [quantity]
15	2,0	WVS-40-015	7612207489965	24 piece	22	2,0	WVS-50-022	7612207489996	6 piece
18	2,0	WVS-40-018	7612207489972	18 piece	28	3,0	WVS-50-028	7612207490091	6 piece
22	2,0	WVS-40-022	7612207490039	18 piece	35	3,0	WVS-50-035	7612207490077	6 piece
28	3,0	WVS-40-028	7612207489897	12 piece	42	3,0	WVS-50-042	7612207490008	6 piece
35	3,0	WVS-40-035	7612207489989	12 piece	48	4,0	WVS-50-048	7612207490015	4 piece
42	3,0	WVS-40-042	7612207489903	6 piece	54	4,0	WVS-50-054	7612207490084	4 piece
48	4,0	WVS-40-048	7612207490046	6 piece	60	4,0	WVS-50-060	7612207490107	4 piece
54	4,0	WVS-40-054	7612207489934	6 piece	76	5,0	WVS-50-076	7612207489910	2 piece
60	4,0	WVS-40-060	7612207490053	6 piece	89	6,0	WVS-50-089	7612207490022	2 piece
76	5,0	WVS-40-076	7612207489941	4 piece	114	6,0	WVS-50-114	7612207489927	2 piece
89	6,0	WVS-40-089	7612207490060	4 piece	-	-	-	-	-
114	6,0	WVS-40-114	7612207489958	2 piece	-	-	-	-	-

Pipe support – combi pack

60 mm					70 mm				
Pipe Ø [mm]	Maximum permissible distance [m]	Item	EAN	Content [quantity]	Pipe Ø [mm]	Maximum permissible distance [m]	Item	EAN	Content [quantity]
28	3,0	WVS-60-028	7612207490169	6 piece	35	3,0	WVS-70-035	7612207490145	4 piece
35	3,0	WVS-60-035	7612207490213	6 piece	42	3,0	WVS-70-042	7612207490152	4 piece
42	3,0	WVS-60-042	7612207490176	6 piece	48	4,0	WVS-70-048	7612207490275	2 piece
48	4,0	WVS-60-048	7612207490220	6 piece	54	4,0	WVS-70-054	7612207490282	2 piece

Pipe support – combi pack

60 mm					70 mm				
Pipe Ø [mm]	Maximum permissible distance [m]	Item	EAN	Content [quantity]	Pipe Ø [mm]	Maximum permissible distance [m]	Item	EAN	Content [quantity]
54	4,0	WVS-60-054	7612207490237	6 piece	76	5,0	WVS-70-076	7612207490299	2 piece
60	4,0	WVS-60-060	7612207490183	4 piece	89	6,0	WVS-70-089	7612207490114	2 piece
76	5,0	WVS-60-076	7612207490244	2 piece	-	-	-	-	-
89	6,0	WVS-60-089	7612207490138	2 piece	-	-	-	-	-
102	6,0	WVS-60-102	7612207490251	2 piece	-	-	-	-	-
108	6,0	WVS-60-108	7612207490190	2 piece	-	-	-	-	-
114	6,0	WVS-60-114	7612207490268	2 piece	-	-	-	-	-

Pipe support – combi pack

80 mm				
Pipe Ø [mm]	Maximum permissible distance [m]	Item	EAN	Content [quantity]
42	3,0	WVS-80-042	7612207490305	2 piece
48	4,0	WVS-80-048	7612207490312	2 piece
54	4,0	WVS-80-054	7612207490329	2 piece
76	5,0	WVS-80-076	7612207490121	2 piece



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ArmaFlex

EC0550 Adhesive

Upgraded formula, reduced environmental impact

- // One-stop solution designed for all NBR/PVC and black ArmaPrene based products
- // Proven reliability of ArmaFlex adhesives
- // Enhanced efficiency: achieve the same performance with only a third of the product
- // Engineered for a more eco-friendly solution
- // Meeting leading green building standards
- // Free from hazardous components for safer use
- // Easy storage, shipping, and disposal
- // Efficiency boost: save time with add-on ArmaFlex EC0550 Activator

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TECHNICAL DATA - ARMAFLEX EC0550 ADHESIVE

Brief description	Solvent-free polychloroprene contact adhesive as single-component or two-component adhesive
Material type	Solvent-free dispersion adhesive based on synthetic latex.
Additional material information	Liquid
Product colour range	White
Special features	Specially formulated adhesive for uniform and safe seam bonding of flexible ArmaFlex insulation materials except EPDM based foams.
Applications	Work should not be carried out on plants in operation or areas exposed to strong sunlight and high windspeed. Apply thinly with a brush or lacquer foam roller to the areas to be bonded. In case of contact adhesion press together with force during the contact adhesion time. Adhesive bond reaches full strength after 36 hours. The system should not be operated during this period and any self-adhesive tapes or protective coatings should only be applied after this period has elapsed. For further details see ArmaFlex EC0550 Adhesive application manual.
Installation	Clean dirty surfaces and the ArmaFlex surface with ArmaFlex SF Cleaner before starting the application with the adhesive. Compatibility with bases: very good adhesion to metallic base, except galvanized surfaces. The compatibility with colour-coated surfaces with adhesive needs to be tested.
Remarks	The application of ArmaFlex EC0550 adhesive shall be performed only by certified users. Before starting application work, a practical instruction training performed by the Armacell Technical Customer Service is obligatory.

Property	Value / Assessment	Standard / Test method
Temperature range		
Service temperature	Min. °C ¹	Max. °C
	-50	100
Weather and UV resistance		
Weather resistance	Very good	
Health and environment		
Volatile organic compounds (VOC) content	Fulfills VOC requirements.	
Health aspects	MSDS available on request.	
Other technical features		
Application conditions	Application temperature: ideally between + 15 °C and + 20 °C, not below +5 °C. The maximum relative humidity must not exceed 70%.	
Disposal and recycling	Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company. Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer. More details see relevant Safety Data Sheet.	
Flash point ²	223°C	
Hazard class	Not relevant.	
Shelf life	12 months	
Storage	Material shall be stored in the sealed original container. In a cool (preferably not under +15 °C and not over + 35 °C) and dry place. Protect from temperatures below +5 °C! Do not store below 0°C.	
Working time	at 20 °C : 1. Minimum drying time (airing time): > 2-3 minutes 2. Contact adhesion time (open time): max. 15 Minutes 3. Setting time: 36 hours The airing and open time depends on the quantity as well as indoor climate conditions.	
Yield	Yield of the adhesive applied to both surfaces: ArmaFlex tubes (thickness > consumption butt joint > consumption butt joint + longitudinal joint): 10 mm > 0,5 g/m > 2 g/m 20 mm > 1 g/m > 4 g/m 30 mm > 1,5 g/m > 6 g/m 40 mm > 2 g/m > 8 g/m ArmaFlex sheets: 30-40 g/m ² These figures are a guide only.	

¹For temperatures below -50 °C please contact our Customer Service Center to request for the corresponding technical information.²more information is available in MSDS.

Adhesive - standard

Item	Description	EAN	Content [quantity]
ADH-EC0550/300G	300 g tins of ArmaFlex EC0550 adhesive packed in a carton.	7612207557893	6 piece

ArmaFlex EC0550 Activator. Accessories

Item	Description	EAN	Content [quantity]
ACT-EC0550/0,1	100 ml tins of ArmaFlex EC0550 activator packed in a carton.	7612207557909	6 piece

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ArmaFlex

Ultima EC0550 Adhesive

Upgraded formula for low-smoke requirements, reduced environmental impact

- // Specially formulated for all ArmaPrene based products
- // Meeting the highest fire and smoke requirements
- // System solution for low-smoke insulation
- // Proven reliability of ArmaFlex adhesives
- // Enhanced efficiency: same results with only a third of the product
- // Designed for a more eco-friendly solution
- // Meeting leading green building standards
- // Free from hazardous components for safer use
- // Easy storage, shipping, and disposal
- // Efficiency boost: save time with add-on ArmaFlex EC0550 Activator

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TECHNICAL DATA - ARMAFLEX ULTIMA ECO550 ADHESIVE

Brief description	Solvent-free polychloroprene contact adhesive as single-component or two-component adhesive
Material type	Solvent-free dispersion adhesive based on synthetic latex.
Additional material information	Liquid
Product colour range	Blue
Special features	Specifically formulated water-based adhesive for uniform and safe seam-bonding of flexible ArmaFlex Ultima insulation materials based on ArmaPrene synthetic rubber.
Applications	Work should not be carried out on plants in operation or areas exposed to strong sunlight and high windspeed. Apply thinly with a brush or lacquer foam roller to the areas to be bonded. In case of contact adhesion press together with force during the contact adhesion time. Adhesive bond reaches full strength after 36 hours. The system should not be operated during this period and any self-adhesive tapes or protective coatings should only be applied after this period has elapsed. For further details see ArmaFlex ECO550 Adhesive application manual.
Installation	Clean dirty surfaces and the ArmaFlex surface before starting the application with the adhesive. Compatibility with bases: very good adhesion to metallic base. The compatibility with colour-coated surfaces with adhesive needs to be tested.
Remarks	The application of ArmaFlex Ultima ECO550 adhesive shall be performed only by certified users. Before starting application work, a practical instruction training performed by the Armacell Technical Customer Service is obligatory

Property	Value / Assessment	Standard / Test method
Temperature range		
Service temperature	Min. °C ¹	Max. °C
	-50	100
Weather and UV resistance		
Weather resistance	Very good	
Health and environment		
Volatile organic compounds (VOC) content	Fulfills VOC requirements.	
Health aspects	MSDS available on request.	
Other technical features		
Application conditions	Application temperature: ideally between + 15 °C and + 20 °C, not below +5 °C. The maximum relative humidity must not exceed 70%.	
Disposal and recycling	Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company. Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer. More details see relevant Safety Data Sheet.	
Flash point ²	223°C	
Hazard class	Not relevant.	
Shelf life	12 months	
Storage	Material shall be stored in the sealed original container. In a cool (preferably not under +15 °C and not over + 35 °C) and dry place. Protect from temperatures below +5 °C. Do not store below 0°C.	
Working time	at 20 °C : 1. Minimum drying time (airing time): > 2-3 minutes 2. Contact adhesion time (open time): max. 15 Minutes 3. Setting time: 36 hours The airing and open time depends on the quantity as well as indoor climate conditions.	
Yield	Yield of the adhesive applied to both surfaces: ArmaFlex tubes (thickness > consumption butt joint > consumption butt joint + longitudinal joint): 10 mm > 0,5 g/m > 2 g/m 20 mm > 1 g/m > 4 g/m 30 mm > 1,5 g/m > 6 g/m 40 mm > 2 g/m > 8 g/m ArmaFlex sheets: 30-40 g/m ² These figures are a guide only.	

¹For temperatures below -50 °C please contact our Customer Service Center to request for the corresponding technical information.

² more information is available in MSDS.

Download from, mepbali.net

Adhesive - standard

Item	Description	EAN	Content [quantity]
AHU-EC0550/300G	300 g tins of ArmaFlex Ultima EC0550 adhesive packed in a carton.	7612207557916	6 piece

ArmaFlex EC0550 Activator. Accessories

Item	Description	EAN	Content [quantity]
ACT-EC0550/0,1	100 ml tins of ArmaFlex EC0550 activator packed in a carton.	7612207557909	6 piece



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ArmaFlex 520 Adhesive

The adhesive for superior ArmaFlex
system reliability

- // Fast drying adhesive solution
- // Ensures reliable vapour-tight joints
- // Specially formulated for ArmaFlex insulation
- // For operating temperatures up to +105 °C

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ARMAFLEX ACCESSORIES

Elastomeric insulation materials not only have good technical properties, they are also very user-friendly due to their high flexibility and ease of application. When installing these insulation materials it is crucial that they are glued professionally. Therefore, Armacell offers a broad range of adhesives specifically developed for its products and regularly adds innovative solutions.

ArmaFlex 520



THE ADHESIVE
FOR SUPERIOR
ARMAFLEX SYSTEM
RELIABILITY

ArmaFlex 525



SPECIAL ADHESIVE
FOR NEXT
GENERATION
OF ARMAFLEX
ELASTOMERIC
INSULATION

ArmaFlex 750



SPECIAL ADHESIVE
FOR SUPERIOR
NH/ARMAFLEX
SMART
INSTALLATIONS

ArmaFlex HT625



THE ADHESIVE
FOR SUPERIOR
ARMAFLEX SYSTEM
RELIABILITY IN HIGH
TEMPERATURE &
SOLAR
APPLICATIONS

ArmaFlex RS850



THE DRIP-FREE,
THIXOTROPIC
(GEL-LIKE)
ADHESIVE

ArmaFlex EC0550 Adhesives

Reinventing Bonding

The introduction of the ArmaFlex EC0550 range marks the beginning of a new era in adhesive solutions. Designed as a versatile alternative to conventional adhesives, ArmaFlex EC0550 serves as a one-stop solution for all NBR/PVC and black ArmaPrene®-based ArmaFlex insulation materials, while the new ArmaFlex Ultima EC0550 ensures reliable bonding for premium applications.



ArmaFlex Ultima 700

ArmaFlex Ultima and ArmaFlex Rail, synthetic rubber insulation materials based on the innovative ArmaPrene technology, require the use of adhesives that have been specially formulated for this type of foam.



Find out more about all accessories in www.armacell.com

TECHNICAL DATA - ARMAFLEX 520 ADHESIVE

Brief description	Special adhesive for installing all flexible ArmaFlex insulation materials with the exception of ArmaPrene and ArmaFlex EPDM-based products. See also "Overview ArmaFlex Adhesives".
Material type	Contact adhesive on polychloroprene basis, free of aromatic components.
Additional material information	Liquid
Product colour range	Beige
Applications	Work should not be carried out on plants in operation or areas exposed to strong sunlight. Stir the adhesive with a brush well before use. Apply thinly with a brush or spatula to the areas to be bonded. In case of contact adhesion press together with force during the contact adhesion time. For further details see extensive ArmaFlex Application Manual.
Installation	Clean dirty surfaces and the ArmaFlex surface with ArmaFlex Cleaner before starting the application with the adhesive. Compatibility with bases: very good adhesion to metallic base. The compatibility with colour-coated surfaces with adhesive needs to be tested. Incompatible with: Asphalt, bitumen or red lead paint (inseed oil based).
Remarks	Setting time of the adhesive is 36 hours. Only then should the plant be put into operation. Wait 36 hours before applying coatings (exception: Armafinish 99), adhesive tape, coverings etc.

Property	Value / Assessment	Standard / Test method
Temperature range		
Service temperature	Min. °C ¹	Max. °C
	-50	105
Weather and UV resistance		
Weather resistance	Very good	
Health and environment		
Volatile organic compounds (VOC) content	Fulfills all VOC requirements (French, Italian, Belgian, German AgBB, EMICODE and Eurofins Indoor air Comfort GOLD).	ISO 16000 Parts 3, 6 & 9
Health aspects	MSDS available on request.	
Green building assessment	Meets the sustainable construction requirements for BREEAM international and DGNB.	
Other technical features		
Ageing stability	Very good.	
Application conditions	Application temperature: ideally + 20 °C, not below 0 °C. At temperatures below + 5 °C or high relative humidity (above approx. 80%), increased condensation may form on the surfaces of the glued or adhesive films. In these cases, bonding is difficult or impossible. This can be tested using absorbent paper (blotting or crepe paper).	
Disposal and recycling	Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company. Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer. More details see relevant Safety Data Sheet.	
Explosion limits	Lower: 1 Vol.% Upper: 20 Vol.%	
Flash point	approx. - 15 °C	
Hazard class	Highly flammable liquid and vapour	
Shelf life	18 months	
Storage	Material shall be stored in a closed (unopened) container in a dry, cool and well ventilated place. Do not store together with: explosive substances; spontaneously combusting substances. Jellification due to frost is reversible.	
Working time ²	at 20 °C: 1. Minimum drying time (airing time): 3-5 minutes 2. Contact adhesion time (open time): 15-20 minutes 3. Setting time: 36 hours The airing and open time depends on the quantity as well as indoor climate conditions.	
Yield	Yield of the adhesive applied to both surfaces: ArmaFlex tubes (thickness > consumption butt joint > consumption butt joint + longitudinal joint):	

Property	Value / Assessment	Standard / Test method
	10 mm > 1120 m/l > 140 m/l 20 mm > 280 m/l > 70 m/l 30 mm > 175 m/l > 45 m/l 40 mm > 130 m/l > 35 m/l ArmaFlex sheets: 7-9 m ² /l	
	These figures are a guide only.	

¹For temperatures below -50 °C please contact our Customer Service Center to request for the corresponding technical information.

²The full adhesion of the adhesive is achieved after 168 h.

Adhesive - standard. Beige. Portable packaging for ease of use.

Item	Description	EAN	Content [quantity]
ADH520/0,5E	0.5 litre tins of ArmaFlex 520 adhesive packed in a carton.	7612207119152	12 tin
ADH520/0,25E	0.25 litre tins of ArmaFlex 520 adhesive with built-in brush, packed in a carton.	7612207235050	24 tin

Adhesive - standard. Beige

Item	Description	EAN	Content [quantity]
ADH520/1,0E	1.0 litre tins of ArmaFlex 520 adhesive packed in a carton.	7612207119114	12 tin
ADH520/2,5E	2.5 litre tins of ArmaFlex 520 adhesive packed in a carton.	7612207119176	8 tin



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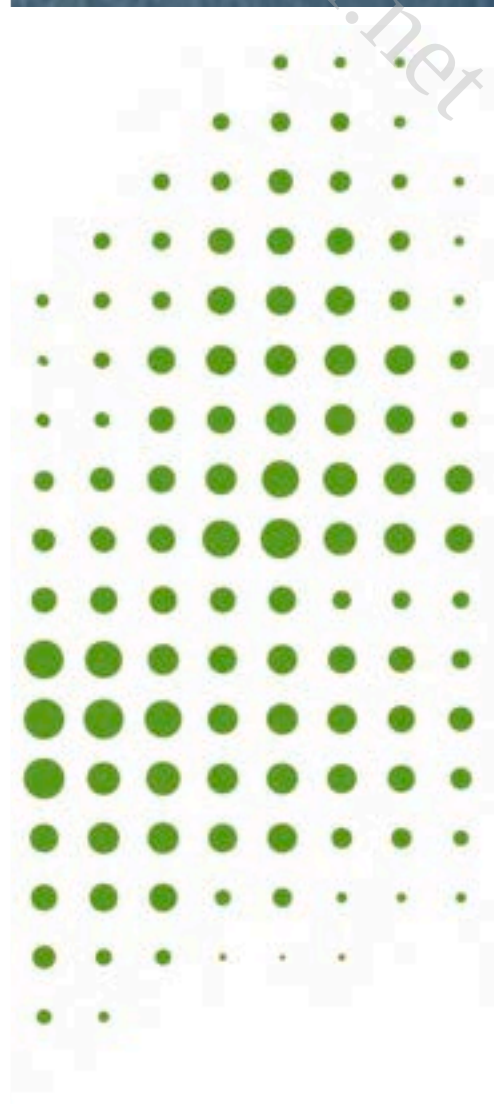
ArmaFlex

525 adhesive

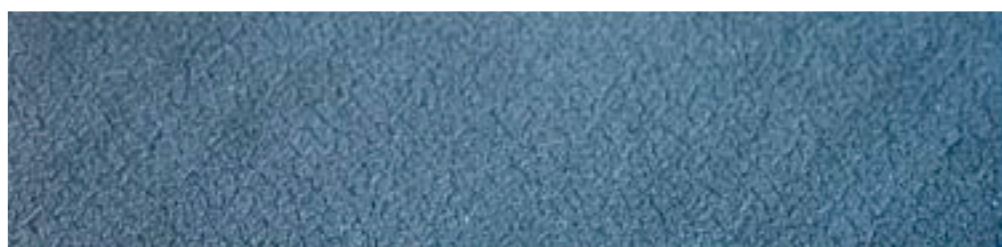
Special adhesive for next generation of
ArmaFlex elastomeric insulation

- // Fast drying adhesive solution
- // Ensures reliable vapour-tight joints
- // Specially formulated for ArmaFlex insulation
- // For operating temperatures up to +105 °C

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TECHNICAL DATA - ARMAFLEX 525 ADHESIVE

Brief description	Special premium adhesive for installing the next generation of flexible ArmaFlex insulation materials (e.g. AF/ArmaFlex Evo). See also "Overview ArmaFlex Adhesives".
Material type	Contact adhesive on polychloroprene basis, free of aromatic components.
Additional material information	Liquid
Product colour range	Beige
Applications	Work should not be carried out on plants in operation or areas exposed to strong sunlight. Stir the adhesive with a brush well before use. Apply thinly with a brush or spatula to the areas to be bonded. In case of contact adhesion press together with force during the contact adhesion time. For further details see extensive ArmaFlex Application Manual.
Installation	Clean dirty surfaces and the ArmaFlex surface with ArmaFlex Cleaner before starting the application with the adhesive. Compatibility with bases: very good adhesion to metallic base. The compatibility with colour-coated surfaces with adhesive needs to be tested. Incompatible with: Asphalt, bitumen or red lead paint (inseed oil based).
Remarks	Setting time of the adhesive is 36 hours. Only then should the plant be put into operation. Wait 36 hours before applying coatings (exception: Armafinish 99), adhesive tape, coverings etc.

Property	Value / Assessment	Standard / Test method
Temperature range		
Service temperature	Min. °C ¹	Max. °C
	-50	110
Weather and UV resistance		
Weather resistance	Very good.	
Health and environment		
Volatile organic compounds (VOC) content	Fulfills all VOC requirements (French, Italian, Belgian, German AgBB, EMICODE and Eurofins Indoor air Comfort GOLD).	ISO 16000 Parts 3, 6 & 9
Health aspects	MSDS available on request.	
Green building assessment	Meets the sustainable construction requirements for BREEAM international and DGNB.	
Other technical features		
Ageing stability	Very good	
Application conditions	Application temperature: ideally + 20 °C, not below 0 °C. At temperatures below + 5 °C or high relative humidity (above approx. 80%), increased condensation may form on the surfaces of the glued or adhesive films. In these cases, bonding is difficult or impossible. This can be tested using absorbent paper (blotting or crepe paper).	
Disposal and recycling	Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company. Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer. More details see relevant Safety Data Sheet.	
Explosion limits	Lower: 1,0 Vol.% Upper: 12,8 Vol. %	
Flash point	approx. - 26 °C	
Hazard class	Highly flammable liquid and vapour	
Shelf life	18 months	
Solids content	approx. 18 %	
Storage	Material shall be stored in a closed (unopened) container in a dry, cool and well-ventilated place. Do not store together with: explosive substances; spontaneously combusting substances. Jellification due to frost is reversible.	
Working time ²	at 20 °C: 1. Minimum drying time (airing time): 3-5 minutes 2. Contact adhesion time (open time): 15-20 minutes 3. Setting time: 36 hours The airing and open time depends on the quantity as well as indoor climate conditions.	

Property	Value / Assessment	Standard / Test method
Yield	Yield of the adhesive applied to both surfaces: ArmaFlex tubes (thickness > consumption butt joint > consumption butt joint + longitudinal joint): 10 mm > 1120 m/l > 140 m/l 20 mm > 280 m/l > 70 m/l 30 mm > 175 m/l > 45 m/l 40 mm > 130 m/l > 35 m/l ArmaFlex sheets: 7-9 m ² /l These figures are a guide only.	

¹For temperatures below -50 °C please contact our Customer Service Center to request for the corresponding technical information.

²The full adhesion of the adhesive is achieved after 168 h.

Adhesive - standard. Portable packaging for ease of use.

Item	Description	EAN	Content [quantity]
ADH-525/0,5	0,5 litre tins packed in a carton.	7612207491135	12 tin

Adhesive - standard

Item	Description	EAN	Content [quantity]
ADH-525/1,0	1.0 litre tins packed in a carton.	7612207491111	12 tin
ADH-525/2,5	2.5 litre tins packed in a carton.	7612207491128	8 tin



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ArmaFlex

HT625 adhesive

The adhesive for superior ArmaFlex system reliability in high temperature and solar applications

- // One-component adhesive
- // Developed to bond ArmaFlex insulation applied on high temperatures

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TECHNICAL DATA - ARMAFLEX HT625 ADHESIVE

Brief description	Special adhesive developed for high temperature applications, especially for ArmaFlex EPDM-based products (e.g. HT/ArmaFlex). See also "Overview ArmaFlex Adhesives".
Material type	Contact adhesive on polychloroprene basis, free of aromatic solvents.
Additional material information	Liquid
Product colour range	Beige
Special features	Specially formulated adhesive for uniform and safe seam bonding of flexible ArmaFlex insulation materials.
Applications	Work should not be carried out on plants in operation or areas exposed to strong sunlight. Stir the adhesive with a brush well before use. Apply thinly with a brush or spatula to the areas to be bonded. In case of contact adhesion press together with force during the contact adhesion time. For further details see extensive ArmaFlex Application Manual.
Installation	Clean dirty surfaces and the ArmaFlex surface with ArmaFlex Cleaner before starting the application with the adhesive. Compatibility with bases: very good adhesion to metallic base. The compatibility with colour-coated surfaces with adhesive needs to be tested. Incompatible with: Asphalt, bitumen or red lead paint (inseed oil based).
Remarks	Setting time of the adhesive is 36 hours. Only then should the plant be put into operation. Wait 36 hours before applying coatings (exception: Armafinish 99), adhesive tape, coverings etc.

Property	Value / Assessment	Standard / Test method
Temperature range		
Service temperature	Min. °C ¹ -50	Max. °C ² 150
Weather and UV resistance		
Weather resistance	Very good	
Health and environment		
Volatile organic compounds (VOC) content	Fulfills all VOC requirements (French, Italian, Belgian, German AgBB, EMICODE and Eurofins Indoor air Comfort GOLD).	ISO 16000 Parts 3, 6 & 9
Health aspects	MSDS available on request.	
Green building assessment	Meets the sustainable construction requirements for BREEAM international and DGNB.	
Other technical features		
Ageing stability	Very good	
Application conditions	Application temperature: ideally + 20 °C, not below 0 °C. At temperatures below + 5 °C or high relative humidity (above approx. 80%), increased condensation may form on the surfaces of the glued or adhesive films. In these cases, bonding is difficult or impossible. This can be tested using absorbent paper (blotting or crepe paper).	
Disposal and recycling	Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company. Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer. More details see relevant Safety Data Sheet.	
Explosion limits	Lower: 1,0 Vol.% Upper: 12,8 Vol.%	
Flash point	approx. - 26 °C	
Hazard class	Highly flammable liquid and vapour	
Shelf life	18 months	
Solids content	approx. 18 %	
Storage	Material shall be stored in a closed (unopened) container in a dry, cool and well-ventilated place. Do not store together with: explosive substances; spontaneously combusting substances. Jellification due to frost is reversible.	
Working time ³	at 20 °C: 1. Minimum drying time (airing time): 3-5 minutes 2. Contact adhesion time (open time): 15-20 minutes 3. Setting time: 36 hours	

Property	Value / Assessment	Standard / Test method
	The airing and open time depends on the quantity as well as indoor climate conditions.	
Yield	Yield of the adhesive applied to both surfaces: ArmaFlex tubes (thickness > consumption butt joint > consumption butt joint + longitudinal joint): 10 mm > 1120 m/l > 140 m/l 20 mm > 280 m/l > 70 m/l 30 mm > 175 m/l > 45 m/l 40 mm > 130 m/l > 35 m/l ArmaFlex sheets: 3-4 m ² /l These figures are a guide only.	

¹For temperatures below -50 °C please contact our Customer Service Center to request for the corresponding technical information.

²For temperatures above +150 °C please contact our Customer Service Centre to request for the corresponding technical information.

³The full adhesion of the adhesive is achieved after 168 h.

Adhesive - standard. Portable packaging for ease of use.

Item	Description	EAN	Content [quantity]
ADH-HT625/0,5	ArmaFlex HT625 one-component adhesive. Available as 0.5 litre cans.	7612207358810	12 tin
ADH-HT625/0,25	ArmaFlex HT625 one-component adhesive. Available as 0.25 litre cans (with brush).	7612207367706	40 tin

Adhesive - standard

Item	Description	EAN	Content [quantity]
ADH-HT625/1,0	ArmaFlex HT625 one-component adhesive. Available as 1.0 litre cans.	7612207357325	12 tin



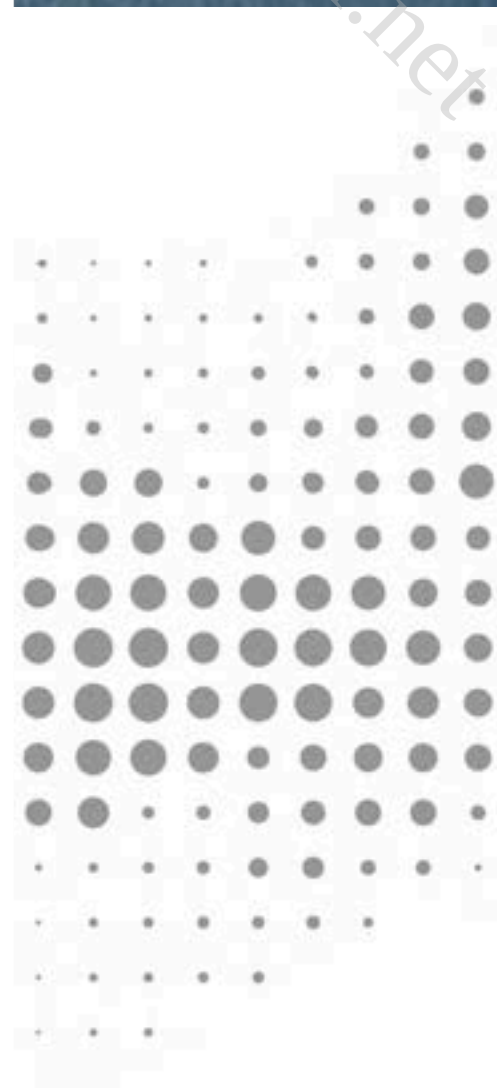
INSTALL IT. TRUST IT.

ArmaFlex 750 adhesive

Special adhesive for superior NH/
ArmaFlex Smart installations

- // Strong bonding
- // specially formulated adhesive for next generation of halogen-free insulation
- // Fast application in difficult environments

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ArmaFlex®

TECHNICAL DATA - ARMAFLEX 750 ADHESIVE

Brief description	Special one-component adhesive formulated for installing the next generation of NH/ArmaFlex Smart. See also "Overview ArmaFlex Adhesives".
Material type	Contact adhesive on polychloroprene basis, free of aromatic components.
Additional material information	Liquid
Product colour range	Beige
Special features	Specially formulated adhesive for uniform and safe seam bonding of flexible NH/ArmaFlex Smart insulation materials based on synthetic rubbers.
Applications	Work should not be carried out on plants in operation or areas exposed to strong sunlight. Stir the adhesive with a brush well before use. Apply thinly with a brush or spatula to the areas to be bonded. In case of contact adhesion press together with force during the contact adhesion time. For further details see extensive ArmaFlex Application Manual.
Installation	Clean dirty surfaces and the ArmaFlex surface with ArmaFlex Cleaner before starting the application with the adhesive. Compatibility with bases: very good adhesion to metallic base. The compatibility with colour-coated surfaces with adhesive needs to be tested. Incompatible with: Asphalt, bitumen or red lead paint (inseed oil based).
Remarks	Setting time of the adhesive is 36 hours. Only then should the plant be put into operation. Wait 36 hours before applying coatings (exception: ArmaFinish 99), adhesive tape, coverings etc.

Property	Value / Assessment	Standard / Test method
Temperature range		
Service temperature	Min. °C ¹	Max. °C
	-50	90
Weather and UV resistance		
Weather resistance	Very Good	
Health and environment		
Volatile organic compounds (VOC) content	Fulfills all VOC requirements (French, Italian, Belgian, German AgBB, EMI CODE and Eurofins Indoor air Comfort GOLD).	ISO 16000 Parts 3, 6 & 9
Green building assessment	Meets the sustainable construction requirements for BREEAM international and DGNB.	
Other technical features		
Application conditions	Application temperature: ideally + 20 °C, not below 0 °C. At temperatures below + 5 °C or high relative humidity (above approx. 80%), increased condensation may form on the surfaces of the glued or adhesive films. In these cases, bonding is difficult or impossible. This can be tested using absorbent paper (blotting or crepe paper).	
Disposal and recycling	Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company. Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer. More details see relevant Safety Data Sheet.	
Flash point	approx. - 12 °C	
Hazard class	Highly flammable liquid and vapour	
Shelf life	18 months	
Storage	Material shall be stored in a closed (unopened) container in a dry, cool and well-ventilated place. Do not store together with: explosive substances; spontaneously combusting substances. Jellification due to frost is reversible.	
Yield	Yield of the adhesive applied to both surfaces: ArmaFlex tubes (thickness > consumption butt joint > consumption butt joint + longitudinal joint): 10 mm > 1120 m/l > 140 m/l 20 mm > 280 m/l > 70 m/l 30 mm > 175 m/l > 45 m/l 40 mm > 130 m/l > 35 m/l ArmaFlex sheets: 7-9 m ² /l These figures are a guide only.	

¹ For temperatures below -50 °C please contact our Customer Service Center to request for the corresponding technical information.² The full adhesion of the adhesive is achieved after 168 h.

Adhesive - standard. Portable packaging for ease of use.

Item	Description	EAN	Content [quantity]
ADH750/0,5	ArmaFlex 750 Adhesive, 0.5 Litre	7612207503791	12 tin



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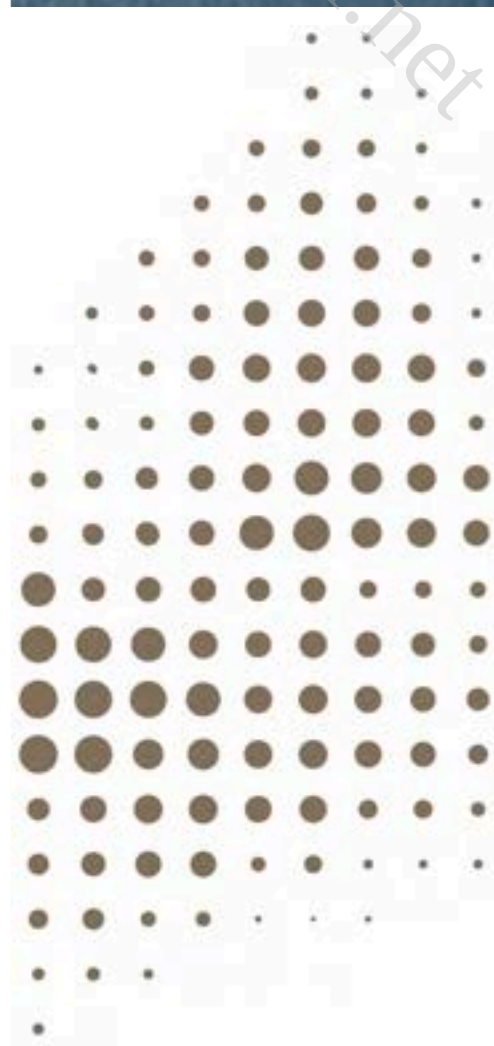
ArmaFlex

RS850 adhesive

Specifically formulated adhesive for uniform and safe seam-bonding of flexible ArmaFlex insulation materials

- // Non-dripping one-component adhesive in gel form
- // Specifically formulated for processing ArmaFlex insulation materials

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ArmaFlex®

TECHNICAL DATA - ARMAFLEX RS850 ADHESIVE

Brief description	Non-dripping, thixotropic one-component adhesive formulated specifically for processing of ArmaFlex insulation materials based on synthetic rubber with the exception of ArmaFlex EPDM-based products. See also "Overview ArmaFlex Adhesives".
Material type	Thixotropic contact adhesive based on polychloroprene, free of aromatic solvents.
Additional material information	Thixotropic
Product colour range	Yellowish
Special features	Specially formulated adhesive for uniform and safe seam bonding of flexible ArmaFlex insulation materials.
Applications	Work should not be carried out on plants in operation or areas exposed to strong sunlight. Apply thinly with a brush or spatula to the areas to be bonded. In case of contact adhesion press together with force during the contact adhesion time. For further details see extensive ArmaFlex Application Manual.
Installation	Clean dirty surfaces and the ArmaFlex surface with ArmaFlex Cleaner before starting the application with the adhesive. Compatibility with bases: very good adhesion to metallic base. The compatibility with colour-coated surfaces with adhesive needs to be tested. Incompatible with: Asphalt, bitumen or red lead paint (inseed oil based).
Remarks	Setting time of the adhesive is 24 hours. Only then should the plant be put into operation. Wait 36 hours before applying coatings (exception: Armafinish 99), adhesive tape, coverings etc.

Property	Value / Assessment	Standard / Test method
Temperature range		
Service temperature	Min. °C ¹	Max. °C
	-40	70
Weather and UV resistance		
Weather resistance	Very good	
Health and environment		
Volatile organic compounds (VOC) content	Fulfills all VOC requirements (French, Italian, Belgian, German AgBB, EMICODE and Eurofins Indoor air Comfort GOLD).	ISO 16000 Parts 3, 6 & 9
Health aspects	MSDS available on request.	
Green building assessment	Meets the sustainable construction requirements for BREEAM international and DGNB.	
Other technical features		
Ageing stability	Very good	
Application conditions	Application temperature: ideally between + 15 °C and + 20 °C, not below 10 °C. At temperatures below + 5 °C or high relative humidity (above approx. 80%), increased condensation may form on the surfaces of the glued or adhesive films. In these cases, bonding is difficult or impossible. This can be tested using absorbent paper (blotting or crepe paper).	
Disposal and recycling	Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company. Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer. More details see relevant Safety Data Sheet.	
Explosion limits	Lower: 1,1 Vol.% Upper: 11,5 Vol.%	
Flash point	approx: - 17 °C	
Hazard class	Highly flammable liquid and vapour	
Shelf life	36 months	
Solids content	approx. 19.5 %	
Storage	Material shall be stored in a closed (unopened) container in a dry, cool and well-ventilated place. Do not store together with: explosive substances; spontaneously combusting substances. Jellification due to frost is reversible.	
Working time ²	at 20 °C 1. Minimum drying time (airing time): > 2 minutes 2. Contact adhesion time (open time): 10 to 15 minutes 3. Setting time: 24 hours	

Property	Value / Assessment	Standard / Test method
	The airing and open time depends on the quantity as well as indoor climate conditions.	
Yield	Yield of the adhesive applied to both surfaces: ArmaFlex tubes (thickness > consumption butt joint > consumption butt joint + longitudinal joint): 10 mm > 1120 m/l > 140 m/l 20 mm > 280 m/l > 70 m/l 30 mm > 175 m/l > 45 m/l 40 mm > 130 m/l > 35 m/l ArmaFlex sheets: 3-4 m² /l These figures are a guide only.	

¹ For temperatures below -40 °C please contact our Customer Service Centre to request for the corresponding technical information.

² The full adhesion of the adhesive is achieved after 168 h.

Adhesive - standard. Portable packaging for ease of use.

Item	Description	EAN	Content [quantity]
ADH-RS850/0,5	ArmaFlex RS850 adhesive. Available in 0.5 litre cans.	7612207414363	6 tin

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ArmaFlex

Ultima 700 adhesive

Specially formulated adhesive for uniform and safe seam bonding of ArmaFlex Ultima and insulating materials based on ArmaPrene synthetic rubbers

// One-component adhesive

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TECHNICAL DATA - ARMAFLEX ULTIMA 700 ADHESIVE

Brief description	Special premium one-component adhesive for processing ArmaFlex Ultima and insulating materials based on ArmaPrene synthetic rubber materials. See also "Overview ArmaFlex Adhesives".
Material type	Contact adhesive on polychloroprene basis, free of aromatic solvents.
Additional material information	Liquid
Product colour range	Teal
Special features	Specially formulated adhesive for uniform and safe seam bonding of ArmaFlex Ultima and insulating materials based on ArmaPrene synthetic rubbers.
Applications	Work should not be carried out on plants in operation or areas exposed to strong sunlight. Stir the adhesive with a brush well before use. Apply thinly with a brush or spatula to the areas to be bonded. In case of contact adhesion press together with force during the contact adhesion time. For further details see extensive ArmaFlex Application Manual.
Installation	Clean dirty surfaces and the ArmaFlex surface with ArmaFlex Cleaner before starting the application with the adhesive. Compatibility with bases: very good adhesion to metallic base. The compatibility with colour-coated surfaces with adhesive needs to be tested. Incompatible with: Asphalt, bitumen or red lead paint (inseed oil based).
Remarks	Setting time of the adhesive is 36 hours. Only then should the plant be put into operation. Wait 36 hours before applying coatings (exception: Armafinish 99), adhesive tape, coverings etc.

Property	Value / Assessment	Standard / Test method
Temperature range		
Service temperature	Min. °C ¹	Max. °C
	-50	110
Weather and UV resistance		
Weather resistance	Very good	
Health and environment		
Volatile organic compounds (VOC) content	Fulfills all VOC requirements (French, Italian, Belgian, German AgBB, EMICODE and Eurofins Indoor air Comfort GOLD).	ISO 16000 Parts 3, 6 & 9
Health aspects	MSDS available on request.	
Green building assessment	Meets the sustainable construction requirements for BREEAM international and DGNB.	
Other technical features		
Ageing stability	Very good	
Application conditions	Application temperature: ideally between + 15 °C and + 20 °C, not below 0 °C. At temperatures below + 5 °C or high relative humidity (above approx. 80%), increased condensation may form on the surfaces of the glued or adhesive films. In these cases, bonding is difficult or impossible. This can be tested using absorbent paper (blotting or crepe paper).	
Disposal and recycling	Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company. Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer. More details see relevant Safety Data Sheet.	
Explosion limits	Lower: 1,0 Vol.% Upper: 12,8 Vol. %	
Flash point	approx. - 26 °C	
Hazard class	Highly flammable liquid and vapour	
Shelf life	18 months	
Solids content	approx. 18 %	
Storage	Material shall be stored in a closed (unopened) container in a dry, cool and well-ventilated place. Do not store together with: explosive substances; spontaneously combusting substances. Jellification due to frost is reversible.	
Working time ²	at 20 °C: 1. Minimum drying time (airing time): 3-5 minutes 2. Contact adhesion time (open time): 15-20 minutes	

Property	Value / Assessment	Standard / Test method
	3. Setting time: 36 hours	
	The airing and open time depends on the quantity as well as indoor climate conditions.	
Yield	Yield of the adhesive applied to both surfaces: ArmaFlex tubes (thickness > consumption butt joint > consumption butt joint + longitudinal joint): 10 mm > 1120 m/l > 140 m/l 20 mm > 280 m/l > 70 m/l 30 mm > 175 m/l > 45 m/l 40 mm > 130 m/l > 35 m/l ArmaFlex sheets: 3-4 m² /l These figures are a guide only.	

¹For temperatures below -50 °C please contact our Customer Service Center to request for the corresponding technical information.

²The full adhesion of the adhesive is achieved after 168 h.

Adhesive - standard

Item	Description	EAN	Content [quantity]
AHU-700/1,0	ArmaFlex Ultima 700 adhesive. Available in 1.0 litre cans.	7612207358841	12 tin



INSTALL IT. TRUST IT.

ArmaFlex SF cleaner

Special cleaner for use with all
ArmaFlex solvent-free adhesive

// Meets the increased requirements of green building
programs

// Practical spray bottle

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ArmaFlex®

TECHNICAL DATA - ARMAFLEX SF CLEANER

Brief description	Special water-soluble based cleaner for use with ArmaFlex solvent-free dispersion adhesives.
Additional material information	Liquid
Product colour range	Yellowish
Applications	Cleaning of surfaces where ArmaFlex solvent-free adhesive are to be used.
Installation	To ensure perfect adhesion all contaminated surfaces - including contaminated ArmaFlex - must be cleaned.
Remarks	ArmaFlex SF Cleaner is sprayed onto areas to be cleaned, allowed to have an effect depending on pollution degree, then wash off.

Property	Value / Assessment	Standard / Test method
Health and environment		
Health aspects	Physiologically harmless, even when used in food processing plants. Odourless.	
Other technical features		
Disposal and recycling	Dispose of waste according to applicable legislation. More details see relevant Safety Data Sheet.	
Flash point	> 100 °C	
Hazard class	This product does not meet the classification and labelling criteria given in the Regulation (EC) No 1272/2008 (CLP).	
Shelf life	12 months	
Storage	Material shall be stored in a tightly closed container in a cool, well-ventilated place. Protect from frost and do not store it below of + 5°C.	

Cleaner - solvent-free

Item	Description	EAN	Content [quantity]
SF-CLEANER/1,0	Solvent-free cleaner for use with ArmaFlex	7612207405699	6 tin



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ArmaFlex Cleaner

Special cleaner for use with all
ArmaFlex adhesives

- // Cleaning from surfaces
- // Cleaning dirty brushes and tools

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TECHNICAL DATA - ARMAFLEX CLEANER

Brief description	Special solvent based cleaner for use with all ArmaFlex adhesives.
Additional material information	Liquid
Product colour range	Clear
Applications	Cleaning of surfaces where ArmaFlex adhesive are to be used.
Installation	To ensure perfect adhesion all contaminated surfaces - including contaminated ArmaFlex must be cleaned. In addition, the cleaner can also be used to clean surfaces to which, for example, Armafinish 99 is to be applied.
Remarks	Please also use the ArmaFlex Cleaner to clean tools (except ArmaFlex Ultima EC0550 and ArmaFlex EC0550 adhesives).

Property	Value / Assessment	Standard / Test method
Other technical features		
Disposal and recycling	Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company. Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer. More details see relevant Safety Data Sheet.	
Explosion limits	Lower: approx. 1 Vol-% Upper: approx. 13 Vol-%	
Flash point	approx. - 20 °C	
Hazard class	highly flammable liquid and vapour	
Shelf life	12 months	
Storage	Material shall be stored in a tightly closed container in a cool, well-ventilated place. Protect from heat and direct sunlight. Do not store together with: explosive substances, spontaneously combusting substances.	

Cleaner - standard

Item	Description	EAN	Content [quantity]
CLEANER/1,0	Special cleaner for use with ArmaFlex adhesives	7612207119190	4 tin

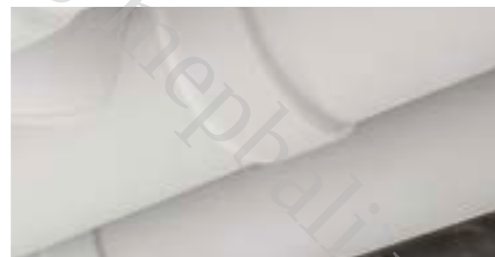
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ArmaFinish 99

The elastic paint designed for protection and covering of ArmaFlex

- // Non-dripping paint
- // Permanently elastic
- // Resistant to weathering
- // Good ageing resistance

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ArmaFlex®

TECHNICAL DATA - ARMAFINISH 99

Brief description	ArmaFinish 99 is a paint, which remains permanently elastic, it is resistant to weathering and has good ageing resistance.
Material type	Non-dripping paint.
Product colour range	white (RAL 9001) and grey (RAL 7037) Black
Applications	Protection of ArmaFlex insulation materials when installed outdoors and for marking purposes for interior use.
Installation	All ArmaFlex insulation (except HT/ArmaFlex and ArmaFlex products based on Armaprene, see relevant product data sheet) which are installed outdoors can be coated with two complete coats of Armafinish 99. Paint may be applied using a brush or roller. Clean the tools with water.
Remarks	Unprotected ArmaFlex must not be exposed to weathering for more than 3 days, so the paint should be applied as soon as possible. The protective coating should be inspected at regular intervals. After 2 years at the latest, two further coats should be applied.

Property	Value / Assessment	Standard / Test method
Health and environment		
Health aspects	MSDS available on request.	
Other technical features		
Application conditions	Application temperature: + 10 °C to + 30 °C maximum relative humidity: 80%.	
Cure time	Drying time at + 20 °C: approx. 2 hours. It is also necessary to allow this time between coats; the second coating layer must be applied within 7 days.	
Disposal and recycling	Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company. Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer. More details see relevant Safety Data Sheet.	
Hazard class	Environmentally hazardous substance as defined by the transport regulations (ADR/RID, IMDG-Code, ICAO-TI/ IATA-DGR).	
Shelf life	12 months	
Storage	Material shall be stored in a tightly closed container in a cool, well-ventilated place. Protect from frost and do not store it below of + 5°C.	
Yield	Normal consumption: 0,55 l/m ² when two coats are applied (corresponds to a dry film thickness of 0,26mm).	

Item	Description	EAN	Content [quantity]
FINISH/WH-2,5	Protective coat for ArmaFlex insulation material. White colour (RAL number: 9001). Available in 2.5 litre buckets.	7612207119480	4 tin

Item	Description	EAN	Content [quantity]
FINISH/GY-2,5	Protective coat for ArmaFlex insulation material. Silver grey colour (RAL number: 7037). Available in 2.5 litre buckets.	7612207119497	4 tin



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ArmaFlex Toolbox

Tools for professionals

- // Measuring correctly
- // Cut perfectly
- // Glue neatly

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ArmaFlex®

THE RIGHT SET FOR PROFESSIONALS

ArmaFlex Toolbox

Tools for professionals!



When it comes to preventing condensation and energy losses on equipment, not only high-quality insulation material is crucial, but also the installation. ArmaFlex insulation materials not only have the required technical properties, they can also be installed quickly and easily. Armacell already offers various tools and aids such as the ArmaFlex Application Manual and the installation videos. Now all the tools and aids are available in a lightweight, robust, lockable aluminium case!

// Measuring Correctly

- ArmaFlex Application Manual with fabrication and measuring instructions for ArmaFlex covers for complex shaped components
- Folding rule with circumference scale
- Callipers (300 mm) to determine diameters precisely
- Edding marker pen, Armacell ballpoint pen and silver-ink marker pen for marking, making notes and transferring measurements to ArmaFlex insulation material
- Bow compass with a holder for the silver-ink marker pen and protective cap for use on ArmaFlex insulation material

// Cut Perfectly

- ArmaFlex template
- 4 knives: with blade length of 9, 17 and 27 cm for different cut-outs and 1 ceramic knife
- Knife holster for attaching to a belt
- Sharpening stone for the knives
- Sharpened copper pipe ends (6 different diameters) for cut-outs in ArmaFlex insulation material
- Tool for re-sharpening the copper pipe ends

// Glue Neatly

- ArmaFlex short-bristle brush 14, 70mm flat brush
- ArmaFlex Gluemaster (adhesive pump)
- Cleaning cloth for the tools



TECHNICAL DATA - ARMAFLEX TOOLBOX

Brief description	When it comes to preventing condensation and energy losses on equipment, not only high-quality insulation material is crucial, but also the installation. Elastomeric insulation materials not only have good technical properties, they are also very user-friendly due to their high flexibility and ease of application. When installing these insulation materials it is crucial that they are glued professionally. Therefore, Armacell offers a broad range of accessories specifically developed for its products and regularly adds innovative solutions.

Property	Value / Assessment	Standard / Test method
Other technical features		
Additional remarks	ArmaFlex Accessories have no specific test standard presented.	

Item	Description	EAN	Content [quantity]
TOOLBOX	Robust carrying case containing tools for the professional installation of Armacell's solutions.	7612207389319	1 piece

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Gluemaster

Glue pump for all ArmaFlex adhesives

- // Fast processing of all glues
- // Including brush

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ArmaFlex®

TECHNICAL DATA - GLUEMASTER

Brief description	Armacell contact adhesive applicator with refillable metal container and two brush options.	
Applications	Recommended for use in the installation of all Armacell thermal and acoustic insulation lines in elastomeric foam and polyethylene. Compatible with all Armacell adhesives.	
Remarks	Fill the metal reservoir with the desired Armacell adhesive and press the trigger until the adhesive is projected by the brush. Apply the adhesive to the surfaces to be glued. After use, cover the brush with the cap. For greater durability, the brush used must be cleaned regularly using solvents. Replace the brush when necessary.	
Property	Value / Assessment	Standard / Test method
Other technical features		
Additional remarks	ArmaFlex Accessories have no specific test standard presented.	

Item	Description	EAN	Content [quantity]
GLUEMASTER B	ArmaFlex Gluemaster adhesive pump	7612207193923	12 piece

Item	Description	EAN	Content [quantity]
GLUEM-BRUSH11MM	Extra brush points with cap (11mm diameter) for use with ArmaFlex Gluemaster.	7612207119305	20 piece
GLUEM-BRUSH17MM	Extra brush points with cap (17mm diameter) for use with ArmaFlex Gluemaster.	7612207190182	20 piece



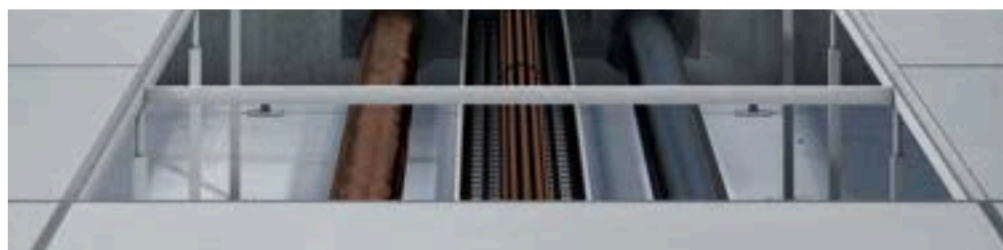
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Cutting tools

The right set for professionals

- // Specially designed to install ArmaFlex
- // Reliable installation
- // Optimal performance
- // Complete range of high-quality tools and accessories

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 **armacell**
MAKING A DIFFERENCE AROUND THE WORLD

TECHNICAL DATA - CUTTING TOOLS

Brief description	There are no technical descriptions available for these products.	
Property	Value / Assessment	Standard / Test method
Other technical features		
Additional remarks	ArmaFlex Accessories have no specific test standard presented.	

Accessories

Item	Description	EAN	Content [quantity]
BLADES	Spare blades for tube slitter-knife (50x6 pcs).	7612207119268	300 piece
BLADES-PCS	Spare blades for tube slitter-knife (50x6 pieces in a carton).	7612207197563	6 piece
BLADES-PCS-I	Spare blades for tube slitter-knife (6 pieces in a carton).	7612207119268	1 piece
CERAMIC-KNIFE, 4"	Knife with ceramic blade (10 cm) and rubber grip (9 cm).	7612207119213	1 piece
CUTTING-SET-1	ArmaFlex knife set (3 knives and 1 honing rod).	7612207565782	1 set
PEN-SILVER/10	Silver-ink marker pen	7612207352573	10 piece
SLITTER	Special tube slitter-knife.	7612207119251	10 piece

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