

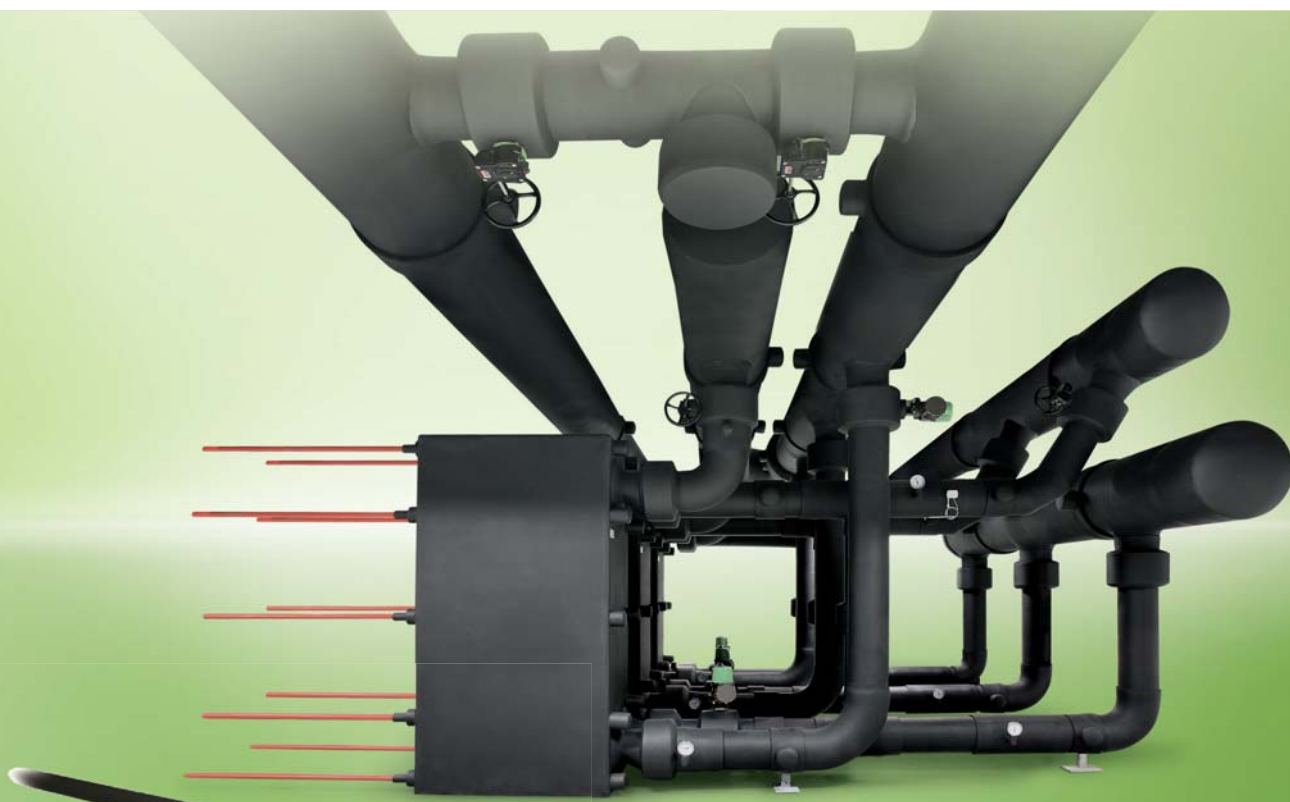
ARMACELL UK PRODUCT CATALOGUE (2014-15 REPRINT)

Product
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APP

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Armacell
Premium
APP

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www.armacell.com

ARMAFLEX®
TUBOLIT®
ARMA-CHEK®
ARMASOUND®

armacell®

Advanced Insulation

Armacell is a world leader in the manufacture of flexible insulation foams for the insulation of mechanical equipment in HVAC, plumbing and refrigeration applications and process lines in industrial and oil & gas systems.

Today, Armacell employs more than 2,600 people worldwide, with 23 manufacturing plants in 16 countries on four continents. With production facilities in China, Thailand, India, Brazil, Saudi Arabia and South Korea, Armacell has long been a pioneer in exploring new geographical markets and is focused on further growth in emerging markets.

ENERGY SAVING

Armacell insulation materials are among the few products that save more energy than is used for their production: Armaflex saves 140 times more energy than it takes to manufacture.

In light of rising energy prices, stricter energy conservation laws and the rapid pace of climate change, Armacell believes that the insulation of building equipment and industrial installations will play an even more important role in future.

INNOVATIVE SOLUTIONS FOR SPECIFIC DEMANDS

In addition to conventional thermal insulation materials to protect against heat and cold, the company today offers a wide range of covering systems, fire-protection and noise-control solutions, pre-insulated pipes, special insulation systems for applications in industry and the accessories to match.

TECHNOLOGY LEADER

In recent years, Armacell has also developed new insulation systems for the oil & gas industry – a key growth market for the Group – and low-smoke products that are setting new standards in the industry. Being a technology leader in flexible technical insulation materials, Armacell holds more than 200 active patents worldwide.

PIONEERING FLEXIBLE INSULATION

In 1954, the company invented Armaflex, the first flexible insulation product. In doing so, it established a new branch of industry – flexible technical insulation – that it has been shaping ever since. Armaflex is now the world's best-known brand for flexible technical insulation, and the brand name has become eponymous in the building materials industry.



Technical Considerations

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

THERMAL CONDUCTIVITY (λ FACTOR)

Thermal conductivity, 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 AF/Armaflex Class O at 0.033 at $0^\circ C$.



CONDENSATION CONTROL

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 $>10,000$.

ENERGY SAVING

The rate of heat flow from a pipe is largely governed by the differential to the ambient temperature, and heat losses can be considerable. The insulation of mechanical services is one of the single most effective measures for improving energy efficiency and prolonging the lifespan of equipment.

PIPE FREEZING

Since water services are often located outside or in unheated areas where ambient temperatures may drop below $0^\circ C$, the water can freeze and expand, causing pipes to burst. For this reason water supply regulations specify pipe insulation to reduce the risk of pipe freezing.

SURFACE EMISSIVITY

The emissivity of a material is the relative ability of its surface to emit energy by radiation compared to energy radiated by a black body at the same temperature.

The more reflective a material, the less energy it radiates. Non-metallic silver coverings such as Arma-Chek Silver for example can be used either outdoors to prevent heat gain on cold applications or to reduce heat losses from warm applications. For condensation prevention, reflective finishes are generally not advantageous as a duller black surface, such as AF/Armaflex Class O, will help control outer temperatures, bringing them closer to the dew point.

INDOOR AIR QUALITY

Air pollutants such as man-made volatile organic chemicals, industrial fibres, acidic particles of dust, and spores of mould and bacteria can all contribute to building related symptoms.

The specification of Armaflex dust and fibre free insulation systems with added Microban® anti-microbial protection helps minimise the impact on indoor air quality.

Building Regulations

A number of regulations govern the specification and application of building services insulation materials in the UK.

BS 5422

- BS 5422 is the main British Standard referred to when specifying insulation materials for building services (Method for specifying thermal insulating materials for pipes, tanks, vessels, ductwork and equipment operating within the temperature range -40 °C to +700 °C).
- The standard sets out the minimum insulation thicknesses for specific temperatures and applications in order to achieve a good balance between energy saving and comparative cost of insulation.



PART L (CONSERVATION OF FUEL AND POWER)

- The energy efficiency requirements of the Building Regulations are set out in Part L (Conservation of fuel and power) of Schedule 1 to the Building Regulations.
- Technical guidance is contained in four Part L Approved Documents and two building services compliance guides (non-domestic building services and domestic building services compliance guides). These documents provide maximum permitted heat loss tables for given pipework applications.



CE MARKING

- CE marking became a mandatory requirement for thermal insulation construction products governed by a European harmonized standard (hEN) in July 2013.
- The harmonized 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.

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

EUROCLASS FIRE RATINGS

- In addition to British Fire Classes, Euroclasses are now also listed for Reaction to Fire Performance, ranging from A1 to F with additional criteria showing smoke intensity levels (s1 to s3) and burning droplets (d0 to d2).

European Fire Class		Equivalent British Class
E	>	4
D	>	3
C	>	1
B	>	0
A2	>	limited combustibility
A1	>	non-combustible

Market Segments

REFRIGERATION AND CHILLED WATER SERVICES

Refrigeration and cold water services operating at low temperatures leads to the formation of condensation which can cause problems with corrosion, mould growth and subsequently reduce the efficiency and service life of equipment if un-insulated or a product without an integral water vapour barrier is used. Closed cell Armaflex materials prevent moisture ingress with a high water vapour diffusion resistance value of $>10,000$ (μ value).

HEATING, VENTILATION AND AIR CONDITIONING

Insulation is an essential part of ducted heating, ventilation and air-conditioning systems, with the large surface areas causing significant heat losses/gains and problems with condensation, mould growth and poor indoor air quality.

Armaflex products are dust, formaldehyde and fibre free and come with in-built Microban anti-microbial protection for additional safe guarding against mould and bacteria.

HEATING AND PLUMBING

The insulation of central heating pipework can reduce heat losses by as much as 87% and make a significant contribution to improving boiler efficiencies. The insulation of cold water pipes is also important to protect against pipes freezing in sub zero temperatures.

Armacell has also developed pre-insulated UV resistant and high temperature insulation ideal for solar hot water systems and for insulating ground source heat pump pipes to maximise efficiency.



MANUFACTURING INDUSTRIES

Process industry equipment including pipework, ducts, vessels, valves and flanges should be insulated to help ensure that steam, hot water, hot gasses or cold liquids and gases are delivered at controlled levels.

Elastomeric thermal and acoustic insulation systems are suitable for both high and low temperature process applications and easy to fabricate Armaflex sheet or tubes (up to 114mm diameter) can be used to minimise heat loss/gain, improve process efficiencies, control condensation and provide mechanical impact and personnel protection.



OIL & GAS

One of the greatest challenges for insulation of marine, offshore and heavy industrial environments is the issue of Corrosion Under Insulation which causes pipe and metal cladding systems to rust and decay, resulting in expensive production stoppages and maintenance schedules.

Closed cell insulation and non-metallic covering systems provide an excellent alternative for thermal and acoustic insulation to protect against mechanical impact, chemicals and salt water. Pre-fabricated fittings are also available to cut down on-site installation times in hazardous and process critical environments.

ArmaPlus Technical Services

The performance of technical insulation materials can only be guaranteed when carried out by skilled installers and contractors. For this purpose Armacell accredited training courses are available monthly at our Oldham training school. One to three day courses are held depending on the level of knowledge required. For example more complex applications such as large diameter pipework and pattern developments for fittings and covering systems are covered as part of the three day training course. Dates of upcoming training days and the applications covered are listed on the ArmaPlus section of our website. Onsite training and applications support is also available on request / as and when required.

CPD PRESENTATIONS

A series of free CIBSE approved Continuous Professional Development seminars are available for consulting engineers and specifiers of M&E services, with presentations including:

- An Introduction to Mechanical Services Insulation
- CE Marking
- New Euroclass Fire Ratings

Please see the ArmaPlus section of our website for details (www.armacell.com).

ARMACELL PREMIUM REWARDS

Thermal insulation contractors can now earn extra rewards on purchases of Armaflex and Arma-Chek products. A range of premium gifts can be collected by registering at the www.armacell-premium.com website and entering ibonus barcodes printed on eligible products. Barcodes can also be scanned in to register the ibonus points using the Armacell Premium app, available from the itunes and Google Play stores.

ARMACELL UK PRODUCT SELECTOR TOOL

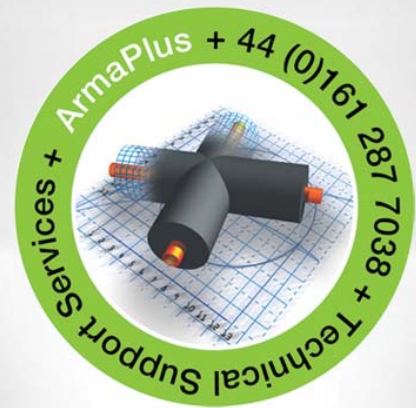
The product selector tool is available from the products section of the UK website and as a free app to download from the itunes and Google Play stores. By answering a series of set questions the user receives product and accessories recommendations to suit the relevant application criteria.

INSULATION THICKNESS CALCULATIONS

The relaunched ArmWin thermal insulation calculation program is now available to download from our website and as an app to determine the correct insulation thickness required for condensation control, minimising heat loss / heat gain and maintaining process temperatures to meet building regulations and the relevant industry standards.

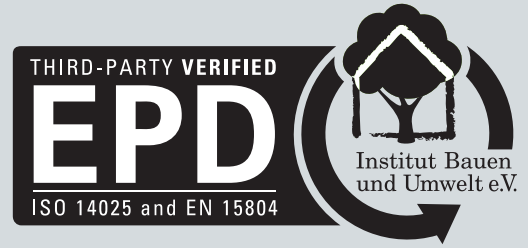
BIM OBJECTS

Armacell in the UK has become the first flexible insulation manufacturer to make BIM objects available for our elastomeric product ranges. These data-rich objects allow Armaflex products to be easily incorporated into 3D building models going forwards and are free to download from the NBS National BIM library.



Environmental product declarations (EPDs) for Armacell products

Armacell publishes environmental product declarations which are based on an independent lifecycle assessment (LCA). Comparing the primary energy input identified in the LCA with the energy saving achieved shows that Armacell insulation materials save 140 times more energy than is needed for their manufacture, transport and disposal.



Environmental product declarations (EPDs) are becoming more and more important in the construction industry: they provide a transparent, independent and reproducible analysis of the environmental impacts of construction products and give detailed information with sound data and figures. As a 'sustainability passport' EPDs form the basis for designing green buildings in accordance with certification schemes such as LEED, BREEAM or DGNB.

All information about the Armacell environmental product declarations as well as fact sheets on BREEAM, LEED and DGNB for Armacell products can be viewed and downloaded at www.armacell.com/epd



THERMAL SYSTEMS



- **AF/ARMAFLEX CLASS 0**
- **ARMAFLEX ULTIMA**
- **ARMAFLEX DUCT**
- **NH/ARMAFLEX**
- **HT/ARMAFLEX**

Insulating pipe and ductwork is one of the most effective ways to protect the value of mechanical services equipment.

Aside from restricting energy losses, Armaflex thermal insulation also prevents condensation and the associated risks of corrosion and mould growth.

AF/Armaflex® Class 0

THE FLEXIBLE INSULATION SYSTEM TO
PREVENT CONDENSATION AND ENERGY
LOSSES



- Reliable condensation control with closed-cell Armaflex structure
- Effective reduction of thermal losses
- Built-in Microban® antimicrobial protection reduces mould and bacteria growth
- Class 0 Fire Performance
- NEW! Improved thermal conductivity value $\lambda_0 \text{ °C} \leq 0.033 \text{ W/(m} \cdot \text{K)}$
- NEW! Improved water vapour resistance value $\mu \geq 10,000$
- Made in the UK



AF/Armaflex Class 0

TRIPLE SECURITY

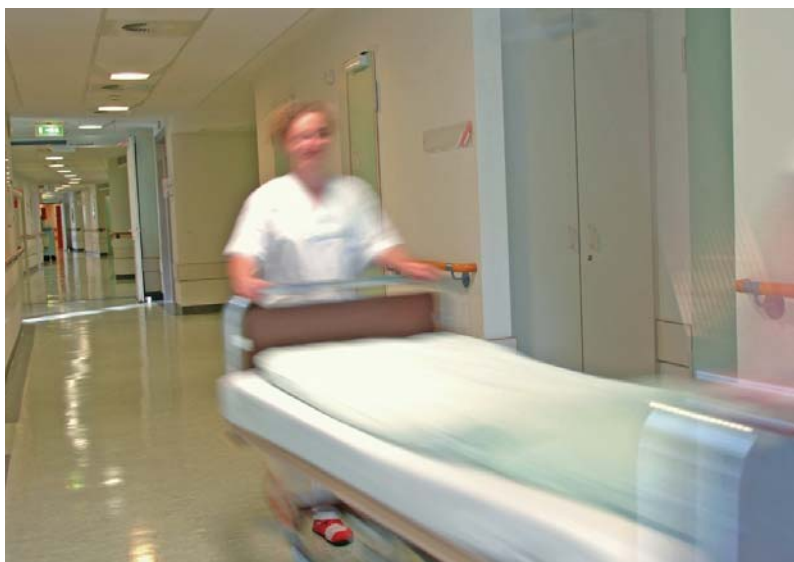
AF/Armaflex Class 0 is the professional flexible insulation for reliable condensation control. The combination of a low thermal conductivity value of $0.033 \text{ W}/(\text{m} \cdot \text{K})$ and extremely high resistance to water vapour transmission ($\mu \geq 10,000$) prevents long-term energy losses, water vapour ingress and reduces the risk of corrosion under insulation.



AF/ARMAFLEX CLASS 0 WITH ACTIVE MICROBAN® ANTIMICROBIAL PROTECTION

Conditioned systems can be problematic for the development of microbes and contamination, with indoor air up to 10 times more polluted than outdoor air. Microbes found in and on HVAC systems include stain and odour causing bacteria and mould and mildew. These microbes subsequently emit spores, cells, fragments and volatile organic compounds (VOCs) into indoor air which can contribute to sick building syndrome. Mould & mildew can additionally cause degradation of insulation materials.

AF/Armaflex Class 0 is the first flexible insulation material equipped with MICROBAN® technology. When microbes come into 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 AF/Armaflex Class 0 products an added level of protection against mould and mildew and is therefore the ideal solution for insulating ventilation or air-conditioning equipment in schools, hospitals, care homes, offices and airports, as well as mechanical systems in the pharmaceutical and food industries.





TRUSTED FOR 40 YEARS

With a combination of internal and externally monitored technical values we offer consistently high-quality products. This is the result of 40 years experience and continual research and development of the product properties.

AF/Armaflex Class 0 is manufactured in the UK to meet local fire standards, is compliant with the CE marking legislation requirements for thermal insulation products and is tested to the new Euroclass fire standards.



COMPLETE SYSTEM

Armacell offers a complete and carefully considered system solution to meet professional insulation requirements: AF/Armaflex Class 0 standard, self-adhesive and endless tubes, sheet, tape and accessories.



Ready made **specification texts** are available to download and use from the ArmaPlus section of the UK website (www.armacell.co.uk).

ArmWin is the technical calculation program from Armacell that allows the correct insulation thickness to be determined for preventing condensation and to minimise energy losses.

Application training: Accredited training for insulation contractors is available and upon successful completion, certification is provided for attendees.

Technical Data - AF/Armaflex Class 0

Brief description	Flexible, closed-cell insulation material with built-in Microban® antimicrobial protection
Material type	Elastomeric foam based on synthetic rubber. Factory made flexible elastomeric foam (FEF) according to EN 14304.
Colour	Black
Material Special Information	Self-adhesive coating: pressure-sensitive adhesive coating on modified acrylate basis with mesh structure. Covered with polyethylene film. Traces of silicon can be found on the protective film used on self-adhesive closures.
Applications	Insulation / protection to control condensation, reduce energy losses and protect against frost on pipes, air ducts, vessels (incl. elbows, fittings, flanges etc.) Suitable for hot and cold water services, chilled water lines, heating systems, air conditioning ductwork and refrigerated pipework.
Special Features	MCCP-free
Safety and Environment	Type III Environmental Product Declaration (EPD): Declaration number "EPD-ARM-20150110-IBB1-DE", Institut Bauen und Umwelt e.V. (IBU) in accordance with ISO 14025 and EN 15804
Assembly	Light weight and flexible. Closed cell structure means no additional vapour barrier is required.
Remarks	Certificate of Constancy of Performance, Güteschutzgemeinschaft Hartschaum e.V. , Celle

Property	Value/Assessment	Test ²	Special Remarks
Temperature Range			
Temperature Range	Max. service temperature + 110 °C (+ 85 °C if sheet or tape is glued to the object with its whole surface.) Min. service temperature ¹ -50 °C	EU 5621 EU 5626	Tested acc. to EN 14706, EN 14707 and EN 14304
Thermal Conductivity			
Thermal Conductivity	ϑ_m +/-0 °C $\lambda =$	EU 5621 EU 5626	Declared acc. to EN ISO 13787 Tested acc. to EN 12667 EN ISO 8497
	Tubes 6-19 mm $\lambda \leq 0.033$ W/(m · K) $[33 + 0,1 \cdot \vartheta_m + 0,0008 \cdot \vartheta_m^2]/1000$		
	Tubes 25-32 mm $\lambda \leq 0.036$ W/(m · K) $[36 + 0,1 \cdot \vartheta_m + 0,0008 \cdot \vartheta_m^2]/1000$		
	Sheets, tape 3-32 mm $\lambda \leq 0.033$ W/(m · K) $[33 + 0,1 \cdot \vartheta_m + 0,0008 \cdot \vartheta_m^2]/1000$		
Water vapour diffusion resistance			
Water vapour diffusion resistance	Tubes 6-19 mm ; Sheets 6-32 mm $\mu \geq 10,000$ Tubes 25-32 mm $\mu \geq 7,000$	EU 5621 EU 6228	Tested acc. to EN 12086 EN 13469
Fire performance			
Reaction to fire ²	tubes B _L -s3, d0 sheets & tape B-s3,d0 Surface Spread of Flames Class 1 Fire Propagation Total Index Performance (I) ≤ 12 Sub Index (i ₁) ≤ 6 Fire Performance acc. to Building Regulations Class 0	EU 5621 EU 5626 GB 5731 & GB 5732 GB 5731 & GB 5732	Classified acc. to EN 13501-1 Tested acc. to EN 13823 EN ISO 11925-2 Surface Spread of Flame: tested according to BS 476 Part 7:1997 Fire Propagation: tested according to BS 476 Part 6:1989
Other fire class	FM-approved	D 5614	Tested according to UBC26-3, Class No.4924
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames		
Other technical features			
Dimensions and tolerances	In accordance with EN 14304, table 1	EU 5621 EU 6228	Tested acc. to EN 822, EN 823, EN 13467
UV resistance	Protection against UV-radiation is necessary. See disclaimer.		
Health aspects	ODP & GWP ratings of zero		
Storage & Shelf life	Self-adhesive tapes, self-adhesive sheets, self-adhesive tubes: 1 year		Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).
Antimicrobial behaviour	In-built Microban® active antimicrobial protection: No fungal growth observed		

1. For temperatures below -50 °C please contact our Technical Department to request the corresponding technical information.

2. The building materials classification is valid on metal or solid, mineral surfaces.

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

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Installation instructions are given in our Armaflex installation manual. Not suitable for outside use. Armaflex should be protected within 3 days of installation with Armafinish Paint or Arma-Chek covering. With some refrigerants the discharge temperature may exceed +110 °C, please consult our Technical Department for further information.

AF/Armaflex Class 0 tubes



Length 2.0 m, Colour Black, Microban®

Pipe max. Outside-Ø [mm]	Inner Ø min/ max mm (tube)	6,0 mm insulation thickness			9,0 mm insulation thickness		
		Code	m/carton		Code	m/carton	
6	7.0 - 9.0	AF-CO-06X006	544		AF-CO-09X006	352	
10	11.0 - 13.0	AF-CO-06X010	400		AF-CO-09X010	280	
12	13.0 - 15.0	AF-CO-06X012	336		AF-CO-09X012	240	
15	16.0 - 18.0	AF-CO-06X015	266		AF-CO-09X015	192	
20	21.0 - 23.0	-	-		AF-CO-09X020	156	
22	23.0 - 25.0	-	-		AF-CO-09X022	140	
28	29.0 - 31.5	-	-		AF-CO-09X028	98	
35	36.0 - 38.5	-	-		AF-CO-09X035	84	
42	43.0 - 46.0	-	-		AF-CO-09X042	60	
48	49.0 - 51.5	-	-		AF-CO-09X048	56	
54	55.0 - 58.0	-	-		AF-CO-09X054	54	
60	61.0 - 64.0	-	-		AF-CO-09X060	42	

Pipe max. Outside-Ø [mm]	Inner Ø min/ max mm (tube)	13,0 mm insulation thickness			19,0 mm insulation thickness		
		Code	m/carton		Code	m/carton	
6	7.0 - 9.0	AF-CO-13X006	226		-	-	
10	11.0 - 13.0	AF-CO-13X010	188		AF-CO-19X010	104	
12	13.0 - 15.0	AF-CO-13X012	162		AF-CO-19X012	92	
15	16.0 - 18.0	AF-CO-13X015	136		AF-CO-19X015	78	
20	21.0 - 23.0	AF-CO-13X020	112		AF-CO-19X020	70	
22	23.0 - 25.0	AF-CO-13X022	104		AF-CO-19X022	64	
28	29.0 - 31.5	AF-CO-13X028	78		AF-CO-19X028	50	
35	36.0 - 38.5	AF-CO-13X035	60		AF-CO-19X035	40	
42	43.0 - 46.0	AF-CO-13X042	56		AF-CO-19X042	32	
48	49.0 - 51.5	AF-CO-13X048	40		AF-CO-19X048	30	
54	55.0 - 58.0	AF-CO-13X054	42		AF-CO-19X054	24	
60	61.0 - 64.0	AF-CO-13X060	36		AF-CO-19X060	24	
67	68.0 - 71.0	AF-CO-13X067	34		AF-CO-19X067	20	
76	77.0 - 80.0	AF-CO-13X076	28		AF-CO-19X076	18	
80	81.0 - 84.0	AF-CO-13X080	28		AF-CO-19X080	16	
89	90.0 - 93.0	AF-CO-13X089	22		AF-CO-19X089	16	
93	94.0 - 97.0	AF-CO-13X093 ●	20		AF-CO-19X093 ●	16	
108	110.0 - 114.0	AF-CO-13X108 ●	18		AF-CO-19X108 ●	12	
114	116.0 - 120.0	AF-CO-13X114 ●	18		AF-CO-19X114 ●	12	

Pipe max. Outside-Ø [mm]	Inner Ø min/ max mm (tube)	25,0 mm insulation thickness			32,0 mm insulation thickness		
		Code	m/carton		Code	m/carton	
12	13.0 - 15.0	AF-CO-25X012	50		-	-	
15	16.0 - 18.0	AF-CO-25X015	48		AF-CO-32X015	32	
20	21.0 - 23.0	AF-CO-25X020	40		-	-	
22	23.0 - 25.0	AF-CO-25X022	40		AF-CO-32X022	32	
28	29.0 - 31.5	AF-CO-25X028	32		AF-CO-32X028	24	
35	36.0 - 38.5	AF-CO-25X035	24		AF-CO-32X035	18	
42	43.0 - 46.0	AF-CO-25X042	24		AF-CO-32X042	16	
48	49.0 - 51.5	AF-CO-25X048	22		AF-CO-32X048	12	
54	55.0 - 58.0	AF-CO-25X054	18		AF-CO-32X054	12	
60	61.0 - 64.0	AF-CO-25X060	18		AF-CO-32X060	12	
67	68.0 - 71.0	AF-CO-25X067	16		AF-CO-32X067	12	
76	77.0 - 80.0	AF-CO-25X076	14		AF-CO-32X076	10	
80	81.0 - 84.0	AF-CO-25X080	12		-	-	
89	90.0 - 93.0	AF-CO-25X089	12		AF-CO-32X089	8	
93	94.0 - 97.0	AF-CO-25X093 ●	12		-	-	
108	110.0 - 114.0	AF-CO-25X108 ●	8		-	-	
114	116.0 - 120.0	AF-CO-25X114 ●	8		AF-CO-32X114 ●	6	

Length tolerance for tubes: ± 1,5 %

Thickness tolerance

≤ 8 mm:	±1,0 mm
9 - 18 mm:	±1,5 mm
19 - 31 mm:	±2,5 mm
> 31 mm:	±3,0 mm

Remark All AF/Armaflex Class O tubes available as SLIT items. Add 0.12 p/m net after discount has been applied. For ordering add -SLT to above codes (e.g. AF-CO-19X010-SLT)

● Not a stock item. Delivery on request.

AF/Armaflex Class 0 tubes DBSCG



Pipe max. Outside-Ø [mm]	Domestic Building Services Compliance Guide Range insulation thickness				
	Max. Permissible Heat loss [W/m]	Thickness [mm]	Code	m/carton	
8	7.06	13.0	AF-CO-13X010	188	
10	7.23	13.0	AF-CO-13X010	188	
12	7.35	19.0	AF-CO-19X012	92	
15	7.89	19.0	AF-CO-19X015	78	
22	9.12	25.0	AF-CO-25X022	40	
28	10.07	25.0	AF-CO-25X028	32	
35	11.08	25.0	AF-CO-25X035	24	
42	12.19	25.0	AF-CO-25X042	24	
54	14.12	32.0	AF-CO-32X054	12	

AF/Armaflex Class 0 self-adhesive tubes (Self Seal)



Length 2.0 m, Colour Black, Microban®

Pipe max. Outside-Ø [mm]	Inner Ø min/max mm (tube)	9,0 mm			13,0 mm		
		Code	m/carton		Code	m/carton	
15	16.0 - 18.0	AF-CO-09X015-A	192		AF-CO-13X015-A	136	
20	21.0 - 23.0	AF-CO-09X020-A ●	156		AF-CO-13X020-A ●	112	
22	23.0 - 25.0	AF-CO-09X022-A	140		AF-CO-13X022-A	104	
28	29.0 - 31.5	AF-CO-09X028-A	98		AF-CO-13X028-A	78	
35	36.0 - 38.5	AF-CO-09X035-A	84		AF-CO-13X035-A	60	
42	43.0 - 46.0	AF-CO-09X042-A	60		AF-CO-13X042-A	56	
48	49.0 - 51.5	AF-CO-09X048-A ●	56		AF-CO-13X048-A	40	
54	55.0 - 58.0	AF-CO-09X054-A	54		AF-CO-13X054-A	42	
60	61.0 - 64.0	AF-CO-09X060-A ●	42		AF-CO-13X060-A	36	
67	68.0 - 71.0	-	-		AF-CO-13X067-A ●	34	
76	77.0 - 80.0	-	-		AF-CO-13X076-A	28	
89	90.0 - 93.0	-	-		AF-CO-13X089-A	22	

Pipe max. Outside-Ø [mm]	Inner Ø min/max mm (tube)	19,0 mm			25,0 mm		
		Code	m/carton		Code	m/carton	
15	16.0 - 18.0	AF-CO-19X015-A	78		AF-CO-25X015-A	48	
20	21.0 - 23.0	AF-CO-19X020-A ●	70		AF-CO-25X020-A ●	40	
22	23.0 - 25.0	AF-CO-19X022-A	64		AF-CO-25X022-A	40	
28	29.0 - 31.5	AF-CO-19X028-A	50		AF-CO-25X028-A	32	
35	36.0 - 38.5	AF-CO-19X035-A	40		AF-CO-25X035-A	24	
42	43.0 - 46.0	AF-CO-19X042-A	32		AF-CO-25X042-A	24	
48	49.0 - 51.5	AF-CO-19X048-A	30		AF-CO-25X048-A	22	
54	55.0 - 58.0	AF-CO-19X054-A	24		AF-CO-25X054-A	18	
60	61.0 - 64.0	AF-CO-19X060-A	24		AF-CO-25X060-A	18	
67	68.0 - 71.0	AF-CO-19X067-A ●	20		AF-CO-25X067-A ●	16	
76	77.0 - 80.0	AF-CO-19X076-A	18		AF-CO-25X076-A	14	
89	90.0 - 93.0	AF-CO-19X089-A	16		AF-CO-25X089-A	12	

Length tolerance for tubes: ± 1,5 %

Thickness tolerance

≤ 8 mm:	±1,0 mm
9 - 18 mm:	±1,5 mm
19 - 31 mm:	±2,5 mm
> 31 mm:	±3,0 mm

● Not a stock item. Delivery on request.

AF/Armaflex Class 0 tubes endless (15m coils)



Colour Black, Microban®, Coil length 15 m, supplied in polyethylene bag

Pipe max. Outside-Ø [mm]	Inner Ø min/max mm (tube)	6,0 mm insulation thickness		9,0 mm insulation thickness	
		Code	m/carton	Code	m/carton
6	7.0 - 9.0	-	-	AF-CO-09X006/E-15	180
10	11.0 - 13.0	AF-CO-06X010/E-15	210	AF-CO-09X010/E-15	150
12	13.0 - 15.0	AF-CO-06X012/E-15	180	AF-CO-09X012/E-15	135
15	16.0 - 18.0	AF-CO-06X015/E-15	135	AF-CO-09X015/E-15	135
20	21.0 - 23.0	-	-	AF-CO-09X020/E-15	105
22	23.0 - 25.0	-	-	AF-CO-09X022/E-15	90
28	29.0 - 31.5	-	-	AF-CO-09X028/E-15	75

Pipe max. Outside-Ø [mm]	Inner Ø min/max mm (tube)	13,0 mm insulation thickness				
		Code	m/carton			
6	7.0 - 9.0	AF-CO-13X006/E-15	135	-	-	-
10	11.0 - 13.0	AF-CO-13X010/E-15	105	-	-	-
12	13.0 - 15.0	AF-CO-13X012/E-15	90	-	-	-
15	16.0 - 18.0	AF-CO-13X015/E-15	90	-	-	-
20	21.0 - 23.0	AF-CO-13X020/E-15	90	-	-	-
22	23.0 - 25.0	AF-CO-13X022/E-15	75	-	-	-
28	29.0 - 31.5	AF-CO-13X028/E-15	60	-	-	-

Length tolerance for tubes: ± 1,5 %
 Thickness tolerance ≤ 8 mm: ±1,0 mm
 9 -18 mm: ±1,5 mm

AF/Armaflex Class 0 AC coils



Colour Black, Air Conditioning coils supplied in a specially designed carton for easy dispense

Pipe max. Outside-Ø [mm]	6,0 mm insulation thickness		9,0 mm insulation thickness	
	Code	m/carton	Code	m/carton
6	-	-	AF-CO-09X006/E	70
10	AF-CO-06X010/E	75	AF-CO-09X010/E	50
12	-	-	AF-CO-09X012/E	45
15	AF-CO-06X015/E	55	AF-CO-09X015-E	40
20	-	-	AF-CO-09X020/E	34
22	-	-	AF-CO-09X022/E	30
28	-	-	AF-CO-09X028/E	26

Pipe max. Outside-Ø [mm]	13,0 mm insulation thickness				
	Code	m/carton			
6	AF-CO-13X006/E	45	-	-	-
10	AF-CO-13X010/E	35	-	-	-
12	AF-CO-13X012/E	32	-	-	-
15	AF-CO-13X015/E	32	-	-	-
20	AF-CO-13X020/E	28	-	-	-
22	AF-CO-13X022/E	26	-	-	-
28	AF-CO-13X028/E	20	-	-	-

Length tolerance for tubes: ± 1,5 %
 Thickness tolerance ≤ 6 mm: ±1,0 mm
 9 -18 mm: ±1,5 mm

AF/Armaflex Class 0 sheets



Length 2.0 m, Width 0.5 m, Colour Black, Microban®

Code	Thickness [mm]	m ² /carton
AF-CO-10MM	10.0	13
AF-CO-13MM	13.0	9
AF-CO-19MM	19.0	7
AF-CO-25MM	25.0	5
AF-CO-32MM	32.0	4

Length tolerance for sheets	±1,5 %	
Thickness tolerance for sheets	≤ 6 mm:	±1,0 mm
	7 -19 mm:	±1,5 mm
	>19 mm:	±2,0 mm

AF/Armaflex Class 0 self-adhesive sheets



Length 2.0 m, Width 0.5 m, Colour Black, Microban®

Code	Thickness [mm]	m ² /carton
AF-CO-10MM/A ●	10.0	13
AF-CO-13MM/A ●	13.0	9
AF-CO-19MM/A ●	19.0	7
AF-CO-25MM/A ●	25.0	5
AF-CO-32MM/A ●	32.0	4

Length tolerance for sheets	±1,5 %	
Thickness tolerance for sheets	≤ 6 mm:	±1,0 mm
	7 -19 mm:	±1,5 mm
	>19 mm:	±2,0 mm

● Not a stock item. Delivery on request.

AF/Armaflex Class 0 continuous sheets (rolls)



Width 1.0 m, Colour Black

1,0 m width				
Code	Thickness [mm]	Roll length [m]	m ² /carton	
AF-03MM/E ●	3.0	30	30	
AF-CO-06MM/E	6.0	15	15	
AF-CO-10MM/E	10.0	10	10	
AF-CO-13MM/E	13.0	8	8	
AF-CO-19MM/E	19.0	6	6	
AF-CO-25MM/E	25.0	4	4	
AF-CO-32MM/E	32.0	3	3	
AF-50MM/E ●	50.0	5	5	

Length tolerance for sheets	± 5 % - 1.5%	
Thickness tolerance for sheets	≤ 6 mm:	±1,0 mm
	7 -19 mm:	±1,5 mm
	> 19 mm:	±2,0 mm

● Not a stock item. Delivery on request.

AF/Armaflex Class 0 continuous sheets self-adhesive (rolls)



Width 1.0 m, Microban®

1,0 m width				
Code	Thickness [mm]	Roll length [m]	m ² /carton	
AF-03MM/EA ●	3.0	30	30	
AF-CO-06MM/EA ●	6.0	15	15	
AF-CO-10MM/EA ●	10.0	10	10	
AF-CO-13MM/EA ●	13.0	8	8	
AF-CO-19MM/EA ●	19.0	6	6	
AF-CO-25MM/EA ●	25.0	4	4	
AF-CO-32MM/EA ●	32.0	3	3	
AF-50MM/EA ●	50.0	5	5	

Length tolerance for sheets	± 5 % - 1.5%	
Thickness tolerance for sheets	≤ 6 mm:	±1,0 mm
	7 -19 mm:	±1,5 mm
	> 19 mm:	±2,0 mm

● Not a stock item. Delivery on request.

AF/Armaflex Class 0 self-adhesive tapes



Length 15.0 m, Width 50.0 mm, Thickness 3.0 mm, Colour Black, Microban®

Code	Width [mm]	Length [m]	Thickness [mm]	Rolls/carton	
AF-TAPE-MC	50.0	15	3	12	

Armaflex Ultima[®]

THE FIRST LOW SMOKE FLEXIBLE
INSULATION FOR INCREASED FIRE
SAFETY



- Increased safety through superior fire performance and reduced smoke density
- Meets the requirements for sustainable construction in combination with Armaflex Ultima RS850 reduced solvent adhesive
- Manufactured with Armaprene, patented technology
- Reduces energy losses and minimizes CO₂ emissions

- First flexible closed-cell insulation with Euroclass B_L-s1, d0
- Excellent protection against water vapour diffusion for long-term performance
- Reliable system solution with compatible Armafix Ultima pipe supports, tapes and adhesives available

EPD
Environmental Product Declaration



**BUREAU
VERITAS**



APPROVED

Armaflex Ultima



A NEW SAFETY STANDARD FOR FLEXIBLE INSULATION MATERIALS

With the fire classification B_L-s1, d0, Armaflex Ultima sets a new safety standard in technical insulation. The highly flexible, closed-cell insulation material has extremely low smoke density and thus makes an important contribution to the overall level of fire safety in buildings.

Innovative Armaprene technology, a completely new intrinsically flame-resistant polymer, and the use of special additives means it is no longer necessary to add any brominated flame retardants.

PEOPLE SAFETY

Every year more than 6,000 people die as a result of fires in Europe, with the majority of deaths as a result of smoke inhalation.

Fire safety in buildings includes protecting people and places as well as the environment from the often devastating effects of fire. It covers a range of aspects, such as taking precautions to prevent or reduce the likelihood of fire in buildings, alerting people to the presence of fire and helping those threatened to survive.

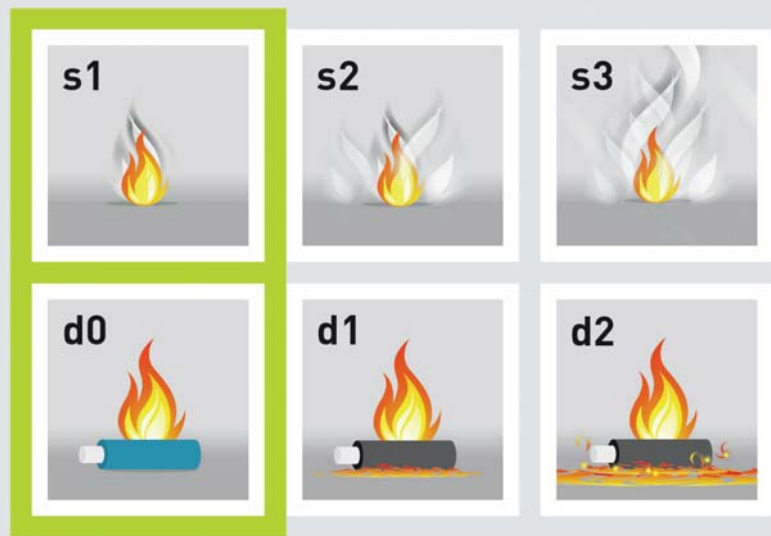


THE IMPORTANCE OF PASSIVE FIRE PROTECTION

Passive fire protection provides breaks and barriers to fire and the spread of combustible materials within buildings, between buildings and to the exterior environment. This includes, but is not limited to, walls, doors, floors, windows and installations. In buildings passive features can make an important difference in protecting people and our built environment.

With the completely new foam Armaflex Ultima, Armacell is the first manufacturer of flexible technical insulation materials to succeed in combining extremely high flammability resistance with minimal smoke development.





A NEW SAFETY STANDARD FOR FLEXIBLE INSULATION MATERIALS

A product's technical properties determine the initiation and growth rate of fire. Measurement of the technical properties and the understanding of how they relate to real hazards are therefore important for fire safety.

Building products have to be tested and classified according to EN13501-1 and the resulting application areas are defined in the national building codes. The new Euroclass fire classification takes into account not only flammability, but also the smoke density and the production of burning droplets.



THE SECURITY OF A WELL DESIGNED SYSTEM

Armaflex Ultima and other insulation materials based on Armaprene® synthetic rubber are glued using Armaflex Ultima RS850 and Armaflex Ultima 700 adhesives which have been specially developed for these products.

The choice of adhesive depends on the requirement of the project.

Armacell also offers its tried and tested pipe support in Armafix Ultima material to provide maximum system reliability.



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	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.
Colour	blue
Material Special 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 paper/foil used to protect self-adhesive closures.
Product Range	Available in tubes, self-adhesive tubes, sheets, self-adhesive sheets, tape and pipe supports. Range: 9-25mm thickness, pipe outer diameter 10-89 mm.
Applications	Insulation / protection of pipes, air ducts, vessels (incl. elbows, fittings, flanges etc.) to prevent condensation and save energy. Self-adhesive tubes should be additionally secured by applying Armaflex Ultima Tape.
Special Features	Low smoke performance
Safety and Environment	Meets the requirements for sustainable construction initiatives when specified in combination with Armaflex Ultima RS850 adhesive. Type III Environmental Product Declaration (EPD): Declaration number "EPD-ARM-20150109-IBB1-DE", Institut Bauen und Umwelt e.V. (IBU) in accordance with ISO 14025 and EN 15804
Remarks	Certificate of Constancy of Performance, Güteschutzgemeinschaft Hartschaum e.V. , Celle

Property	Value/Assessment	Test ²	Special Remarks	
Temperature Range				
Temperature Range	Max. service temperature +110 °C (+85 °C if sheet or tape is glued to the object with its whole surface.)	EU 5654	Tested acc. to EN 14706 EN 14707 and EN 14304	
	Min. service temperature ¹ -50 °C			
Thermal Conductivity				
Thermal Conductivity	ϑ_m +/-0 °C	$\lambda =$	D 4965 D 4964 EU 5654 Declared acc. to EN ISO 13787 Tested acc. to EN 12667 EN ISO 8497	
	$\lambda \leq 0.040$	W/(m · K) $[40 + 0,1 \cdot \vartheta_m + 0,0009 \cdot \vartheta_m^2]/1000$		
Water vapour diffusion resistance				
Water vapour diffusion resistance	$\mu \geq 7,000$	D 5185 EU 5654	Tested acc. to EN 12086 EN 13469	
Fire performance				
Reaction to fire ²	Tubes, Tubes self-adhesive B _L -s1,d0 Sheets, sheets self-adhesive B-s2,d0 Tape B-s1,d0	EU 5654	Classified acc. to EN 13501-1 Tested acc. to EN 13823 and EN ISO 11925-2	
Other fire class	Ship Building Bureau Veritas, Det Norske Veritas, Lloyds Register Rail Approved for use on London Underground	D 5243 D 5244 D 5245 GB 5565		Classified acc. to MED 96/98/EC MODULE D Tested acc. to IMO Resolution BS 6853
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames; low smoke density			
Other	FM-approved	D 5192	FM: Tested according to UBC26-3, Class No.4924	
Other technical features				
Dimensions and tolerances	In accordance with EN 14304, table 1	EU 5315	Tested acc. to EN 822, EN 823, EN 13467	
UV resistance	Armaflex Ultima is not suitable for outdoor use and may not be exposed to the weather or UV-radiation exposure. Metal cladding required. Direct UV radiation also to be avoided indoors.			
Storage & Shelf life	self-adhesive tubes, self-adhesive sheets, self-adhesive tape: 1 year		Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).	
Antimicrobial behaviour	No fungal growth observed	D 5184	Tested acc. to ASTM G21	

1. For temperatures below -50 °C please contact our Technical Department to request the corresponding technical information.

2. The building materials classification is valid on metal or solid, mineral surfaces.

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

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Installation instructions are given in our Armaflex installation manual. Please consult our Technical Department before insulating stainless steel. With some refrigerants the discharge temperature may exceed +110 °C, please consult our Technical Department for further information.

Armaflex Ultima tubes



Length 2.0 m, Colour Blue

Pipe max. Outside-Ø [mm]	9,0 mm insulation thickness		13,0 mm insulation thickness	
	Code	m/carton	Code	m/carton
6	-	-	UL-13X006 ●	164
10	-	-	UL-13X010 ●	140
12	UL-09X012 ●	192	UL-13X012 ●	130
15	UL-09X015 ●	180	UL-13X015 ●	112
18	UL-09X018 ●	150	UL-13X018 ●	98
22	UL-09X022 ●	124	UL-13X022 ●	88
28	UL-09X028 ●	96	UL-13X028 ●	64
35	UL-09X035 ●	70	UL-13X035 ●	56
42	UL-09X042 ●	56	UL-13X042 ●	48
48	UL-09X048 ●	52	UL-13X048 ●	40
54	UL-09X054 ●	42	UL-13X054 ●	36
60	UL-09X060 ●	40	UL-13X060 ●	28
64	UL-09X064 ●	28	UL-13X064 ●	26
76	UL-09X076 ●	32	UL-13X076 ●	24
89	UL-09X089 ●	24	UL-13X089 ●	18

Pipe max. Outside-Ø [mm]	19,0 mm insulation thickness		25,0 mm insulation thickness	
	Code	m/carton	Code	m/carton
10	UL-19X010 ●	92	-	-
12	UL-19X012 ●	84	-	-
15	UL-19X015 ●	64	-	-
18	UL-19X018 ●	58	UL-25X018 ●	46
22	UL-19X022 ●	56	UL-25X022 ●	36
28	UL-19X028 ●	40	UL-25X028 ●	36
35	UL-19X035 ●	40	UL-25X035 ●	28
42	UL-19X042 ●	24	UL-25X042 ●	24
48	UL-19X048 ●	24	UL-25X048 ●	20
54	UL-19X054 ●	24	UL-25X054 ●	18
60	UL-19X060 ●	16	UL-25X060 ●	18
64	UL-19X064 ●	16	UL-25X064 ●	16
76	UL-19X076 ●	16	UL-25X076 ●	12
89	UL-19X089 ●	16	UL-25X089 ●	12

Length tolerance for tubes: ± 1,5 %
Thickness tolerance 9 mm, 13 mm: ±1,5 mm
 19 mm, 25 mm: ±2,5 mm

● Not a stock item. Delivery on request.

Armaflex Ultima self-adhesive tubes (Self Seal)



Length 2.0 m, Colour Blue

Pipe max. Outside-Ø [mm]	9,0 mm insulation thickness		13,0 mm insulation thickness	
	Code	m/carton	Code	m/carton
15	UL-09X015-A ●	180	UL-13X015-A ●	112
18	UL-09X018-A ●	150	UL-13X018-A ●	98
22	UL-09X022-A ●	124	UL-13X022-A ●	88
28	UL-09X028-A ●	96	UL-13X028-A ●	64
35	UL-09X035-A ●	70	UL-13X035-A ●	56
42	UL-09X042-A ●	56	UL-13X042-A ●	48
48	UL-09X048-A ●	52	UL-13X048-A ●	40
54	UL-09X054-A ●	42	UL-13X054-A ●	36
60	UL-09X060-A ●	40	UL-13X060-A ●	28
76	UL-09X076-A ●	32	UL-13X076-A ●	24
89	UL-09X089-A ●	24	UL-13X089-A ●	18

Armaflex Ultima self-adhesive tubes (Self Seal)



Length 2.0 m, Colour Blue

Pipe max. Outside-Ø [mm]	19,0 mm insulation thickness		25,0 mm insulation thickness	
	Code	m/carton	Code	m/carton
15	UL-19X015-A ●	64	-	-
18	UL-19X018-A ●	58	UL-25X018-A ●	46
22	UL-19X022-A ●	56	UL-25X022-A ●	36
28	UL-19X028-A ●	40	UL-25X028-A ●	36
35	UL-19X035-A ●	40	UL-25X035-A ●	28
42	UL-19X042-A ●	24	UL-25X042-A ●	24
48	UL-19X048-A ●	24	UL-25X048-A ●	20
54	UL-19X054-A ●	24	UL-25X054-A ●	18
60	UL-19X060-A ●	16	UL-25X060-A ●	18
76	UL-19X076-A ●	16	UL-25X076-A ●	12
89	UL-19X089-A ●	16	UL-25X089-A ●	12

Length tolerance for tubes: ± 1,5 %
 Thickness tolerance 9 mm, 13 mm: ±1,5 mm
 19 mm, 25 mm: ±2,5 mm

● Not a stock item. Delivery on request.

Armaflex Ultima continuous sheets (rolls)



Width 1.0 m, Colour Blue

Code	Thickness [mm]	Roll length [m]	m ² /carton
UL-06-99/E ●	6.0	15	15
UL-09-99/E ●	9.0	10	10
UL-13-99/E ●	13.0	8	8
UL-19-99/E ●	19.0	5	5
UL-25-99/E ●	25.0	4	4

Length tolerance for sheets ± 5 % - 1.5%
 Thickness tolerance for sheets 6 mm: ±1,0 mm
 9 mm - 19 mm: ±1,5 mm
 25 mm: ±2,0 mm

● Not a stock item. Delivery on request.

Armaflex Ultima continuous sheets self-adhesive (rolls)



Width 1.0 m, Colour Blue

Code	Thickness [mm]	Roll length [m]	m ² /carton
UL-06-99/EA ●	6.0	15	15
UL-09-99/EA ●	9.0	10	10
UL-13-99/EA ●	13.0	8	8
UL-19-99/EA ●	19.0	5	5
UL-25-99/EA ●	25.0	4	4

Length tolerance for sheets ± 5 % - 1.5%
 Thickness tolerance for sheets 6 mm: ±1,0 mm
 9 mm - 19 mm: ±1,5 mm
 25 mm: ±2,0 mm

● Not a stock item. Delivery on request.

Armaflex Ultima self-adhesive tapes



Colour Blue

Code	Width [mm]	Length [m]	Thickness [mm]	Rolls/carton
UL-TAPE ●	50.0	15	3	12

● Not a stock item. Delivery on request.

Armaflex Ultima adhesive



Code	Description	Pieces/carton	
AHU-700/1,0 •	Armaflex Ultima Adhesive 700, blue one component adhesive, 1 litre cans	12	
AHU-RS850/0,7 •	Armaflex Ultima Adhesive RS850, reduced solvent, non-drip blue gel form adhesive, 0.75 litre cans	6	

- Not a stock item. Delivery on request.

Armaflex®
Duct

THE DUST & FIBRE FREE ARMAFLEX
INSULATION FOR AESTHETIC AND
DURABLE PROTECTION OF AIR DUCTS



- Prevents condensation
- Structure-borne noise control
- 1.5m wide sheet size manufactured to fit ducting segments
- Easy to install and repair

- Dust & fibre free
- Closed cell structure to prevent water vapour transmission
- Smooth surface for easy cleaning and aesthetic finish

Technical Data - Armaflex Duct AL

Brief description	Armaflex Duct AL is a black, closed-cell insulation material with a bright silver finish. It is especially designed and produced for the thermal and acoustic insulation of air-conditioning ducts. Armaflex Duct insulation reduces heat losses and the closed-cell structure prevents water vapour transmission, thus avoiding the risk of corrosion.
Material type	Elastomeric foam based on synthetic rubber. Factory made flexible elastomeric foam (FEF) according to EN 14304.
Colour	Black with silver foil covering
Material Special Information	Self-adhesive coating: pressure-sensitive adhesive coating on modified acrylate basis with mesh structure. Covered with polyethylene foil.
Applications	Insulation of rectangular and cylindrical air ducts
Remarks	EC Certificate of Constancy of Performance no. 0543 of Güteschutzgemeinschaft Hartschaum e.V. , Celle

Property	Value/Assessment	Test ²	Special Remarks
Temperature Range			
Temperature Range	Max. service temperature	+110 °C	
	Min. service temperature	-50 °C	
Thermal Conductivity			
Thermal Conductivity	ϑ_m 0 °C	$\lambda =$	EU 5697 Declared acc. to EN ISO 13787 Tested acc. to EN 12667 EN ISO 8497
	sheets 9 - 25 mm $\lambda \leq 0.036$	W/(m · K) [36 + 0,1 · ϑ_m + 0,0008 · ϑ_m^2]/1000	
	sheets 32 - 40 mm $\lambda \leq 0.038$	W/(m · K) [38 + 0,1 · ϑ_m + 0,0008 · ϑ_m^2]/1000	
Water vapour diffusion resistance			
Water vapour diffusion resistance	μ	\geq 7,000	EU 5697 Tested acc. to EN 12086
Fire performance			
Reaction to fire	Euroclass	E	EU 5697 Classified acc. to EN 13501-1 Tested acc. to EN 13823 EN ISO 11925-2
Other technical features			
Dimensions and tolerances	In accordance with EN 14304, table 1		EU 5697 Tested acc. to EN 822, EN 823, EN 13467
Storage & Shelf life	Sheets, self-adhesive: 1 year		Can be stored in dry, clean rooms at normal relative humidity (50 % to 70 %) and ambient temperature (0 °C - 35 °C)

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

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Installation instructions are given in our Armaflex installation manual. Armaflex 520 adhesive must be used to guarantee correct installation. For outside use, Armaflex should be protected with a suitable outer covering within 3 days of installation.

Technical Data - Armaflex Duct Plus

Brief description	Armaflex Duct Plus is a closed-cell insulation material especially designed for the thermal and acoustic insulation of air-conditioning ducts. Armaflex Duct Plus insulation offers an improved fire rating for indoor applications, reduces heat losses and the closed-cell structure prevents water vapour transmission.
Material type	Elastomeric foam based on synthetic rubber
Colour	Black (no foil covering)
Remarks	EC Certificate of Constancy of Performance no. 0543 of Güteschutzgemeinschaft Hartschaum e.V. , Celle

Property	Value/Assessment	Test ²	Special Remarks
Temperature Range			
Temperature Range	Max. service temperature	+110 °C	
	Min. service temperature	-50 °C	
Thermal Conductivity			
Thermal Conductivity	ϑ_m +/-0 °C	$\lambda=$	EU 5697 Declared acc. to EN ISO 13787 Tested acc. to EN 12667 EN ISO 8497
	sheets 9 - 32mm $\lambda \leq 0.036$	W/(m · K)	
Water vapour diffusion resistance			
Water vapour diffusion resistance	μ	\geq 7,000	EU 5316 Tested acc. to EN 12086
Fire performance			
Reaction to fire ¹	Euroclass	B-s3, d0	EU 5697 Classified acc. to EN 13501-1 Tested acc. to DIN EN 13823 DIN EN ISO 11925-2
Practical fire behaviour	Self-extinguishing, does not drip		
Other technical features			
Dimensions and tolerances	In accordance with EN 14304, table 1		EU 5697 Tested acc. to EN 822, EN 823, EN 13467
Health aspects	Dust and fibre free		
Storage & Shelf life	self-adhesive sheets: 1 year		Can be stored in dry, clean rooms at normal relative humidity (50 % to 70 %) and ambient temperature (0 °C - 35 °C)

1. The building materials classification is valid on metal or solid, mineral surfaces.

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

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Installation instructions are given in our Armaflex installation manual. Armaflex 520 adhesive must be used to guarantee correct installation. For outside use, Armaflex should be protected with a suitable outer covering within 3 days of installation.

Armaflex Duct AL pre-covered endless sheets (rolls)



Armaflex Duct laminated with a silver foil covering

1,5 m width					
Code	Thickness [mm]	Roll length [m]	Width [m]	m ² /carton	
ADU-09MM/E-L ●	9.0	20	1.5	30	
ADU-13MM/E-L ●	13.0	16	1.5	24	
ADU-19MM/E-L ●	19.0	12	1.5	18	
ADU-25MM/E-L ●	25.0	8	1.5	12	
ADU-32MM/E-L ●	32.0	6	1.5	9	

Thickness tolerance for sheets	≤ 6 mm:	±1,0 mm
	7 -19 mm:	±1,5 mm
	> 19 mm:	±2,0 mm

● Not a stock item. Delivery on request.

Armaflex Duct AL pre-covered endless sheets self-adh (rolls)



Armaflex Duct laminated with a silver foil covering

1,0 m width					1,5 m width					
Code	Thickness [mm]	Roll length [m]	Width [m]	m ² /carton	Code	Thickness [mm]	Roll length [m]	Width [m]	m ² /carton	
ADU-09MM-1/EA-L ●	9.0	20	1.0	20	ADU-09MM/EA-L ●	9.0	20	1.5	30	
ADU-13MM-1/EA-L ●	13.0	16	1.0	16	ADU-13MM/EA-L ●	13.0	16	1.5	24	
ADU-19MM-1/EA-L ●	19.0	12	1.0	12	ADU-19MM/EA-L ●	19.0	12	1.5	18	
ADU-25MM-1/EA-L ●	25.0	8	1.0	8	ADU-25MM/EA-L ●	25.0	8	1.5	12	
ADU-32MM-1/EA-L ●	32.0	6	1.0	6	ADU-32MM/EA-L ●	32.0	6	1.5	9	

Thickness tolerance for sheets	≤ 6 mm:	±1,0 mm
	7 -19 mm:	±1,5 mm
	> 19 mm:	±2,0 mm

● Not a stock item. Delivery on request.

Armaflex Duct AL self-adhesive tapes



Covering Colour Silver

Code	Width [mm]	Length [m]	Thickness [mm]	Rolls/carton	
ACH-PSATAPES-30 ●	30.0	25	0.08	10	
ACH-PSATAPES-50 ●	50.0	50	0.08	6	

● Not a stock item. Delivery on request.

Armaflex Duct Plus continuous sheets (rolls)



1.5m wide Armaflex Duct Plus black sheet with B-s3, d0 fire rating

Code	Thickness [mm]	Roll length [m]	Width [m]	m ² /carton	
ADU-09MM/E-P ●	9.0	20	1.5	30	
ADU-13MM/E-P ●	13.0	16	1.5	24	
ADU-19MM/E-P ●	19.0	12	1.5	18	
ADU-25MM/E-P ●	25.0	8	1.5	12	
ADU-32MM/E-P ●	32.0	6	1.5	9	

Thickness tolerance for sheets	≤ 6 mm:	±1,0 mm
	7 -19 mm:	±1,5 mm
	> 19 mm:	±2,0 mm

● Not a stock item. Delivery on request.

Armaflex Duct Plus continuous sheets self-adhesive (rolls)



1.5m wide Armaflex Duct Plus self-adhesive black sheet with B-s3, d0 fire rating

Code	Thickness [mm]	Roll length [m]	Width [m]	m ² /carton	
ADU-09MM/EA-P ●	9.0	20	1.5	30	
ADU-13MM/EA-P ●	13.0	16	1.5	24	
ADU-19MM/EA-P ●	19.0	12	1.5	18	
ADU-25MM/EA-P ●	25.0	8	1.5	12	
ADU-32MM/EA-P ●	32.0	6	1.5	9	

Thickness tolerance for sheets

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

- Not a stock item. Delivery on request.

NH/Armaflex®

THE NON-HALOGEN INSULATION TO
REDUCE SMOKE AND TOXICITY IN THE
EVENT OF FIRE



- Low amounts of smoke and acid gas in the event of fire, for use in marine and transport applications
- Reduced toxicity and corrosive effects on people and equipment
- Prevents stress corrosion cracking of stainless steel

- Fibre dust free material with low thermal conductivity: $\lambda_{0^{\circ}\text{C}} \leq 0.040 \text{ W}/(\text{m} \cdot \text{K})$
- Excellent protection against water vapour diffusion
- IMO certified, UL and FM-approved



Technical Data - NH/Armaflex

Brief description	Halogen free, flexible closed-cell insulation material with certification for use in marine environments, rail and military sectors. Also suitable for use in clean rooms and server rooms.
Material type	Elastomeric foam based on synthetic rubber. Factory made flexible elastomeric foam (FEF) according to EN 14304.
Colour	Dark grey / anthracite
Applications	Insulation / protection for air conditioning / refrigeration, ventilation and process equipment to prevent condensation and save energy on pipework, air ducts, vessels (incl. Elbows, fittings, flanges etc.)
Special Features	Zero halogens (chloride, bromide) acc. to DIN / VDE 0472, part 815. Fulfills DIN 1988 Parts 2 and 7.
Safety and Environment	ODP zero GWP zero
Remarks	EC Certificate of Conformity no. 0543 of Güteschutzgemeinschaft Hartschaum e.V. , Celle

Property	Value/Assessment	Test ³	Super- vision ⁴	Special Remarks
Temperature Range				
Temperature Range	Max. service temperature	+110 °C (+85 °C if sheet or tape is glued to the object with its whole surface.)	EU 5316	Tested according to EN 14706 EN 14707 EN 14304
	Min. service temperature ¹	-50 °C		
Thermal Conductivity				
Thermal Conductivity	ϑ_m +/-0 °C	$\lambda =$	D 4788 D 4810	Tested acc. to BS 874 Part 2 1986 EN 12667 ENISO 8497
	$\lambda \leq 0.040$	W/(m · K)	$[40 + 0,1 \cdot \vartheta_m + 0,0009 \cdot \vartheta_m^2]/1000$	
Water vapour diffusion resistance				
Water vapour diffusion resistance	μ	$\geq 2,000$	EU 5316	Tested according to DIN 52 615 EN 12086 EN 13469
Fire performance				
Reaction to fire	Class 1	.	GB 5157 EU 5316	Tested according to BS 476 Part 7: 1997 Classified acc. to EN 13501-1. Tested according to EN 13823 + EN ISO 11925-2
	sheets, tape	Euroclass E		
	tubes	Euroclass D _L -s3, d0		
Other fire class	Ship Building	Bureau Veritas, Det Norske Veritas, Lloyds Register	Ship Building: D 4555/ D 5348 / EU 6111	Tested according to: Ship Building: acc. to IMO A653(16) Railway: acc. to DIN 54837 ISO 5659 (DIN 5510-2) UL: acc. to UL94, IEC 60695 and Can/ CSA-C.22.2 No. 0.17., UL 746C FM: acc. to UBC26-3, Class No.4924
	Railway	Exova Brandhaus	Railway: D 4675 / D 4676 UL: D 3763 FM: D 4266	
	UL - approved	HF-1		
	FM - approved			
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames			
Other technical features				
Dimensions and tolerances	In accordance with EN 14304, table 1			
Chemical behaviour	Resistant against commonly used building materials including concrete, lime, gypsum, cement.			
Health aspects	Dust & fibre free			
Storage & Shelf life	Self-adhesive tapes, self-adhesive sheets, self-adhesive tubes: 1 year			
				Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).
Resistance to	Building Materials: Very Good Chemicals: Consult Product Test List Ozone: Very Good			
Water Absorption	0.2% by volume			
				Test acc. to ASTM C 209
Environmental Aspects	ODP zero GWP zero	D4524		

1. For temperatures below -50 °C please contact our Technical Department to request the corresponding technical information.

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

*2 ●: Official supervision by independent institutes and /or test authorities
○: In-house quality monitoring

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Installation instructions are given in our Armaflex installation manual. Please consult our Technical Department before insulating stainless steel. With some refrigerants the discharge temperature may exceed +110 °C, please consult our Technical Department for further information. Armaflex 520 or Armaflex HT 625 Adhesive must be used to guarantee proper installation. For outside use, Armaflex should be protected with a suitable outer covering within 3 days of installation.

NH/Armaflex tubes



Length 2.0 m

Pipe max. Outside-Ø [mm]	9,0 mm insulation thickness		13,0 mm insulation thickness	
	Code	m/carton	Code	m/carton
10	NH-09X010 ●	266	NH-13X010 ●	156
12	NH-09X012 ●	200	NH-13X012 ●	162
15	NH-09X015 ●	192	NH-13X015 ●	120
18	NH-09X018 ●	166	NH-13X018 ●	112
22	NH-09X022 ●	136	NH-13X022 ●	98
28	NH-09X028 ●	98	NH-13X028 ●	78
35	NH-09X035 ●	76	NH-13X035 ●	56
42	NH-09X042 ●	60	NH-13X042 ●	48
48	NH-09X048 ●	50	NH-13X048 ●	40
54	-	-	NH-13X054 ●	34
60	-	-	NH-13X060 ●	32
76	-	-	NH-13X076 ●	22
89	-	-	NH-13X089 ●	18

Pipe max. Outside-Ø [mm]	19,0 mm insulation thickness		25,0 mm insulation thickness	
	Code	m/carton	Code	m/carton
15	NH-19X015 ●	78	NH-25X015 ●	40
18	NH-19X018 ●	60	NH-25X018 ●	40
22	NH-19X022 ●	56	NH-25X022 ●	40
28	NH-19X028 ●	48	NH-25X028 ●	32
35	NH-19X035 ●	36	NH-25X035 ●	24
42	NH-19X042 ●	32	NH-25X042 ●	22
48	NH-19X048 ●	24	NH-25X048 ●	18
54	NH-19X054 ●	24	NH-25X054 ●	16
60	NH-19X060 ●	18	NH-25X060 ●	12
76	NH-19X076 ●	12	NH-25X076 ●	10
89	NH-19X089 ●	12	NH-25X089 ●	8
114	NH-19X114 ●	8	NH-25X114 ●	6

Length tolerance for tubes: ± 1.5 %
 Thickness tolerance 9-18mm ± 1.5 mm
 19-25mm ± 2.5 mm

● Not a stock item. Delivery on request.

NH/Armaflex self-adhesive tubes (Self Seal)



Pipe max. Outside-Ø [mm]	13,0 mm insulation thickness		19,0 mm insulation thickness	
	Code	m/carton	Code	m/carton
15	NH-13X015-A ●	120	NH-19X015-A ●	78
18	NH-13X018-A ●	112	NH-19X018-A ●	60
22	NH-13X022-A ●	98	NH-19X022-A ●	56
28	NH-13X028-A ●	78	NH-19X028-A ●	48
35	NH-13X035-A ●	56	NH-19X035-A ●	36
42	NH-13X042-A ●	48	NH-19X042-A ●	32
48	NH-13X048-A ●	40	NH-19X048-A ●	24
54	NH-13X054-A ●	34	NH-19X054-A ●	24
60	NH-13X060-A ●	32	NH-19X060-A ●	18
76	-	-	NH-19X076-A ●	12
89	-	-	NH-19X089-A ●	12

Length tolerance for tubes: ± 1,5 %
 Thickness tolerance ≤ 13 mm ± 1,5 mm
 >19 mm ± 2,5 mm

● Not a stock item. Delivery on request.

NH/Armaflex continuous sheets (rolls)



Width 1.0 m

Code	Thickness [mm]	Roll length [m]	m ² /carton	
NH-03-99/E ●	3.0	30	30	
NH-06-99/E ●	6.0	15	15	
NH-10-99/E ●	10.0	10	10	
NH-13-99/E ●	13.0	8	8	
NH-19-99/E ●	19.0	6	6	
NH-25-99/E ●	25.0	4	4	
NH-32-99/E ●	32.0	3	3	

Length tolerance for sheets	± 5 % - 1.5%
Thickness tolerance for sheets	3-6 mm ± 1,0 mm
	10-19 mm ± 1,5 mm
	25-32 mm ± 2,0 mm

● Not a stock item. Delivery on request.

NH/Armaflex continuous sheets self-adhesive (rolls)



Width 1.0 m

Code	Thickness [mm]	Roll length [m]	m ² /carton	
NH-06-99/EA ●	6.0	15	15	
NH-10-99/EA ●	10.0	10	10	
NH-13-99/EA ●	13.0	8	8	
NH-19-99/EA ●	19.0	6	6	
NH-25-99/EA ●	25.0	4	4	
NH-32-99/EA ●	32.0	3	3	

Length tolerance for sheets	± 5 % - 1.5%
Thickness tolerance for sheets	≤ 6mm = ± 1mm
	10 - 19mm = ± 1.5mm
	25 - 32mm = ± 2mm

● Not a stock item. Delivery on request.

NH/Armaflex self-adhesive tapes



Code	Width [mm]	Length [m]	Thickness [mm]	Rolls/carton	
NH-TAPE ●	50.0	15	3	12	

● Not a stock item. Delivery on request.

HT/Armaflex®

UV RESISTANT HIGH TEMPERATURE
INSULATION FOR INDUSTRIAL AND
SOLAR APPLICATIONS



- Closed-cell structure provides built-in vapour barrier
- Maximum service temperature up to 150 °C
- High temperature applications
- Low life cycle, maintenance and repair costs
- UV resistant for outdoor use
- Thermal conductivity value $\lambda_{40\text{ °C}} \leq 0.042 \text{ W/(m} \cdot \text{K)}$
- Minimum energy loss through low thermal conductivity



Technical Data - HT/Armaflex

Brief description	Highly flexible, closed cell insulation material based on extruded elastomeric foam with resistance to UV radiation.
Material type	Synthetic EPDM rubber based foam.
Colour	Black
Applications	Thermal insulation of pipes, vessels and ducts for solar panels (including outdoors), motor vehicles, hot gas lines, steam and dual temperature lines.
Special Features	Fulfills DIN 1988, resistant to UV radiation.
Safety and Environment	Type III Environmental Product Declaration (EPD): Declaration number "EPD-ARM-20150060-IBB1-DE", Institut Bauen und Umwelt e.V. (IBU) in accordance with ISO 14025 and EN 15804
Assembly	The Armaflex application guide should be consulted before use
Remarks	EC Certificate of Conformity no. 0543 of Güteschutzgemeinschaft Hartschaum e.V. , Celle

Property	Value/Assessment	Test ³	Super-vision ⁴	Special Remarks
Temperature Range				
Temperature Range ¹	Max. service temperature ²	+ 150 °C (+ 85 °C for tapes)	D4866 D4867	Tested acc. to EN14707 EN 14706
	Min. service temperature	-50 °C		
Thermal Conductivity				
Thermal Conductivity	ϑ_m 40 °C	$\lambda =$	D4778 D4890	o/● Tested according to: BS 874 Part 2 1986 EN 12667 EN ISO 8497
	tubes $\lambda \leq 0.042$	W/(m · K)	$[36,92 + 0,125 \cdot \vartheta_m + 0,0008 \cdot (\vartheta_m - 30)^2]/1000$	
	sheets $\lambda \leq 0.045$	W/(m · K)	$[39,92 + 0,125 \cdot \vartheta_m + 0,0008 \cdot (\vartheta_m - 30)^2]/1000$	
Water vapour diffusion resistance				
Water vapour diffusion resistance	tubes	$\mu \geq 4,000$	D4281	Tested according to EN 12086 EN 13469
	sheets	$\mu \geq 3,000$		
Fire performance				
Reaction to fire	Class 1	.	GB5154 & EU5030	o/● Tested according to: BS 476 Part 7: 1997 Classified acc. to EN 13501-1. Tested acc. to EN 13823 & EN ISO 11925-2.
	Euroclass sheets & tubes	D-s3, d0 & D _L -s3, d0	EU 5316	
	UL94			
Other fire class	UL -approved	V-0	UL: D3763 Lloyd R EU 6136	UL: Tested according to UL94, IEC 60695 and Can/ CSA-C.22.2 No0.17., UL 746C
	Lloyds Register			
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames			
Other technical features				
Dimensions and tolerances	In accordance with EN 14304, table 1		EU 5316	Tested acc. to EN 822, EN 823, EN 13467
UV resistance ³	Good			
Health aspects	Dust & Fibre Free			
Storage & Shelf life	Tape, self-adhesive: 1 year			
Resistance to	Building Materials: Very Good			
	Chemicals: Consult Product Test List			
Environmental Aspects	Ozone: Very Good			
	UV: Very Good			
Environmental Aspects	ODP zero GWP zero		D4524	

- For temperatures above +125 °C or below -50 °C please contact our Technical Department to request the corresponding technical information.
 - At high service temperatures certain hardening processes may start on the inner surface of the material. Investigations show that these changes have no detrimental impact on the physical and fire protection properties of the material, provided the material is installed in the correct way with all joints properly sealed. For specific applications please consult our technical services department.
 - In outdoor applications, the surface of the material may become discoloured and some minor surface cracks may appear. The visual appearance has no influence on the physical properties of the material however (i.e. thermal conductivity and behaviour in the event of fire).
- *1 Further documents such as test certificates and approvals can be requested using the registration number given.
- *2 ●: Official supervision by independent institutes and /or test authorities
○: In-house quality monitoring

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Installation instructions are given in our Armaflex installation manual. Please consult our Technical Department before insulating stainless steel. Armaflex HT625 adhesive must be used to guarantee correct installation. For temperatures below -50 °C or above +150 °C, please consult our Technical Department for further information.

HT/Armaflex tubes



Length 2.0 m

Pipe max. Outside-Ø [mm]	Inner Ø min/ max mm (tube)	10,0 mm insulation thickness			13,0 mm insulation thickness		
		Code	m/carton		Code	m/carton	
10	11.5 - 13.0	HT-10X010 ●	192		HT-13X010 ●	140	
12	13.5 - 15.0	HT-10X012 ●	172		HT-13X012 ●	130	
15	16.5 - 18.0	HT-10X015	144		HT-13X015	112	
18	19.5 - 21.0	HT-10X018 ●	130		HT-13X018 ●	98	
22	23.5 - 25.0	HT-10X022	108		HT-13X022	84	
28	29.5 - 31.0	HT-10X028 ●	82		HT-13X028 ●	64	
35	36.5 - 38.5	HT-10X035 ●	60		HT-13X035	50	
42	44.0 - 46.0	HT-10X042 ●	50		HT-13X042	40	
48	50.0 - 52.0	-	-		HT-13X048	32	
54	55.5 - 57.5	-	-		HT-13X054	32	
60	62.0 - 64.0	-	-		HT-13X060	28	
76	77.5 - 80.0	-	-		HT-13X076	24	
89	91.0 - 94.0	-	-		HT-13X089	18	

Pipe max. Outside-Ø [mm]	Inner Ø min/ max mm (tube)	19,0 mm insulation thickness			25,0 mm insulation thickness		
		Code	m/carton		Code	m/carton	
12	13.5 - 15.0	HT-19X012 ●	80		-	-	
15	16.5 - 18.0	HT-19X015	64		HT-25X015	40	
18	19.5 - 21.0	HT-19X018 ●	58		HT-25X018 ●	36	
22	23.5 - 25.0	HT-19X022	50		HT-25X022	36	
28	29.5 - 31.0	HT-19X028	48		HT-25X028	32	
35	36.5 - 38.5	HT-19X035	32		HT-25X035	24	
42	44.0 - 46.0	HT-19X042	24		HT-25X042	20	
48	50.0 - 52.0	HT-19X048	22		HT-25X048	16	
54	55.5 - 57.5	HT-19X054	18		HT-25X054	16	
60	62.0 - 64.0	HT-19X060	16		HT-25X060	16	
76	77.5 - 80.0	HT-19X076	18		HT-25X076	12	
89	91.0 - 94.0	HT-19X089	16		HT-25X089	12	

Length tolerance for tubes: ± 1,5 %
Thickness tolerance 10 - 13 mm ± 1,5 mm
 19 - 25 mm ± 2,5 mm

● Not a stock item. Delivery on request.

HT/Armaflex tubes endless (coils)



Pipe max. Outside-Ø [mm]	Inner Ø min/ max mm (tube)	13,0 mm insulation thickness			19,0 mm insulation thickness		
		Code	m/carton		Code	m/carton	
15	16.5 - 18.0	HT-13X015/E ●	26		HT-19X015/E ●	16	
18	19.5 - 21.0	HT-13X018/E ●	22		HT-19X018/E ●	14	
22	23.5 - 25.0	HT-13X022/E ●	18		HT-19X022/E ●	12	

Length tolerance for tubes: ± 1,5 %
Thickness tolerance 10 - 13 mm ± 1,5 mm
 19 - 25 mm ± 2,5 mm

● Not a stock item. Delivery on request.

HT/Armaflex continuous sheets (rolls)



Width 1.0 m

Code	Thickness [mm]	Roll length [m]	m ² /carton	
HT-10-99/E ●	10.0	10	10	
HT-13-99/E ●	13.0	8	8	
HT-19-99/E ●	19.0	6	6	
HT-25-99/E	25.0	4	4	
HT-32-99/E ●	32.0	3	3	

Length tolerance for sheets ± 5 % - 1.5%
 Thickness tolerance for sheets 10 - 19mm = ± 1.5 mm
 25 - 32mm = ± 2 mm

● Not a stock item. Delivery on request.

HT/Armaflex self-adhesive tapes



Code	Width [mm]	Length [m]	Thickness [mm]	Rolls/carton	
HT-TAPE	50.0	15	3	12	

HT/Armaflex accessories



Code	Description	Pieces/carton	
ADH-HT625/0,25 ●	Armaflex HT625 one-component adhesive, 0,25 litre cans (with brush)	40	
ADH-HT625/0,5	Armaflex HT625 one-component adhesive, 0,5 litre cans	12	
ADH-HT625/1,0	Armaflex® HT625 one-component adhesive, 1,0 litre cans	12	
CLEANER/1,0	Special cleaner for use with Armaflex® Adhesive 520 and Armaflex® Adhesive HT625.	4	

● Not a stock item. Delivery on request.

RENEWABLES & COVERING SYSTEMS



- **ARMAFLEX DUOSOLAR**
- **ARMAFLEX TUFFCOAT**
- **ARMA-CHEK SILVER**

Insulation solutions for solar thermal hot water, ground source heat pump and outdoor pipework applications with additional coverings against UV, weathering and damage from mechanical impact.

Arma-Chek non-metallic coverings designed to work in harmony with Armaflex material and reduce the risk of corrosion under insulation.

Armaflex®
DuoSolar

THE PATENTED EASY-TO-INSTALL, PRE-INSULATED PIPING SYSTEM FOR EFFICIENCY IN SOLAR HOT WATER APPLICATIONS



- Reduces cost and saves time of assembly
- Resistant against UV damage and weather impact
- Reduces energy losses and minimises CO₂ emissions
- Patented joint-split adhesive technology
- Integrated temperature sensor cable
- Polyolefin-copolymer textured coating provides good resistance to UV radiation

Technical Data - Armaflex DuoSolar

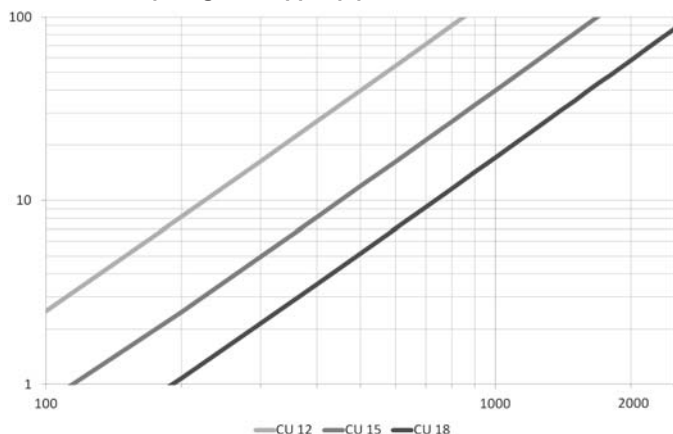
Brief description	Armaflex DuoSolar is a flexible pre-insulated, UV resistant insulation system used to connect solar collectors with hot-water storage tanks in an easy and professional way. The system is offered with a smart join-split system with two corrugated stainless steel pipes. Integrated temperature sensor cable included.
Material type	Insulation material: Synthetic EPDM rubber based foam. Corrugated stainless steel hose: austenitic stainless steel, according to EN 10088-2: X2CrNiMo 17-12-2 and DIN 17441: 1.4404. Covering: polyolefin copolymer film.
Colour	Black
Material Special Information	The return pipe includes a temperature sensor cable (2 x 0.75 mm ²) with halogen-free, temperature resistant silicon coating (+180 °C).
Product Range	Pre-insulated corrugated stainless steel pipes in different coil lengths, pipe hangers, fittings sets and accessories.
Applications	Tubing system to connect solar collectors with solar thermal hot water boilers and other uses.
Special Features	Resistant to UV radiation.
Remarks	EC Certificate of Conformity no. 0543 of Güteschutzgemeinschaft Hartschaum e.V. , Celle

Property	Value/Assessment	Test ³	Super- vision ⁴	Special Remarks
Temperature Range				
Temperature Range	Max. service temperature	+ 150 °C	D4866 D4867	Tested acc. to EN 14707 EN 14706
	Min. service temperature	-50 °C		
Thermal Conductivity				
Thermal Conductivity	ϑ_m 40 °C	$\lambda =$	D4890	○ Declared acc. to EN ISO 13787 Tested according to EN ISO 8497
	$\lambda \leq 0.042$ W/(m · K)	$[36,92 + 0,125 \cdot \vartheta_m + 0,0008 \cdot (\vartheta_m - 30)^2] / 1000$		
Water vapour diffusion resistance				
Water vapour diffusion resistance	$\mu \geq$	4,000	D4281	Tested according to EN 13469
Fire performance				
Reaction to fire	Euroclass	E	EU 5316	○/● Classified acc. to EN 13501-1 Tested according to EN ISO 11925-2
Other technical features				
Dimensions and tolerances	In accordance with EN 14304, table 1		EU 5316	Tested acc. to EN 13467
Chemical behaviour	Excellent resistance to ozone, chemicals (consult product test list) and building materials			
UV resistance	Good			
Health aspects	Dust & fibre free			
	ODP zero GWP zero		D4524	

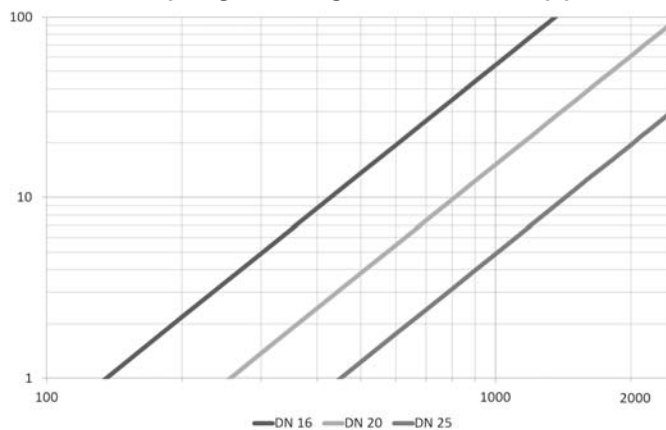
*1 Further documents such as test certificates and approvals can be requested using the registration number given.

*2 ●: Official supervision by independent institutes and /or test authorities
○: In-house quality monitoring

Pressure drop diagram copper pipes



Pressure drop diagram corrugated stainless steel pipes



Medium temperature 60 °C Heat fluid 1,2 Propylenglycol Dynamic Viscosity 1612,8 10-6 kg/ms Weight density 1008 kg/m³

X-axis = volume flow in litre per hour
Y-axis = pressure drop in millibar per meter

Armaflex DuoSolar pre-insulated VA pipe, coils



Covering Colour Black, pre-insulated corrugated tubes made of stainless steel 1.4404 (ASTM 316 L)

Outer- Ø [mm]	Code	Thickness [mm]	Outer diameter pipe + insulation mm	Coil length [m]
21,4 VA	SO-DV-14X16/E10	14.0	2 x 50	10
21,4 VA	SO-DV-14X16/E15	14.0	2 x 50	15
21,4 VA	SO-DV-14X16/E20	14.0	2 x 50	20
21,4 VA	SO-DV-14X16/E25	14.0	2 x 50	25
26,7 VA	SO-DV-14X20/E10 ●	14.0	2 x 55	10
26,7 VA	SO-DV-14X20/E15 ●	14.0	2 x 55	15
26,7 VA	SO-DV-14X20/E20 ●	14.0	2 x 55	20
26,7 VA	SO-DV-14X20/E25 ●	14.0	2 x 55	25
31,8 VA	SO-DV-14X25/E15 ●	14.0	2 x 60	15
31,8 VA	SO-DV-14X25/E25 ●	14.0	2 x 60	25
21,4 VA	SO-DV-20X16/E15 ●	20.0	2 x 61	15
21,4 VA	SO-DV-20X16/E25 ●	20.0	2 x 61	25
26,7 VA	SO-DV-20X20/E15 ●	20.0	2 x 67	15
26,7 VA	SO-DV-20X20/E25 ●	20.0	2 x 67	25

Remark

All other items delivery 10 working days

- Not a stock item. Delivery on request.

Armaflex DuoSolar VA accessories



Code	Description	Pieces/set
SCH-DN16-FEF14 ●	Pipe hanger for DN16-FEF14 with hex-head screw M8x80 and raw plugs S10, insulation thickness 14mm	4
SCH-DN16-FEF20 ●	Pipe hanger for DN16-FEF20 with hex-head screw M8x80 and raw plugs S10, insulation thickness 20mm	4
SCH-DN20-FEF14 ●	Pipe hanger for DN20-FEF14 with hex-head screw M8x80 and raw plugs S11, insulation thickness 14mm	4
SCH-DN20-FEF20 ●	Pipe hanger for DN20-FEF20 with hex-head screw M8x80 and raw plugs S11, insulation thickness 20mm	4
SCH-DN25-FEF14 ●	Pipe hanger for DN25-FEF14 with hex-head screw M8x80 and raw plugs S12, insulation thickness 14mm	4
SO-VA-DNI-16	Double nipple ¾" for DN 16	2
SO-VA-DNI-20 ●	Double nipple 1" for DN 20	2
SO-VA-DNI-25 ●	Double nipple 1 ¼" for DN 25	2
SO-VA-FIT-16/4	Fitting set for DN16 with 4 of each split rings, union nuts, washers	4
SO-VA-FIT-20/4 ●	Fitting set for DN20 with 4 of each split rings, union nuts, washers	4
SO-VA-FIT-25/4 ●	Fitting set for DN25 with 4 of each split rings, union nuts, washers	4

Remark

Oval fastening clamps: 4 pc/set
Double nipples: 2 pc/set

Delivery 10 working days

- Not a stock item. Delivery on request.

Armaflex DuoSolar VA calibration tool



Code	Description	Pieces/set
SO-VA-BACK-16 ●	Clamping jaw for flange tool DN 16	1
SO-VA-BACK-20 ●	Clamping jaw for flange tool DN 20	1
SO-VA-BACK-25 ●	Clamping jaw for flange tool DN 25	1
SO-VA-FLA ●	Flange tool base element, without clamping jaw DN 16 - DN 25	1

- Not a stock item. Delivery on request.

Armaflex DuoSolar fitting for corrugated hoses



Quick fitting coupling for corrugated stainless steel hoses

Stainless steel VA	Code	Connection	Pieces/carton	
DN 16	SO-SDN16-DN16 •	corrugated stainless steel hoses DN 16	10	
DN 20	SO-SDN20-DN20 •	corrugated stainless steel hoses DN 20	10	
DN 25	SO-SDN25-DN25 •	corrugated stainless steel hoses DN 25	4	

• Not a stock item. Delivery on request.

Armaflex DuoSolar fitting for copper pipes



Quick fitting coupling with clamping ring for copper pipes

Stainless steel VA	Code	Connection	Pieces/carton	
DN 16	SO-SDN16-CU15 •	plain pipes Ø 15 mm	10	
DN 16	SO-SDN16-CU18 •	plain pipes Ø 18 mm	10	
DN 16	SO-SDN16-CU22 •	plain pipes Ø 22 mm	10	
DN 20	SO-SDN20-CU15 •	plain pipes Ø 15 mm	10	
DN 20	SO-SDN20-CU18 •	plain pipes Ø 18 mm	10	
DN 20	SO-SDN20-CU22 •	plain pipes Ø 22 mm	10	
DN 25	SO-SDN25-CU18 •	plain pipes Ø 18 mm	4	
DN 25	SO-SDN25-CU22 •	plain pipes Ø 22 mm	4	

• Not a stock item. Delivery on request.

Armaflex DuoSolar fitting with female straight internal thread



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

Stainless steel VA	Code	Connection	Pieces/carton	
DN 16	SO-SDN16-I1/2 •	inside thread G $\frac{1}{2}$ "	10	
DN 16	SO-SDN16-I3/4 •	inside thread G $\frac{3}{4}$ "	10	
DN 16	SO-SDN16-I1 •	inside thread G1"	10	
DN 20	SO-SDN20-I3/4 •	inside thread G $\frac{3}{4}$ "	10	
DN 20	SO-SDN20-I1 •	inside thread G1"	10	
DN 25	SO-SDN25-I1 •	inside thread G1"	4	
DN 25	SO-SDN25-I11/4 •	inside thread G1 $\frac{1}{4}$ "	4	

• Not a stock item. Delivery on request.

Armaflex DuoSolar fitting with male straight thread



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

Stainless steel VA	Code	Connection	Pieces/carton	
DN 16	SO-SDN16-F3/4 •	external thread G $\frac{3}{4}$ "	10	
DN 16	SO-SDN16-F1 •	external thread G1"	10	
DN 20	SO-SDN20-F3/4 •	external thread G $\frac{3}{4}$ "	10	
DN 20	SO-SDN20-F1 •	external thread 1"	10	

• Not a stock item. Delivery on request.

Armaflex DuoSolar fitting with male tapered thread



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

Stainless steel VA	Code	Connection	Pieces/carton	
DN 16	SO-SDN16-E1/2 ●	external thread R1/2"	10	
DN 16	SO-SDN16-E3/4 ●	external thread R3/4"	10	
DN 16	SO-SDN16-E1 ●	external thread R1"	10	
DN 20	SO-SDN20-E3/4 ●	external thread R3/4"	10	
DN 20	SO-SDN20-E1 ●	external thread R1"	10	
DN 25	SO-SDN25-E1 ●	external thread R1"	4	
DN 25	SO-SDN25-E11/4 ●	external thread R1 1/4"	4	

● Not a stock item. Delivery on request.

Armaflex DuoSolar fitting with cylindrical connection



Quick fitting coupling with cylindrical connection piece

Stainless steel VA	Code	Connection	Pieces/carton	
DN 16	SO-SDN16-Z18 ●	cylindrical connection piece Ø 18 mm	10	
DN 20	SO-SDN20-Z18 ●	cylindrical connection piece Ø 18 mm	10	

● Not a stock item. Delivery on request.

Armaflex DuoSolar clamping ring



Clamping ring for quick fitting coupling

Stainless steel VA	Code	Connection	Pieces/carton	
DN 16	SO-SDN16-CR ●	clamping ring	50	
DN 20	SO-SDN20-CR ●	clamping ring	50	
DN 25	SO-SDN25-CR ●	clamping ring	50	

● Not a stock item. Delivery on request.

DuoSolar 220

THE PRE-INSULATED PIPE SYSTEM FOR
HIGH-TEMPERATURE EVACUATED TUBE
SOLAR COLLECTORS



- Excellent performance for high-temperature applications
- Integrated temperature sensor cable
- Outer coating provides good UV stability
- Reduces energy loss and minimises CO₂ emissions
- Pre-insulated pipe system made in Germany
- Easy separation and joining of the feed and return pipe without any tools required

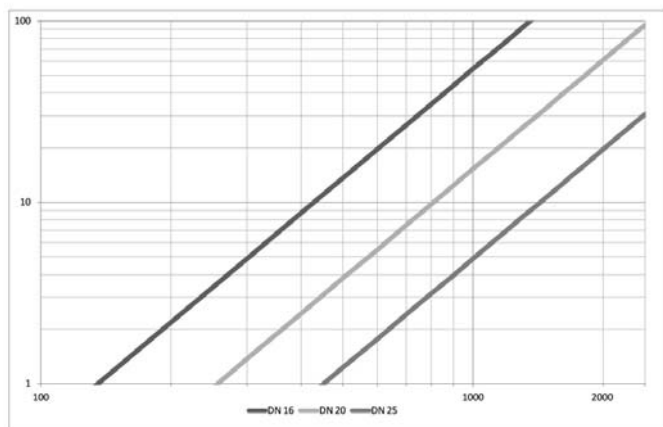
Technical Data - DuoSolar 220

Brief description	DuoSolar 220 is a system solution with pre-insulated feed and return pipes for high temperature solar hot-water applications. DuoSolar can be used to connect evacuated tube collectors with hot-water storage tanks in an easy and professional way.
Material type	Insulation material: Polyester Corrugated stainless steel hose: austenitic stainless steel, according to EN 10088-2: X2CrNiMo 17-12-2 and DIN 17441: 1.4404. Facing: polyolefin copolymer coating
Colour	black
Material Special Information	Sensor cable (2 x 0,75 mm ²) integrated in the return pipe with halogen-free, temperature-resistant silicon coating (+180 °C)
Product Range	Pre-insulated corrugated stainless steel hoses, available in different coil lengths.
Applications	Flexible tubing system to connect evacuated tube collectors with hot water boilers or for other high-temperature solar applications.

Property	Value/Assessment	Test ^{*2}	Special Remarks
Temperature Range			
Temperature Range	Max. service temperature	+ 220 °C	
	Min. service temperature	-50 °C	
Thermal Conductivity			
Thermal Conductivity	ϑ_m	40 [°C]	D5753 Tested according to EN ISO 8497
	λ	≤ 0.040 W/(m · K)	
Fire performance			
Reaction to fire	B1	D5753	Tested according to DIN 4102
Other technical features			
UV resistance	Resistant to UV radiation.		
Melting point	+256 °C		

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

Pressure drop diagram corrugated stainless steel pipes



Medium temperature 60 °C Heat fluid 1,2 Propylenglycol Dynamic Viscosity 1612,8 10⁻⁶ kg/ms X-axis = volume flow in litre per hour Y-axis = pressure drop in millibar per meter

DuoSolar 220 pre-insulated VA pipe, coils



Covering Colour Black

Outer- Ø [mm]	Code	Thickness [mm]	Outer diameter pipe + insulation mm	Coil length [m]	
21,4 VA	SO-DP-20X16/E10 •	20.0	2 x 62	10	
21,4 VA	SO-DP-20X16/E15	20.0	2 x 62	15	
21,4 VA	SO-DP-20X16/E20 •	20.0	2 x 62	20	
21,4 VA	SO-DP-20X16/E25	20.0	2 x 62	25	
26,7 VA	SO-DP-20X20/E15	20.0	2 x 67	15	
26,7 VA	SO-DP-20X20/E20 •	20.0	2 x 67	20	
26,7 VA	SO-DP-20X20/E25	20.0	2 x 67	25	
31,8 VA	SO-DP-20X25/E15	20.0	2 x 72	15	
31,8 VA	SO-DP-20X25/E25	20.0	2 x 72	25	

Remark

Delivery 10 working days

- Not a stock item. Delivery on request.

DuoSolar 220 VA accessories



Code	Description	Pieces/set	
SCH-DN16-FEF20	Pipe hanger for DN16-FEF20 with hex-head screw M8x80 and raw plugs S10, insulation thickness 20mm	4	
SCH-DN20-FEF20	Pipe hanger for DN20-FEF20 with hex-head screw M8x80 and raw plugs S11, insulation thickness 20mm	4	

DuoSolar 220 fitting for corrugated hoses



Stainless steel VA	Code	Connection	Pieces/carton	
DN 16	SO-SDN16-DN16 •	corrugated stainless steel hoses DN 16	10	
DN 20	SO-SDN20-DN20 •	corrugated stainless steel hoses DN 20	10	
DN 25	SO-SDN25-DN25 •	corrugated stainless steel hoses DN 25	4	

- Not a stock item. Delivery on request.

DuoSolar 220 fitting for copper pipes



Stainless steel VA	Code	Connection	Pieces/carton	
DN 16	SO-SDN16-CU15	plain pipes Ø 15 mm	10	
DN 16	SO-SDN16-CU18	plain pipes Ø 18 mm	10	
DN 16	SO-SDN16-CU22	plain pipes Ø 22 mm	10	
DN 20	SO-SDN20-CU15	plain pipes Ø 15 mm	10	
DN 20	SO-SDN20-CU18	plain pipes Ø 18 mm	10	
DN 20	SO-SDN20-CU22	plain pipes Ø 22 mm	10	
DN 25	SO-SDN25-CU18	plain pipes Ø 18 mm	4	
DN 25	SO-SDN25-CU22	plain pipes Ø 22 mm	4	

DuoSolar 220 fitting with female straight internal thread



Stainless steel VA	Code	Connection	Pieces/carton	
DN 16	SO-SDN16-I1/2 ●	inside thread G1/2"	10	
DN 16	SO-SDN16-I3/4 ●	inside thread G3/4"	10	
DN 16	SO-SDN16-I1 ●	inside thread G1"	10	
DN 20	SO-SDN20-I3/4 ●	inside thread G3/4"	10	
DN 20	SO-SDN20-I1 ●	inside thread G1"	10	
DN 25	SO-SDN25-I1 ●	inside thread G1"	4	
DN 25	SO-SDN25-I11/4 ●	inside thread G1 1/4"	4	

● Not a stock item. Delivery on request.

DuoSolar 220 fitting with male straight thread



Stainless steel VA	Code	Connection	Pieces/carton	
DN 16	SO-SDN16-F3/4 ●	external thread G3/4"	10	
DN 16	SO-SDN16-F1 ●	external thread G1"	10	
DN 20	SO-SDN20-F3/4 ●	external thread G3/4"	10	
DN 20	SO-SDN20-F1 ●	external thread 1"	10	

● Not a stock item. Delivery on request.

DuoSolar 220 fitting with male tapered thread



Stainless steel VA	Code	Connection	Pieces/carton	
DN 16	SO-SDN16-E1/2 ●	external thread R1/2"	10	
DN 16	SO-SDN16-E3/4 ●	external thread R3/4"	10	
DN 16	SO-SDN16-E1 ●	external thread R1"	10	
DN 20	SO-SDN20-E3/4 ●	external thread R3/4"	10	
DN 20	SO-SDN20-E1 ●	external thread R1"	10	
DN 25	SO-SDN25-E1 ●	external thread R1"	4	
DN 25	SO-SDN25-E11/4 ●	external thread R1 1/4"	4	

● Not a stock item. Delivery on request.

DuoSolar 220 fitting with cylindrical connection



Stainless steel VA	Code	Connection	Pieces/carton	
DN 16	SO-SDN16-Z18 ●	cylindrical connection piece Ø 18 mm	10	
DN 20	SO-SDN20-Z18 ●	cylindrical connection piece Ø 18 mm	10	

● Not a stock item. Delivery on request.

DuoSolar 220 clamping ring



Stainless steel VA	Code	Connection	Pieces/carton	
DN 16	SO-SDN16-CR ●	clamping ring	50	
DN 20	SO-SDN20-CR ●	clamping ring	50	
DN 25	SO-SDN25-CR ●	clamping ring	50	

● Not a stock item. Delivery on request.

Armaflex®
TuffCoat

MADE TO WITHSTAND MECHANICAL
IMPACT



- Protection against mechanical impact
- Can be used on underground pipework, including mains cold water and ground source heat pump pipes
- Wash-down waterproof and easy to clean
- Built-in vapour barrier prevents condensation

- No additional painting required
- UV resistant
- Microban® antimicrobial protection

 **Microban®**
antibacterial protection

Technical Data - Armaflex Tuffcoat

Brief description	AF/Armaflex Class O with polymeric covering for protection against mechanical impact
Material type	Foamed nitrile rubber with polymeric covering
Colour	Black or white covering (other colours available on request)
Product Range	Armaflex Tuffcoat tubes are supplied in 1m lengths with a section of the Tuffcoat outer covering un-adhered to the Armaflex tube. To enable easy slitting of tubes on secondary installations the un-adhered section has a self-adhesive backing for sealing the covering in place on-site.
Applications	<p>Insulation for hot and cold water services, chilled water lines, heating systems, air conditioning and refrigerated pipework to provide condensation control, energy conservation and frost protection.</p> <p>Easy to wipe clean and wash down - suitable for food manufacturing, hospitals and schools.</p> <p>Suitable for outdoor use since covering provides additional protection against UV damage and bird attack.</p> <p>Can be used underground - including on mains cold water and ground source heat pump pipes.</p>
Special Features	For outside applications NO additional coating is necessary.
Safety and Environment	<p>ODP zero</p> <p>GWP zero</p> <p>Fibre dust free</p>

Property	Value/Assessment	Test ^{*3}	Super-vision ^{*4}	Special Remarks
Temperature Range				
Temperature Range ¹	Max. service temperature	+110 °C	EU 5412	According to EN 14706, EN 14707 + EN14304
	Min. service temperature	-50 °C		
Thermal Conductivity				
Thermal Conductivity	ϑ_m +/-0 °C	$\lambda=$	EU 5412	Tested acc. to EN ISO 8497 + EN 12667
	Tubes 6-19mm $\lambda \leq 0.033$	W/(m · K)	$[33 + 0,1 \cdot \vartheta_m + 0,0008 \cdot \vartheta_m^2]/1000$	
	Sheets 13 - 25mm $\lambda \leq 0.033$	W/(m · K)	$[33 + 0,1 \cdot \vartheta_m + 0,0008 \cdot \vartheta_m^2]/1000$	
	Tubes 25mm $\lambda \leq 0.036$	W/(m · K)	$[33 + 0,1 \cdot \vartheta_m + 0,0008 \cdot \vartheta_m^2]/1000$	
Water vapour diffusion resistance				
Water vapour diffusion resistance	μ	\geq	15,000	EU 5412 Tested acc. to EN 12086 EN 13469
Fire performance				
Reaction to fire ²	Euroclass (tubes and sheets)	E	GB5730 / GB5732	<p>o/● Surface Spread of Flame acc. to BS 476 Part 7: 1997 Fire Propagation acc. to BS 476 Part 6: 1989</p> <p>Classified acc. to EN 13501-1 Tested acc. to EN ISO 11925-2</p>
	Surface Spread of Flames	Class 1*	GB5150 / GB5152	
	Fire Propagation	Total Index Performance (I) ≤ 12 Sub Index (i_1) ≤ 6		
	Fire Performance acc. to Building Regulation	Class 0*		
Other technical features				
Dimensions and tolerances	In accordance with EN 14304, table 1			
Resistance to mechanical impact	Very Good			
Chemical behaviour	Consult Product Test List			
UV resistance	Excellent			
Antimicrobial behaviour	In-built Microban® antimicrobial protection : No fungal growth observed			

1. For temperatures above +110 °C, please consult our Customer Service Centre for further information.

2. *AF/Armaflex Class O insulation and Tuffcoat covering both Class O fire rated.

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

*2 ●: Official supervision by independent institutes and /or test authorities
o: In-house quality monitoring

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Please consult our Technical Department before insulating stainless steel. Armaflex 520 adhesive must be used to guarantee correct installation.

Armaflex Tuffcoat tubes



Armaflex Tuffcoat tubes are supplied in 1m lengths with a section of the Tuffcoat outer covering un-adhered to the Armaflex tube. To enable ease of slitting the tube on secondary installations the un-adhered section has a self-adhesive backing for sealing the covering in place on-site.

Pipe max. Outside-Ø [mm]	Inner Ø min/max mm (tube)	White 13,0 mm insulation thickness			Black 13,0 mm insulation thickness		
		Code	m/carton		Code	m/carton	
10	11.0 - 13.0	CO-13X010/WH-1M ●	94		CO-13X010/BK-1M ●	94	
12	13.0 - 15.0	CO-13X012/WH-1M ●	81		CO-13X012/BK-1M ●	81	
15	16.0 - 18.0	CO-13X015/WH-1M ●	68		CO-13X015/BK-1M ●	68	
20	21.0 - 23.0	CO-13X020/WH-1M ●	56		CO-13X020/BK-1M ●	56	
22	23.0 - 25.0	CO-13X022/WH-1M ●	52		CO-13X022/BK-1M ●	52	
28	29.0 - 31.5	CO-13X028/WH-1M ●	39		CO-13X028/BK-1M ●	39	
35	36.0 - 38.5	CO-13X035/WH-1M ●	30		CO-13X035/BK-1M ●	30	
42	43.0 - 46.0	CO-13X042/WH-1M ●	28		CO-13X042/BK-1M ●	28	
48	49.0 - 51.5	CO-13X048/WH-1M ●	20		CO-13X048/BK-1M ●	20	
54	55.0 - 58.0	CO-13X054/WH-1M ●	21		CO-13X054/BK-1M ●	21	
60	61.0 - 64.0	CO-13X060/WH-1M ●	18		CO-13X060/BK-1M ●	18	
67	68.0 - 71.0	CO-13X067/WH-1M ●	17		CO-13X067/BK-1M ●	17	

Pipe max. Outside-Ø [mm]	Inner Ø min/max mm (tube)	White 19,0 mm insulation thickness			Black 19,0 mm insulation thickness		
		Code	m/carton		Code	m/carton	
12	13.0 - 15.0	CO-19X012/WH-1M ●	46		CO-19X012/BK-1M ●	46	
15	16.0 - 18.0	CO-19X015/WH-1M ●	39		CO-19X015/BK-1M ●	39	
20	21.0 - 23.0	CO-19X020/WH-1M ●	35		CO-19X020/BK-1M ●	35	
22	23.0 - 25.0	CO-19X022/WH-1M ●	32		CO-19X022/BK-1M ●	32	
28	29.0 - 31.5	CO-19X028/WH-1M ●	25		CO-19X028/BK-1M ●	25	
35	36.0 - 38.5	CO-19X035/WH-1M ●	20		CO-19X035/BK-1M ●	20	
42	43.0 - 46.0	CO-19X042/WH-1M ●	16		CO-19X042/BK-1M ●	16	
48	49.0 - 51.5	CO-19X048/WH-1M ●	15		CO-19X048/BK-1M ●	15	
54	55.0 - 58.0	CO-19X054/WH-1M ●	12		CO-19X054/BK-1M ●	12	
60	61.0 - 64.0	CO-19X060/WH-1M ●	12		CO-19X060/BK-1M ●	12	
67	68.0 - 71.0	CO-19X067/WH-1M ●	10		CO-19X067/BK-1M ●	10	
76	77.0 - 80.0	CO-19X076/WH-1M ●	9		CO-19X076/BK-1M ●	9	
80	81.0 - 84.0	CO-19X080/WH-1M ●	8		CO-19X080/BK-1M ●	8	
89	90.0 - 93.0	CO-19X089/WH-1M ●	8		CO-19X089/BK-1M ●	8	
93	94.0 - 97.0	CO-19X093/WH-1M ●	8		CO-19X093/BK-1M ●	8	
108	110.0 - 114.0	CO-19X108/WH-1M ●	6		CO-19X108/BK-1M ●	6	
114	116.0 - 120.0	CO-19X114/WH-1M ●	6		CO-19X114/BK-1M ●	6	

Pipe max. Outside-Ø [mm]	Inner Ø min/max mm (tube)	White 25,0 mm insulation thickness			Black 25,0 mm insulation thickness		
		Code	m/carton		Code	m/carton	
12	13.0 - 15.0	CO-25X012/WH-1M ●	25		CO-25X012/BK-1M ●	25	
15	16.0 - 18.0	CO-25X015/WH-1M ●	24		CO-25X015/BK-1M ●	24	
20	21.0 - 23.0	CO-25X020/WH-1M ●	20		CO-25X020/BK-1M ●	20	
22	23.0 - 25.0	CO-25X022/WH-1M ●	20		CO-25X022/BK-1M ●	20	
28	29.0 - 31.5	CO-25X028/WH-1M ●	16		CO-25X028/BK-1M ●	16	
35	36.0 - 38.5	CO-25X035/WH-1M ●	12		CO-25X035/BK-1M ●	12	
42	43.0 - 46.0	CO-25X042/WH-1M ●	12		CO-25X042/BK-1M ●	12	
48	49.0 - 51.5	CO-25X048/WH-1M ●	11		CO-25X048/BK-1M ●	11	
54	55.0 - 58.0	CO-25X054/WH-1M ●	9		CO-25X054/BK-1M ●	9	
60	61.0 - 64.0	CO-25X060/WH-1M ●	9		CO-25X060/BK-1M ●	9	
67	68.0 - 71.0	CO-25X067/WH-1M ●	8		CO-25X067/BK-1M ●	8	
76	77.0 - 80.0	CO-25X076/WH-1M ●	7		CO-25X076/BK-1M ●	7	
80	81.0 - 84.0	CO-25X080/WH-1M ●	6		CO-25X080/BK-1M ●	6	
89	90.0 - 93.0	CO-25X089/WH-1M ●	6		CO-25X089/BK-1M ●	6	
93	94.0 - 97.0	CO-25X093/WH-1M ●	6		CO-25X093/BK-1M ●	6	
108	110.0 - 114.0	CO-25X108/WH-1M ●	4		CO-25X108/BK-1M ●	4	
114	116.0 - 120.0	CO-25X114/WH-1M ●	4		CO-25X114/BK-1M ●	4	

Remark Other colours available on request.

- Not a stock item. Delivery on request.

Armaflex Tuffcoat pre-covered sheet



Black					White				
Code	Thickness [mm]	Width [m]	Pieces/ carton	m ² /carton	Code	Thickness [mm]	Width [m]	Pieces/ carton	m ² /carton
CO-13MM/BK ●	13.0	0.5	9	9	CO-13MM/WH ●	13.0	0.5	9	9
CO-19MM/BK ●	19.0	0.5	7	7	CO-19MM/WH ●	19.0	0.5	7	7
CO-25MM/BK ●	25.0	0.5	5	5	CO-25MM/WH ●	25.0	0.5	5	5

Length tolerance for sheets ± 1,5 %
 Thickness tolerance for sheets 13 - 19 mm ± 1,5 mm
 >19 mm ± 2,0 mm
 Remark Other colours available on request
 ● Not a stock item. Delivery on request.

Armaflex Tuffcoat pre-covered self-adhesive sheet



Black					White				
Code	Thickness [mm]	Width [m]	Pieces/ carton	m ² /carton	Code	Thickness [mm]	Width [m]	Pieces/ carton	m ² /carton
CO-13MM/A-BK ●	13.0	0.5	9	9	CO-13MM/A-WH ●	13.0	0.5	9	9
CO-19MM/A-BK ●	19.0	0.5	7	7	CO-19MM/A-WH ●	19.0	0.5	7	7
CO-25MM/A-BK ●	25.0	0.5	5	5	CO-25MM/A-WH ●	25.0	0.5	5	5

Length tolerance for sheets ± 1,5 %
 Thickness tolerance for sheets 13 - 19 mm ± 1,5 mm
 >19 mm ± 2,0 mm
 ● Not a stock item. Delivery on request.

Armaflex Tuffcoat pre-covered endless sheets (rolls)



Black				White			
Code	Thickness [mm]	Roll length [m]	m ² /carton	Code	Thickness [mm]	Roll length [m]	m ² /carton
CO-13MM/E-BK ●	13.0	8	8	CO-13MM/E-WH ●	13.0	8	8
CO-19MM/E-BK ●	19.0	6	6	CO-19MM/E-WH ●	19.0	6	6
CO-25MM/E-BK ●	25.0	4	4	CO-25MM/E-WH ●	25.0	4	4

Length tolerance for sheets ± 5 % - 1.5%
 Thickness tolerance for sheets 13 - 19 mm ± 1,5 mm
 >19 mm ± 2,0 mm
 ● Not a stock item. Delivery on request.

Armaflex Tuffcoat pre-covered endless sheets self-adh (rolls)



Black				White			
Code	Thickness [mm]	Roll length [m]	m ² /carton	Code	Thickness [mm]	Roll length [m]	m ² /carton
CO-13MM/EA-BK ●	13.0	8	8	CO-13MM/EA-WH ●	13.0	8	8
CO-19MM/EA-BK ●	19.0	6	6	CO-19MM/EA-WH ●	19.0	6	6
CO-25MM/EA-BK ●	25.0	4	4	CO-25MM/EA-WH ●	25.0	4	4

Length tolerance for sheets ± 5 % - 1.5%
 Thickness tolerance for sheets 13 - 19 mm ± 1,5 mm
 >19 mm ± 2,0 mm
 ● Not a stock item. Delivery on request.

Armaflex Tuffcoat covering rolls



Code	Thickness [mm]	Width [mm]	Length [m]	m ² /roll	
TC-BK-1M/100M •	1	1,000.0	100	100	
TC-WH-1M/100M •	1	1,000.0	100	100	

• Not a stock item. Delivery on request.

Armaflex Tuffcoat self-adhesive tapes



Code	Colour	Width [mm]	Length [m]	Thickness [mm]	Rolls/carton	
TUFF-TP-12,5/BK •	Black	12.5	50	0.08	16	
TUFF-TP-12,5/WH •	White	12.5	50	0.08	16	
TUFF-TP-25/BK •	Black	25.0	50	0.08	8	
TUFF-TP-25/WH •	White	25.0	50	0.08	8	
TUFF-TP-50/BK •	Black	50.0	50	0.08	4	
TUFF-TP-50/WH •	White	50.0	50	0.08	4	

• Not a stock item. Delivery on request.

Armaflex Tuffcoat accessories

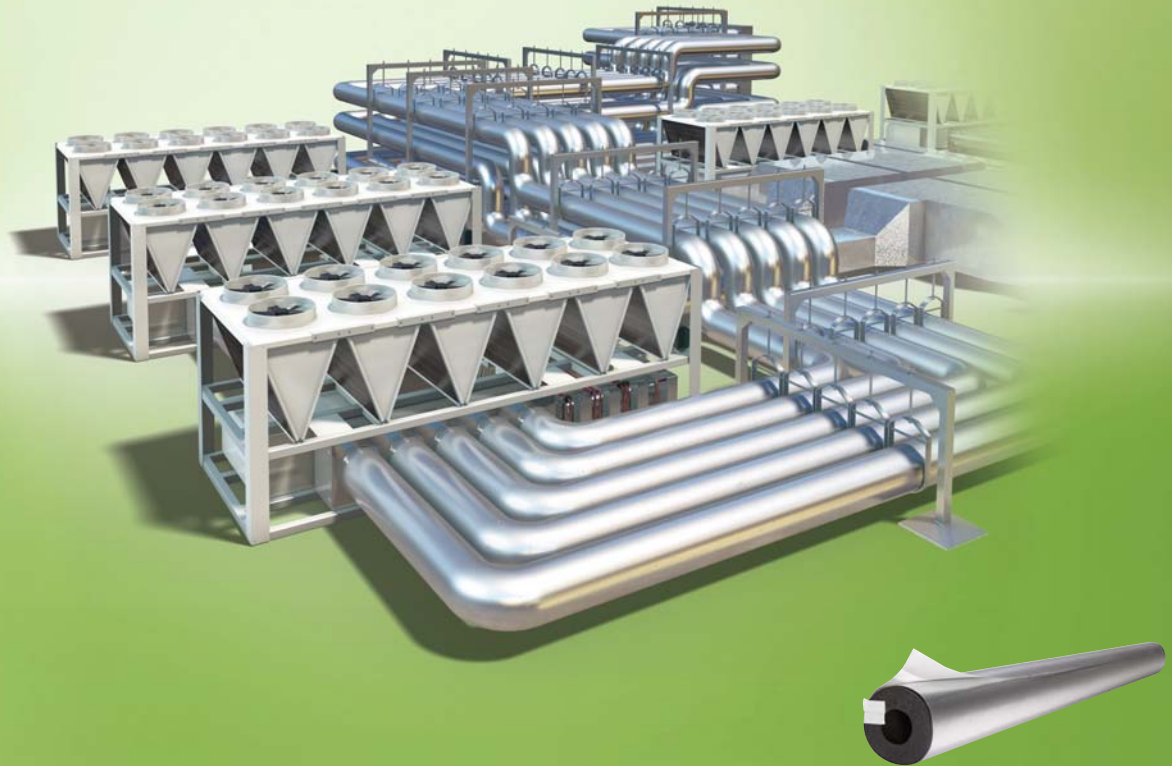


Code	Description	Pieces/carton	
ACH-MASTICD •	Mastic black. Sealing compound for installing Arma-Chek, 290 ml	12	
TC-MASTIC •	White mastic. Sealing compound for installing Armaflex Tuffcoat. Food safe, 310 ml.	6	

• Not a stock item. Delivery on request.

Arma-Chek[®]
Silver

THE SILVER PRE-COVERED ARMAFLEX INSULATION DESIGNED FOR FAST INSTALLATION, DURABILITY AND EASY CLEANING



- 2-in-1 Precovered system, saves installation time compared to traditional cladding
- Suitable for food and beverage production applications
- System with matching tape, elbow and t-parts
- Easy to clean aesthetic surface in metallic look

- Light weight and flexible
- Strong and resistant surface
- Good chemical resistance
- Class 0 fire rating

INSULATION AND CLADDING IN ONE PRODUCT

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

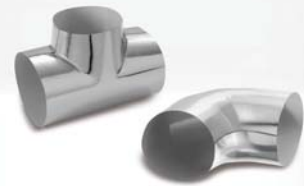
Saves installation time compared with traditional cladding

Watch the video at <http://youtube/watch?v=x0nHyDRcEzo> and see the difference!



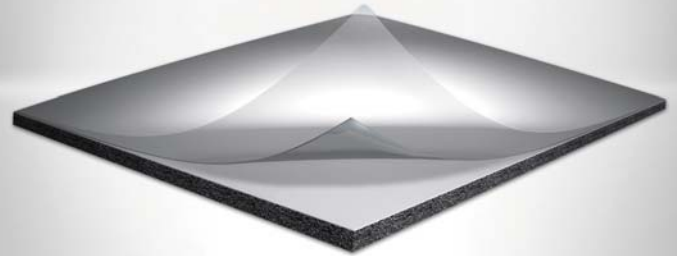
PRE-FORMED PARTS

Specially designed Arma-Chek Silver elbows and t-pieces offer additional installation time savings. The pre-formed sizes perfectly match with the Armaflex tubes range to complete the system.



UV-RESISTANCE

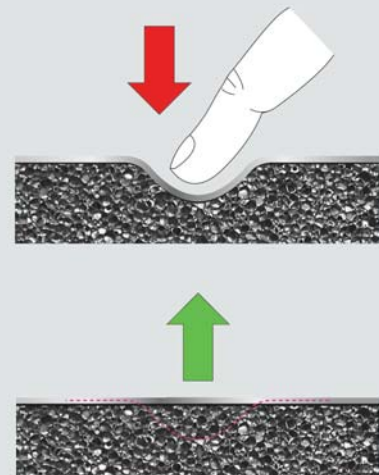
The UV-resistance of Arma-Chek Silver is tested with Weather-O-Metre equipment according to ISO 4892.



SURFACE PRESSURE RESISTANCE

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

This property prevents lasting dents and ensures a durable installation.



Technical Data - Arma-Chek Silver

Brief description	Arma-Chek Silver is a covering system featuring a double layer laminate of aluminium, coated with a special UV protection and a PVC backing. As a covering for Armaflex substrates, 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	Insulation: Highly flexible, closed-cell elastomeric foam material based on synthetic rubber. Covering: double layer laminate of aluminium, coated with a special UV protection and a PVC backing.
Colour	Silver (covering)
Product Range	Arma-Chek Silver is a range of pre-covered tubes & sheets. Covering material also available separately.
Applications	Insulation and protection of pipes, ducts, valves and vessels for refrigeration and air conditioning systems, clean room environments, food industries etc.
Special Features	EC Certificate of Conformity no. 0543 of Güteschutzgemeinschaft Hartschaum e.V. , Celle
Assembly	The Armaflex and Arma-Chek installation manuals should be consulted before assembly. We offer special installation courses for the application of Arma-Chek. Please consult our Customer Services.
Remarks	When calculating the insulation thickness required please use an external surface coefficient of 5 W/(m ² ·K). For outdoor use please note: Testing regarding UV resistance of these materials shows excellent results. When used on outdoor applications the materials show good durability even under UV exposition. However, due to the unpredictable nature of outdoor conditions there may be occasional weathering influences which cannot be tested in advance. Therefore, installation in extreme weather environments is not recommended. Please contact our Technical Department if in doubt.

Property	Value/Assessment	Test ²	Special Remarks
Temperature Range			
Temperature Range ¹	Max. service temperature	+110 °C for substrate (+85 °C if used on flat surfaces) (+75 °C for the silver jacketing)	Tested acc. to EN 14706, EN 14707 and EN 14304
	Min. service temperature ²	-50 °C	
Thermal Conductivity			
Thermal Conductivity	Depends on the Armaflex substrate used.		EU 5316 Tested according to DIN EN 12667 EN ISO 8497
Water vapour diffusion resistance			
Water vapour diffusion resistance	Depends on the Armaflex substrate used.		EU 5695 Tested according to EN ISO 12086 EN 13469
Fire performance			
Reaction to fire	Arma-Chek Silver (AF) tubes	C _L -s3, d0	EU 5316 Classified acc. to EN 13501-1 Tested acc. to EN 13823 EN ISO 11925-2
	Arma-Chek Silver (AF) sheets 13 - 25 mm	C-s3, d0	
	Surface Spread of Flames	Class 1	
	Fire Propagation	Total Index Performance (I) ≤ 12 Sub Index (i ₁) ≤ 6	GB 5574 Surface Spread of Flame: tested according to BS 476 Part 7:1997 Fire Propagation: tested according to BS 476 Part 6:1989
	Fire Performance acc. to Building Regulations	Class O	
Other technical features			
Dimensions and tolerances	In accordance with EN 14304, table 1 (Armaflex substrate)		EU 5695 Tested acc. to EN 822, EN 823, EN 13467
Weight	approx. 340 g/m ³ (covering)		Tested according to EN 22286
Material thickness	approx. 230 µm		
Resistance to mechanical impact	Good puncture and tear resistance.		
UV resistance ³	Excellent		Tested according to ASTM G 26A / ISO 4892-2
Health aspects	Dust & fibre free.		
Storage & Shelf life	Tape, sheets, tubes, self-adhesive: 1 year		Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).

1. The surface may wrinkle slightly when there are fluctuations in temperature since elastomeric products expand and contract in these circumstances. However, these changes are superficial and do not impact the performance of the material. Wrinkles usually disappear once equipment returns to its original operating temperature.

2. For temperatures below -50 °C please contact our Technical Department to request the corresponding technical information.

3. Colour may fade when used in outdoor applications. This does not have any impact on the functionality of the covering or the insulation material.

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

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Installation instructions are given in our Arma-Chek installation manual. Please consult our Technical Department before insulating stainless steel. Armaflex 520 adhesive must be used to guarantee correct installation.

Arma-Chek Silver (AF) pre-covered self-adhesive tubes



Length 1.0 m

Pipe max. Outside-Ø [mm]	Inner Ø min/ max mm (tube)	AF-2 insulation thickness 11,5 mm - 16,0 mm			AF-4 Insulation thickness 17,0 mm - 25,0 mm		
		Thickness [mm]	Code	m/carton	Thickness [mm]	Code	m/carton
15	16.0 - 17.5	11.5	AFSI-2-015 ○●	62	17.0	AFSI-4-015 ●	40
18	19.0 - 20.5	11.5	AFSI-2-018 ●	60	17.5	AFSI-4-018 ●	30
22	23.0 - 24.5	12.0	AFSI-2-022 ●	48	18.0	AFSI-4-022 ●	28
28	29.0 - 30.5	12.5	AFSI-2-028 ●	40	19.0	AFSI-4-028 ●	24
35	36.0 - 38.0	13.0	AFSI-2-035 ●	30	19.5	AFSI-4-035 ●	18
42	43.5 - 45.5	13.5	AFSI-2-042 ●	20	20.5	AFSI-4-042 ●	16
48	49.5 - 51.5	13.5	AFSI-2-048 ●	20	21.0	AFSI-4-048 ●	12
54	55.0 - 57.0	13.5	AFSI-2-054 ●	16	21.0	AFSI-4-054 ●	12
60	61.5 - 63.5	14.0	AFSI-2-060 ●	16	21.5	AFSI-4-060 ●	10
64	65.0 - 67.5	14.0	AFSI-2-064 ●	14	21.5	AFSI-4-064 ●	9
76	77.0 - 79.5	14.0	AFSI-2-076 ●	14	22.0	AFSI-4-076 ●	8
89	90.5 - 93.5	14.5	AFSI-2-089 ●	10	22.5	AFSI-4-089 ●	6
114	116.0 - 120.0	15.0	AFSI-2-114 ○●	8	23.5	AFSI-4-114 ○●	5
140	142.0 - 146.0	15.5	AFSI-2-140 ○●	4	24.5	AFSI-4-140 ○●	3
168	170.0 - 176.0	16.0	AFSI-2-168 ○●	3	25.0	AFSI-4-168 ○●	2

Pipe max. Outside-Ø [mm]	Inner Ø min/ max mm (tube)	AF-5 insulation thickness 25,0 mm - 33,0 mm						
		Thickness [mm]	Code	m/carton				
18	19.0 - 20.5	25.0	AFSI-5-018 ●	21	-	-	-	-
22	23.0 - 24.5	25.0	AFSI-5-022 ●	18	-	-	-	-
28	29.0 - 30.5	25.0	AFSI-5-028 ●	18	-	-	-	-
35	36.0 - 38.0	27.0	AFSI-5-035 ●	12	-	-	-	-
42	43.5 - 45.5	27.0	AFSI-5-042 ●	11	-	-	-	-
48	49.5 - 51.5	27.5	AFSI-5-048 ●	8	-	-	-	-
54	55.0 - 57.0	28.5	AFSI-5-054 ●	8	-	-	-	-
60	61.5 - 63.5	29.0	AFSI-5-060 ●	6	-	-	-	-
64	65.0 - 67.5	29.0	AFSI-5-064 ●	6	-	-	-	-
76	77.0 - 79.5	30.0	AFSI-5-076 ●	5	-	-	-	-
89	90.5 - 93.5	30.5	AFSI-5-089 ●	4	-	-	-	-
114	116.0 - 120.0	31.5	AFSI-5-114 ○●	3	-	-	-	-
140	142.0 - 146.0	32.0	AFSI-5-140 ○●	3	-	-	-	-
168	170.0 - 176.0	33.0	AFSI-5-168 ○●	2	-	-	-	-

Length tolerance for tubes: ± 1.5%

Length tolerance
 ≤ 8 mm ± 1 mm
 9 - 18 mm ± 1.5 mm
 19 - 31 mm ± 2.5 mm
 >31 mm ± 3 mm

○ In the case of this item the seam is not self-adhesive and is achieved with a radial cut surface.

● Not a stock item. Delivery on request.

Arma-Chek Silver (AF) sheets endless pre-covered



Width 1.0 m

Code	Thickness [mm]	Roll length [m]	m ² /carton
AFSI-13MM/E ●	13.0	8	8
AFSI-19MM/E ●	19.0	6	6
AFSI-25MM/E ●	25.0	4	4
AFSI-32MM/E ●	32.0	3	3

Length tolerance for sheets +5% - 1.5%

Thickness tolerance for sheets
 ≤ 6 mm: ±1.0 mm
 7 - 19 mm: ±1.5 mm
 > 19 mm: ±2.0 mm

● Not a stock item. Delivery on request.

Arma-Chek Silver (AF) sheets endless self-adhesive pre-covered



Width 1.0 m

Code	Thickness [mm]	Roll length [m]	m ² /carton
AFSI-13MM/EA •	13.0	8	8
AFSI-19MM/EA •	19.0	6	6
AFSI-25MM/EA •	25.0	4	4
AFSI-32MM/EA •	32.0	3	3

Length tolerance for sheets	+ 5% - 1.5%	
Thickness tolerance for sheets	≤ 6 mm:	±1.0 mm
	7 - 19 mm:	±1.5 mm
	> 19 mm:	±2.0 mm

• Not a stock item. Delivery on request.

Arma-Chek Silver covering rolls



Code	Width [mm]	Roll length [m]	Rolls/carton	m ² /carton
ACH-SI25 •	1,040.0	25	2	52
ACH-SI25/100 •	100.0	25	4	10

• Not a stock item. Delivery on request.

Arma-Chek Silver pre-fabricated elbows



Colour Silver, Elbow fitting (covering without insulation)

Pipe max. Outside-Ø [mm]	AF-2 insulation thickness 11,5 mm - 16,0 mm			AF-4 insulation thickness 15,5 mm - 25,0 mm		
	Code	Pieces/carton		Code	Pieces/carton	
15	ACHB-040 •	1		ACHB-050 •	1	
18	ACHB-040 •	1		ACHB-060 •	1	
22	ACHB-050 •	1		ACHB-060 •	1	
28	ACHB-050 •	1		ACHB-070 •	1	
35	ACHB-060 •	1		ACHB-080 •	1	
42	ACHB-070 •	1		ACHB-080 •	1	
48	ACHB-080 •	1		ACHB-090 •	1	
54	ACHB-080 •	1		ACHB-100 •	1	
60	ACHB-090 •	1		ACHB-110 •	1	
64	ACHB-100 •	1		ACHB-110 •	1	
76	ACHB-110 •	1		ACHB-120 •	1	
89	ACHB-130 •	1		ACHB-140 •	1	
114	ACHB-150 •	1		ACHB-160 •	1	
140	ACHB-180 •	1		ACHB-200 •	1	
168	ACHB-210 •	1		ACHB-220 •	1	

Pipe max. Outside-Ø [mm]	AF-5 insulation thickness 25,0 mm - 32,0 mm		
	Code	Pieces/carton	
18	ACHB-070 •	1	
22	ACHB-080 •	1	
28	ACHB-080 •	1	
35	ACHB-090 •	1	
42	ACHB-100 •	1	
48	ACHB-100 •	1	
54	ACHB-110 •	1	
60	ACHB-120 •	1	
64	ACHB-120 •	1	
76	ACHB-130 •	1	
89	ACHB-160 •	1	
114	ACHB-180 •	1	
140	ACHB-210 •	1	
168	ACHB-230 •	1	

• Not a stock item. Delivery on request.

Arma-Chek Silver pre-fabricated t-pieces



T-piece fitting (covering without insulation)

Pipe max. Outside-Ø [mm]	AF-2 insulation thickness 11,5 mm - 16,0 mm		AF-4 Insulation thickness 17,0 mm - 25,0 mm	
	Code	Pieces/carton	Code	Pieces/carton
18	-	-	ACHT-052 ●	1
22	ACHT-052 ●	1	ACHT-057 ●	1
28	ACHT-052 ●	1	ACHT-067 ●	1
35	ACHT-057 ●	1	ACHT-073 ●	1
42	ACHT-067 ●	1	-	-
48	ACHT-073 ●	1	ACHT-100 ●	1
54	-	-	ACHT-093 ●	1
60	ACHT-088 ●	1	ACHT-102 ●	1
64	ACHT-100 ●	1	ACHT-108 ●	1
76	ACHT-102 ●	1	ACHT-120 ●	1
89	ACHT-116 ●	1	ACHT-136 ●	1
114	ACHT-149 ●	1	ACHT-156 ●	1
140	ACHT-176 ●	1	ACHT-189 ●	1
168	ACHT-214 ●	1	ACHT-214 ●	1

Pipe max. Outside-Ø [mm]	AF-5 insulation thickness 25,0 mm - 33,0 mm	
	Code	Pieces/carton
18	ACHT-067 ●	1
22	ACHT-073 ●	1
35	ACHT-093 ●	1
42	ACHT-093 ●	1
48	ACHT-100 ●	1
54	ACHT-102 ●	1
60	ACHT-116 ●	1
64	ACHT-120 ●	1
76	ACHT-128 ●	1
89	ACHT-140 ●	1
114	ACHT-169 ●	1
140	ACHT-194 ●	1
168	ACHT-245 ●	1

Remark

All other items delivery 10 working days

- Not a stock item. Delivery on request.

Arma-Chek Silver self-adhesive tapes



Covering Colour Silver

Code	Width [mm]	Length [m]	Thickness [mm]	Rolls/carton
ACH-PSATAPES-30 ●	30.0	25	0.08	10
ACH-PSATAPES-50 ●	50.0	50	0.08	6

- Not a stock item. Delivery on request.

OIL & GAS SYSTEMS



- **ARMA-CHEK R**
- **HT/ARMAFLEX INDUSTRIAL**
- **ARMAFLEX LTD**
- **ARMASOUND INDUSTRIAL SYSTEMS**
- **ARMASOUND RD 240**
- **ARMASOUND BARRIER E**

Specially engineered for oil & gas systems including cryogenic and mid range temperatures (between -180°C to $+110^{\circ}\text{C}$) to prevent freezing and heat losses / gains on industrial processes.

Covering and cladding systems to protect installations against UV, grease, oil, salt water, mechanical impact and chemical attack.

Industrial acoustic insulation for the reduction of hazardous noise levels from process equipment.

Arma-Chek® R

FLEXIBLE NON-METALLIC COVERING
FOR OFFSHORE AND INDUSTRIAL
INSTALLATIONS



- Flexible polymeric covering formulated with CSM (CSPE) with combined acoustic barrier performance
- Excellent mechanical and weathering protection
- Specially developed for use in offshore and industrial environments
- Mitigates 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

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.
Material type	Flexible polymer based rubber formulated with Chlorosulphonated Monomer (CSPE).
Colour	Grey
Applications	Protection of insulated pipework, fittings, vessels and equipment in Offshore, heavy industry, chemical and petrochemical environments which need protection against damage in situations of high mechanical stress.
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.
Assembly	The Armaflex® and Arma-Chek installation manuals should be consulted before assembly. Please consult our Customer Service Centre.

Property	Value/Assessment	Special Remarks
Temperature Range		
Temperature Range	Max. service temperature ¹	+100 °C
	Min. service temperature	- 50 °C
Thermal Conductivity		
Thermal Conductivity	Depending on insulation used. System thermal performance depends on properties and configuration of individual layers.	
Water vapour diffusion resistance		
Water vapour diffusion resistance	μ	\geq 50,000
		Tested according to EN 12086 and ASTM E96 Procedure A
Fire performance		
Reaction to fire	Euroclass	B-s3,d0 (on metallic surface)
		Classified according to EN 13501-1 Tested according to EN 13823 and EN ISO 11925-2
Other fire class	Part 2 and Part 5 (IMO 2010 FTP Code) ASTM E 84 BS 476 Part 6 and Part 7 NFP 92-507	Pass Class A (< 25 flame spread index) Class 0 and Class 1 M1
		IMO Approved by Lloyds and Bureau Veritas, DNV
Other technical features		
Density	1550 to 1700 kg/m ³	
Resistance to mechanical impact	Good	
Tear strength	> 7,0 N/mm	Tested according to ISO 34-1
Tensile strength	> 5,0 MPa	Tested according to ISO 37
Elongation	> 200 %	Tested according to ISO 37
Exposure	UV Resistant, Ozone Resistant	UV resistance assessed according to Allunga Exposure Laboratory
Acoustic Insertion Loss	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.	Tested according to ISO 3741 and ISO 15665 (equivalent method ASTM E1222)

1. For temperatures above or below those indicated in the "temperature range" above, please contact our Customer Service Centre to request for the corresponding technical information.

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Installation instructions are given in our Arma-Chek installation manual. Please consult our Technical Department before insulating stainless steel. Armaflex 520 or Armaflex HT 625 Adhesive must be used to guarantee proper installation. Armacell takes every precaution to ensure the accuracy of the data provided in this document and all statements, technical information and recommendations contained within are believed to be correct. However, Armacell cannot guarantee that the data are 100 % accurate. Furthermore, minor deviations in colour, quality and dimensions are unavoidable and in most cases do not influence the performance of the product. Armacell expressly disclaims any and all liability in relation to any results obtained or arising from any use of the product or reliance on such information. No warranty of fitness for any particular purpose, warranty of merchantability or any other warranty, expressed or implied, is made concerning the goods described or the information provided herein. All the statements and technical information within this document should be read in conjunction with the customer's own specification. It is the responsibility of the recipient to inform all involved parties about the content of these documents. The described and recommended methods should be strictly followed. If there is a requirement to deviate from our recommendations, please contact us in advance to discuss possible suitable alternatives. Armacell will not be liable for any claim resulting from a failure to observe our specification or any other agreed solutions and from non-observance of the customer's specification.

Arma-Chek R covering rolls



Code	Thickness [mm]	Width [mm]	Length [m]	m ² /roll	
ACR-R10/2-07-GY	2	700.0	10	7	
ACR-R20/1-07-GY	1	700.0	20	14	

Arma-Chek R accessories



Code	Description	Pieces/carton	
ACH-MASTICS	Sealing compound for installing Arma-Chek R, Cartridge 290 ml	12	
ADH-HT625/1,0	Armaflex® HT625 one-component adhesive, 1,0 litre cans	12	
CLEANER/1,0	Special cleaner for use with Armaflex® Adhesive 520 and Armaflex® Adhesive HT625.	4	

HT/Armaflex®
Industrial

HIGH DENSITY INDUSTRIAL GRADE FEF
INSULATION FOR ELEVATED
TEMPERATURES



- Enhanced temperature capability
- Closed cell structure provides a built-in water vapour barrier, reducing the risk of corrosion under insulation (CUI)
- Retains physical characteristics throughout service life
- Low maintenance and repair costs

- Low leachable chloride content (< 30 ppm) to minimise stress corrosion cracking (SCC)
- High density and mechanically robust for superior stability
- Low thermal conductivity to minimise energy losses

Technical Data - HT/Armaflex Industrial

Brief description	HT/Armaflex® Industrial is a flexible, high density and mechanically robust, closed cell thermal insulation material based on extruded elastomeric foam. The product has been specially developed to provide enhanced thermal resistance of the insulation systems with its low thermal conductivity.
Material type	Synthetic EPDM rubber based foam. Factory made flexible elastomeric foam (FEF) according to EN 14304.
Colour	Black
Material Special Information	HT/Armaflex® Industrial is resistant to elevated operating temperatures. The product is suitable for use in multi-layer applications including Arma-Sound Industrial Systems.
Product Range	Tubes, 13, 19 and 25 mm thickness, for pipe outer diameters ranging from 15 to 89 mm (½" to 3" NB). Sheets in rolls, 10, 13, 19 and 25 mm thickness.
Applications	Thermal insulation / protection of pipes, vessels and ducts (incl. elbows, fittings, flanges etc.) in offshore, industrial (typically oil & gas) and process equipment facilities. HT/Armaflex® Industrial is also used as a component of Arma-Sound Industrial Systems to provide acoustic insulation on industrial pipework and vessels ensuring reduction of sound transmission.
Assembly	For industrial applications it is recommended to consult the relevant Armacell installation instructions and application manuals. Please consult our Customer Service Centre.

Property	Value/Assessment							Special Remarks	
Temperature Range									
Temperature Range ¹	Max. service temperature		+ 125 °C / +257 °F					Tested according to EN 14706, EN 14707 and EN 14304	
	Min. service temperature		- 50 °C / -58 °F						
Thermal Conductivity									
Thermal Conductivity	sheets & tubes	ϑ_m	-50 °C	0 °C	+50 °C	+100 °C	+125 °C	$\lambda_d(\vartheta_m)=0.04028+1.25 \times 10^{-4} \times \vartheta_m+8 \times 10^{-7} \times (\vartheta_m-30)^2$, where ϑ_m is mean temperature in °C	Declared according to EN ISO 13787 Tested according to EN 12667 and EN ISO 8497 (Equivalent methods ASTM C177 and C518)
		λ	≤ 0.039	0.041	0.047	0.057	0.063	[W/(m · K)]	
Water vapour diffusion resistance									
Water vapour diffusion resistance	Tubes	μ		≥			4,000	Tested according to EN 12086 EN 13469 (equivalent method ASTM E96)	
	Sheets	μ		≥			3,000		
Fire performance									
Reaction to fire	Euroclass (tubes)		D _L -s3,d0					Classified according to EN 13501-1 Tested according to EN 13823 and EN ISO 11925-2	
	Euroclass (sheets)		D-s3, d0						
Other fire class ²	ASTM E84		Class A (< 25 flame spread index)						
	BS 476 pt 7		Class 1						
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames.								
Other technical features									
Density	Sheets: 70 - 85 kg/m ³ Tubes: 60 - 75 kg/m ³							Tested according to ISO 845 ASTM D 1622	
Dimensions and tolerances	In accordance with EN 14304, table 1							Tested according to EN 822, EN 823, EN 13467	
UV resistance	In all industrial 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 consult our Customer Service Centre.								
Tear strength	≥ 0.4 kN/m							Tested according to ISO 34-1 (Angle test piece with a nick.)	
Health aspects	Neutral, MSDS available on request.								
Storage & Shelf life	Material shall be stored indoors, in clean and dry conditions, away from direct sunlight. max. shelf (storage) life: 3 years								
Compression deflection	> 15 kPa							Tested according to ISO 6916-1	
Acoustic insertion loss	When used as part of a system HT/Armaflex® Industrial complies to ISO 15665 Classes A to C and Shell DEP 31.46.00.31-Gen Class D.							Tested according to ISO 3741 (equivalent method ASTM E1222) Classified according to ISO 15665	

Technical Data - HT/Armaflex Industrial

Leachable (water-soluble)chlorides	≤ 30 ppm (mg/kg or µg/g)	Tested according to EN 13468 and ASTM C871
pH Value ²	7 - 9	Tested according to ISO 10523
Stress corrosion cracking ²	No cracks under magnifying glass on test samples after straightening, cleaning and re-bending.	Tested according to ASTM C692
Water absorption ²	≤ 0.1% by volume (total submersion for 2 hours)	Tested according to ASTM C209
Closed cell content	≥ 90 % declared on the basis of the water absorption test	
Vacuum water absorption	≤ 4 % by mass total submersion for 2 x 180 seconds, vacuum pressure 17.2 kPa	Tested according to ASTM D1056
Application conditions*	Ambient temperature: +5 °C to +35 °C Max. relative humidity: 80%	

1. For temperatures above +125 °C or below -50 °C please contact our Technical Department to request the corresponding technical information.

2. Based on single test results which are not monitored in regular frequency. Can be used for information only.

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Please consult our Technical Department before insulating stainless steel. Armaflex HT625 adhesive must be used to guarantee correct installation. Installation instructions are given in our Armaflex installation manual. Armacell takes every precaution to ensure the accuracy of the data provided in this document and all statements, technical information and recommendations contained within are believed to be correct. However, Armacell cannot guarantee that the data are 100 % accurate. Furthermore, minor deviations in colour, quality and dimensions are unavoidable and in most cases do not influence the performance of the product. Armacell expressly disclaims any and all liability in relation to any results obtained or arising from any use of the product or reliance on such information. No warranty of fitness for any particular purpose, warranty of merchantability or any other warranty, expressed or implied, is made concerning the goods described or the information provided herein. All the statements and technical information within this document should be read in conjunction with the customer's own specification. It is the responsibility of the recipient to inform all involved parties about the content of these documents. The described and recommended methods should be strictly followed. If there is a requirement to deviate from our recommendations, please contact us in advance to discuss possible suitable alternatives. Armacell will not be liable for any claim resulting from a failure to observe our specification or any other agreed solutions and from non-observance of the customer's specification.

HT/Armaflex Industrial tubes



Length 2.0 m, Colour Black

Pipe max. Outside-Ø [mm]	Inner Ø min/ max mm (tube)	25,0 mm insulation thickness		
		Code	m/carton	
15	16.5 - 18.0	HTI-25X015 ●	50	
22	23.5 - 25.0	HTI-25X022 ●	36	
28	29.5 - 31.0	HTI-25X028 ●	32	
35	36.5 - 38.5	HTI-25X035 ●	24	
42	44.0 - 46.0	HTI-25X042 ●	24	
48	50.0 - 52.0	HTI-25X048 ●	20	
60	62.0 - 64.0	HTI-25X060 ●	18	
76	77.5 - 80.0	HTI-25X076 ●	12	
89	91.0 - 94.0	HTI-25X089 ●	12	

Length tolerance for tubes:

± 1,5 %

Thickness tolerance

13 mm ± 1,5 mm

19 - 25 mm ± 2,5 mm

Remark

Further dimensions and insulation thicknesses on request

- Not a stock item. Delivery on request.

HT/Armaflex Industrial continuous sheets (rolls)



Width 1.0 m, Colour Black

Code	Thickness [mm]	Roll length [m]	m ² /carton	
HTI-10-99/E ●	10.0	10	10	
HTI-13-99/E ●	13.0	8	8	
HTI-19-99/E ●	19.0	6	6	
HTI-25-99/3,5	25.0	3.5	3.5	

Length tolerance for sheets

± 1,5 %

Thickness tolerance for sheets

10 - 19 mm ± 1,5 mm

25 mm ± 2,0 mm

- Not a stock item. Delivery on request.

HT/Armaflex Industrial accessories



Code	Description	Pieces/carton	
ADH-HT625/1,0	Armaflex® HT625 one-component adhesive, 1,0 litre cans	12	
CLEANER/1,0	Special cleaner for use with Armaflex® Adhesive 520 and Armaflex® Adhesive HT625.	4	
HT-TAPE	HT/Armaflex tape self-seal (15 m x 50 mm x 3 mm), black (suitable for the application on HT/Armaflex)	12	

Armaflex® LTD

ARMAFLEX FLEXIBLE INSULATION MATERIAL FOR CRYOGENIC AND LOW TEMPERATURE APPLICATIONS



- Stays flexible at low temperatures
- Reduces the risk of crack development and propagation
- Reduces the risk of corrosion under insulation (CUI)
- Protects against mechanical impact and shock

- Low thermal conductivity
- Low glass transition temperature
- Easy installation even to complex shapes
- Less wastage compared to rigid / pre-fabricated pieces

Technical Data - Armaflex LTD

Brief description	Armaflex® LTD is a flexible, high density and mechanically robust, closed cell cryogenic thermal insulation material based on extruded elastomeric foam. The product has been specially developed for use on the import/export pipelines and process areas of LNG facilities.
Material type	Synthetic Diene Terpolymer rubber based foam. Factory made flexible elastomeric foam (FEF) according to EN 14304.
Colour	Blue
Material Special Information	Armaflex® LTD is suitable for a range of operating conditions down to -180 °C including liquefied natural gas (LNG) installations. However, it is not recommended for application to process pipelines and equipment carrying liquid oxygen, or to gaseous oxygen lines and equipment running above 1.5 MPa (218 psi) pressure or running above +60 °C (+140°F) operating temperature. For detailed information or advice please refer to our Customer Service Centre.
Product Range	Tubes, 25 mm thickness, for pipe outer diameters ranging from 18 to 89 mm (¾" to 3" NB). Sheets in rolls, 25 mm thickness.
Applications	Insulation / protection for pipes, tanks, vessels (incl. elbows, flanges etc.) in petrochemical, industrial gas, and agricultural chemical production plants. Product specially designed for use on import/export pipelines and process areas of LNG facilities.
Special Features	A high-performance thermal insulation material designed to meet the demands of cryogenic-temperature environments. Armaflex® LTD is part of Armaflex® Cryogenic Systems, providing low temperature flexibility to the system.
Assembly	For industrial applications it is recommended to consult the relevant Armacell installation instructions and application manuals. Please consult our Customer Service Centre.
Remarks	EN 14304 (harmonized construction product standard for FEF) Lloyds approval

Property	Value/Assessment	Test ³	Super- vision ⁴	Special Remarks
Temperature Range				
Temperature Range	Max. service temperature	+110 °C / + 230 °F		Tested according to EN 14706, EN 14707 and EN 14304
	Min. service temperature ¹	-180 °C / -292 °F		
Thermal Conductivity				
Thermal Conductivity	λ_m	-180 °C -100 °C -50 °C 0 °C +50 °C	$\lambda_d(\theta_m)=0.04+3 \times 10^{-5} \times \theta_m+6 \times 10^{-7} \times \theta_m^{-3}+4 \times 10^{-9} \times \theta_m^3$, where θ_m is mean temperature in °C	○ Declared according to EN ISO 13787 Tested according to EN 12667 EN ISO 8497 (Equivalent methods ASTM C177 and C518)
	Sheets & Tubes (25mm)	$\lambda \leq 0.031$	0.039 0.040 0.040 0.044	[W/(m · K)]
Water vapour diffusion resistance				
Water vapour diffusion resistance	For details on system performance please contact our Customer Service Centre			
Fire performance				
Reaction to fire	Surface spread of flames	ES 6385	○	Tested acc. to BS 476 Part 7:1997 Classified acc. to EN 13501-1. Tested acc. to EN 11925-2
	Euroclass E			
Other fire class	BS 476 Part 7	Class 1	ES 6442	BS 476 Class 1 Approved by Lloyds
	ASTM E84 ²	Class A (< 25 flame spread)	ES 6141	
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames.			
Other technical features				
Density	sheets: 60 to 75 kg/m ³ tubes: 60 to 80 kg/m ³			
Dimensions and tolerances	According to EN 14304, for detailed values please refer to product range tables.			
UV resistance	In all industrial 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 consult our Customer Service Centre.			
Health aspects	Neutral, MSDS available on request.			
Storage & Shelf life	Material shall be stored indoors, in clean and dry conditions, away from direct sunlight. max. shelf (storage) life: 3 years			
Compression deflection	≥ 10 kPa at 25% deflection			
Leachable (water-soluble)chlorides	≤ 80 ppm (mg/kg or µg/g)			
				Tested according to ISO 6916-1 (equivalent method ASTM D1056)
				Tested according to EN 13468 and ASTM C871

Technical Data - Armaflex LTD

PH-value	7 to 9			Tested according to ISO 10523
Water absorption ²	≤ 0.1% by volume (total submersion for 2 hours)			Tested according to ASTM C209
Closed cell content	≥ 90 % declared on the basis of the water absorption test			
Glass transition temperature ²	Below -70 °C / -94 °F			
Application conditions	Ambient temperature: +5 °C to +35 °C Max. relative humidity: 80%			

1. For temperatures above or below those indicated in the "temperature range" above, please contact our Customer Service Centre to request for the corresponding technical information.

2. Based on single test results which are not monitored in regular frequency. Can be used for information only.

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

*2 ●: Official supervision by independent institutes and /or test authorities
○: In-house quality monitoring

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Installation instructions are given in our Armaflex installation manual. Please consult our Technical Department before insulating stainless steel. Armaflex 520 or Armaflex HT 625 Adhesive must be used to guarantee proper installation. For outside use, Armaflex should be protected with a suitable outer covering within 3 days of installation. For applications related to the processing or storage of oxygen, please consult our technical services department. Armacell takes every precaution to ensure the accuracy of the data provided in this document and all statements, technical information and recommendations contained within are believed to be correct. However, Armacell cannot guarantee that the data are 100 % accurate. Furthermore, minor deviations in colour, quality and dimensions are unavoidable and in most cases do not influence the performance of the product. Armacell expressly disclaims any and all liability in relation to any results obtained or arising from any use of the product or reliance on such information. No warranty of fitness for any particular purpose, warranty of merchantability or any other warranty, expressed or implied, is made concerning the goods described or the information provided herein. All the statements and technical information within this document should be read in conjunction with the customer's own specification. It is the responsibility of the recipient to inform all involved parties about the content of these documents. The described and recommended methods should be strictly followed. If there is a requirement to deviate from our recommendations, please contact us in advance to discuss possible suitable alternatives. Armacell will not be liable for any claim resulting from a failure to observe our specification or any other agreed solutions and from non-observance of the customer's specification. For temperatures above +110 °C please contact our Customer Service Centre to request the corresponding technical information.

Armaflex LTD tubes



Length 2.0 m, Armaflex LTD insulation maintains flexibility at extreme low temperatures.

Pipe max. Outside-Ø [mm]	Inner Ø min/ max mm (tube)	25,0 mm insulation thickness		
		Code	m/carton	
18	19.5 - 21.0	LTD-25X018 ●	36	
22	23.5 - 25.0	LTD-25X022 ●	32	
28	29.5 - 31.0	LTD-25X028 ●	24	
35	36.5 - 38.5	LTD-25X035 ●	24	
42	44.0 - 46.0	LTD-25X042 ●	20	
48	50.0 - 52.0	LTD-25X048 ●	18	
60	62.0 - 64.0	LTD-25X060 ●	12	
76	78.0 - 80.0	LTD-25X076 ●	10	
89	91.0 - 94.0	LTD-25X089 ●	8	

Length tolerance for tubes:

± 1.5 %

Remark

Armaflex LTD should only be installed as part of the Armaflex Cryogenic System.

- Not a stock item. Delivery on request.

Armaflex LTD continuous sheets (rolls)



Armaflex LTD flexible insulation maintains flexibility at extreme low temperatures.

Code	Thickness [mm]	Roll length [m]	m ² /carton	
LTD-25-99/E ●	25.0	4	4	

Remark

Armaflex LTD should only be installed as part of the Armaflex Cryogenic System.

- Not a stock item. Delivery on request.

Armaflex LTD anti-abrasive foil



Colour Silver, Aluminium vapour barrier foil, thickness 12 µ

Code	Width [mm]	Roll length [m]	Rolls/carton	m ² /carton	
LTD-1/25 ALU ●	1,000.0	25	1	25	
LTD-1/50-ALU ●	1,000.0	50	1	50	

Remark

Rolls of 50m length can be replaced by two 25 m rolls.

- Not a stock item. Delivery on request.

Armaflex LTD accessories



Code	Description	Pieces/carton	
ADH-HT625/1,0	Armaflex® HT625 one-component adhesive, 1,0 litre cans	12	
CLEANER/1,0	Special cleaner for use with Armaflex® Adhesive 520 and Armaflex® Adhesive HT625.	4	



- Combined thermal and acoustic properties
- Effective "Built-in-barrier"
- Significantly reduced insulation thickness and overall system weight
- Hot: Operating temperature: -40 °C to +250 °C
Cold: Operating temperature: -180 °C to +50 °C
- Compliant to ISO 15665 Classes A to C and Shell DEP 31.46.00.31-Gen Class D. Satisfies ASTM E1222 and acoustic classes 6, 7 and 8 according to NORSOK R-004.
- Resists UV, oil, chemicals and weathering

Technical Data - ArmaSound Industrial Systems Cold

Brief description	The ArmaSound Industrial System is a high performance acoustic and thermal insulation system for industrial, marine and offshore environments. The system (composed of Armaflex, ArmaSound RD 240, ArmaSound Barrier and Arma-Chek R or metal covering) reduces the risk of corrosion under insulation (CUI) and provides exceptional noise reduction while minimising total system weight and thickness.
Material type	See product data sheets of the individual components.
Colour	Black / grey
Product Range	ArmaSound Industrial Systems available in different combinations (Classes A, B, C, D) and coverings (Arma-Chek R, UV-cured GRP or metal cladding). Please ask Customer Services for detailed information on these systems.
Applications	Pipes, ducts and vessels in industrial, petrochemical and offshore facilities.
Special Features	Compliant to ISO 15665 Classes A to C and Shell DEP 31.46.00.31-Gen Class D. Satisfies ASTM E 1222 and acoustic classes 6, 7 and 8 acc. to NORSOK R-004.
Assembly	The ArmaSound Industrial Systems Application manual should be consulted before assembly. Please consult our Customer Service Centre.
Remarks	For temperatures between -180 °C and -40 °C ArmaSound Industrial Systems may be combined with other insulation types to offer optimum acoustic attenuation with improved service temperature capability. For detailed information on these specific systems please refer to our Customer Service Centre.

Property	Value/Assessment	Special Remarks
Temperature Range		
Temperature Range	Max. service temperature	+ 20 °C (For temperatures above +20 °C, please refer to ArmaSound Industrial Systems - Hot)
	Min. service temperature	- 180 °C (in combination with other insulation types)
Thermal Conductivity		
Thermal Conductivity	Dependent on Armaflex substrates used.	
	Refer to individual product data sheets	
Water vapour diffusion resistance		
Water vapour diffusion resistance	Dependent on Armaflex substrates used. Refer to individual product data sheets	
Other technical features		
Biological / chemical behaviour	Good	Resists oil and chemicals.
UV resistance	Good	Resists UV and weathering

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. For temperatures below -40 °C please contact our Customer Service Centre to request the corresponding technical information. Armacell takes every precaution to ensure the accuracy of the data provided in this document and all statements, technical information and recommendations contained within are believed to be correct. However, Armacell cannot guarantee that the data are 100 % accurate. Furthermore, minor deviations in colour, quality and dimensions are unavoidable and in most cases do not influence the performance of the product. Armacell expressly disclaims any and all liability in relation to any results obtained or arising from any use of the product or reliance on such information. No warranty of fitness for any particular purpose, warranty of merchantability or any other warranty, expressed or implied, is made concerning the goods described or the information provided herein. All the statements and technical information within this document should be read in conjunction with the customer's own specification. It is the responsibility of the recipient to inform all involved parties about the content of these documents. The described and recommended methods should be strictly followed. If there is a requirement to deviate from our recommendations, please contact us in advance to discuss possible suitable alternatives. Armacell will not be liable for any claim resulting from a failure to observe our specification or any other agreed solutions and from non-observance of the customer's specification.

Technical Data - ArmaSound Industrial Systems Hot

Brief description	ArmaSound Industrial Systems - Hot are high performance acoustic and thermal insulation solutions for industrial, petrochemical and offshore facilities. The multi-layer systems (comprising of HT/Armaflex® Industrial, ArmaSound RD 240, ArmaSound Barrier E and Arma-Chek R or UV-cured GRP or metal cladding) reduce the risk of corrosion under insulation (CUI) and provide exceptional noise reduction while minimising total system weight and thickness.
Material type	See product data sheets of individual components.
Colour	Colour of the covering / cladding: Grey
Product Range	ArmaSound Industrial Systems available in different combinations (Classes A, B, C, D) and coverings (Arma-Chek R, UV-cured GRP or metal cladding). Please ask Customer Services for the extended information on these systems.
Applications	Pipes, ducts and vessels in industrial, marine and offshore environments.
Special Features	Compliant to ISO 15665 Classes A to C and Shell DEP 31.46.00.31-Gen Class D. Satisfies ASTM E 1222 and acoustic classes 6, 7 and 8 acc. to Norsok R-004.
Assembly	The ArmaSound Industrial Systems Application manual should be consulted before assembly. Please consult our Customer Service Centre.
Remarks	For temperatures between 125 °C and 250 °C ArmaSound Industrial Systems may be combined with other insulation types to offer optimum acoustic attenuation with improved service temperature capability. For detailed information on these specific systems please refer to our Customer Service Centre.

Property	Value/Assessment	Special Remarks
Temperature Range		
Temperature Range	Max. service temperature + 250 °C*	(For service temperatures above + 125 °C please contact our Customer Service Centre)
	Min. service temperature + 20 °C	(For temperatures below +20 °C, please refer to ArmaSound Industrial Systems - Cold)
Thermal Conductivity		
Thermal Conductivity	System thermal performance depends on properties and configuration of individual layers	
	Refer to individual product data sheets	
Water vapour diffusion resistance		
Water vapour diffusion resistance	System integrity depends on properties and configuration of individual layers	
	Refer to individual product data sheets	
Other technical features		
Biological / chemical behaviour	Good	Resists oil and chemicals.
UV resistance	Good	Resists UV and weathering.

*With first layer of higher temperature insulation such as mineral wool

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ArmaSound® RD₂₄₀

HIGH PERFORMANCE SOUND
ABSORPTION FOR A QUIETER
ENVIRONMENT



- Optimal performance at lower thickness
- Excellent sound absorption behaviour
- Easy application and low maintenance
- Designed for use in demanding environments

- Compliant to ISO 15665 Classes A to C and Shell DEP 31.46.00.31-Gen Class D
- Meets NORSOK R-004 Classes 6, 7 and 8
- Highly hydrophobic, open-cell structure designed to resist water ingress
- Optimum density, air-flow resistivity and complex pore geometry for maximum acoustic benefit

Technical Data - ArmaSound RD240

Brief description	Highly-flexible, hydrophobic, open-cell acoustic insulation material with complex pore geometry.
Material type	Elastomeric foam based on synthetic rubber.
Colour	Black
Material Special Information	Self-adhesive coating: pressure-sensitive adhesive coating on modified acrylate basis with mesh structure. Adhesive covered with polyethylene film.
Product Range	Sheets, 10, 15, 20, 25, 30, 40 and 50 mm thickness / width 500 and 1000 mm / length 1000 and 2000 mm
Applications	In general applications ArmaSound® RD240 provides 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 Arma-Sound Industrial Systems to provide acoustic insulation on industrial pipework and vessels ensuring reduction of sound transmission.
Special Features	Excellent sound absorption performance.
Assembly	For industrial applications it is recommended to consult the ArmaSound Industrial Systems Application manual and other relevant Armacell installation instructions and application manuals. Please consult our Customer Service Centre.

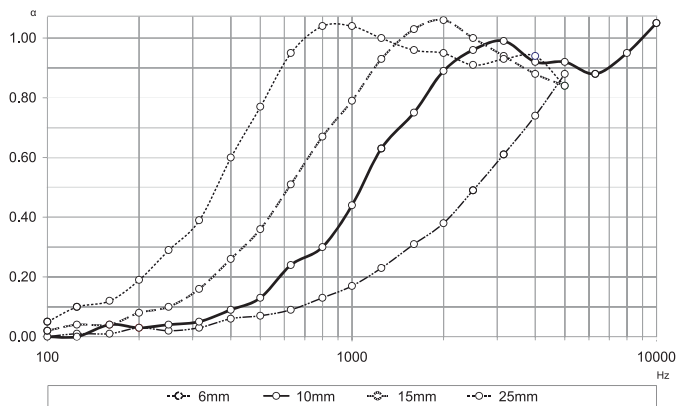
Property	Value/Assessment							Test ³	Super- vision ⁴	Special Remarks
Temperature Range										
Temperature Range	Max. service temperature						+85 °C			
	Min. service temperature						-20 °C			
Thermal Conductivity										
Thermal Conductivity	ϑ_m		0		°C				Tested according to EN 12667 (Equivalent methods ASTM C177 and C518)	
	λ		≤		0.062		W/(m · K)			
Fire performance										
Reaction to fire	Euroclass E						D 4225	o		
Other fire class ¹	BS 476 Part 7 Class 1						ES 6443 & ES 6137		BS 476 Class 1 Approved by Lloyds	
	ASTM E84 < 25 Flame Spread Index									
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames									
Acoustic performance										
Sound absorption										Tested according to ISO 354 / BS EN 20354
Weighted sound absorption coefficient α_w	Dependent on material thickness.									
										Tested according to EN ISO 354 Rated according to EN ISO 11654
	Practical sound absorption coefficient / frequency [Hz] (typical values).									Tested according to ISO 345. rated according to EN ISO 11654
a_s / Thickness	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz			Tested according to ISO 354. Rated according to EN ISO 11654	
6 mm	0.010	0.030	0.070	0.180	0.390	0.740				
10 mm	0.010	0.040	0.150	0.460	0.870	0.940				
15 mm	0.030	0.110	0.380	0.800	1.030	0.890				
25 mm	0.090	0.280	0.770	1.030	0.940	0.900				
Thickness	6 mm	10 mm	15 mm	25 mm						
α_w	0.15 (H)	0.25 (H)	0.40 (MH)	0.60 (MH)						
Class	E	E	D	C						
NRC (acc. to ASTM C 423)	0.150	0.400	0.600	0.750						
Other technical features										
Density	220 to 360 kg/m ³									Tested according to ISO 845, ASTM D1622

Technical Data - ArmaSound RD240

Tear strength	0.4 - 1.4 kN/m			Tested according to ISO 34-1
Tensile strength	MD 70 to 190 kPa			Tested according to ISO 1798
Elongation	MD 50 - 90 %			Tested according to ISO 1798
Health aspects	Fibre dust free			
Storage & Shelf life	Material shall be stored indoors, in clean and dry conditions, away from direct sunlight.			
Acoustic Insertion Loss	1.1 Vol - % (sheet 10 mm) 1.3 Vol - % (sheet 25 mm)			Tested according to ISO 3741 and ISO 15665 (equivalent method ASTM E1222)
Water absorption ¹	4.4 %			Tested according to AGI Q 136

1. Based on single test results which are not monitored in regular frequency. Can be used for information only.
 *1 Further documents such as test certificates and approvals can be requested using the registration number given.
 *2 ●: Official supervision by independent institutes and /or test authorities
 ○: In-house quality monitoring

Typical Sound Absorption Behaviour of ArmaSound RD 240 (ISO 354)



Typical Sound Absorption Values of ArmaSound RD 240

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Armaflex 520 or Armaflex HT 625 Adhesive must be used to guarantee proper installation. Armacell takes every precaution to ensure the accuracy of the data provided in this document and all statements, technical information and recommendations contained within are believed to be correct. However, Armacell cannot guarantee that the data are 100 % accurate. Furthermore, minor deviations in colour, quality and dimensions are unavoidable and in most cases do not influence the performance of the product. Armacell expressly disclaims any and all liability in relation to any results obtained or arising from any use of the product or reliance on such information. No warranty of fitness for any particular purpose, warranty of merchantability or any other warranty, expressed or implied, is made concerning the goods described or the information provided herein. All the statements and technical information within this document should be read in conjunction with the customer's own specification. It is the responsibility of the recipient to inform all involved parties about the content of these documents. The described and recommended methods should be strictly followed. If there is a requirement to deviate from our recommendations, please contact us in advance to discuss possible suitable alternatives. Armacell will not be liable for any claim resulting from a failure to observe our specification or any other agreed solutions and from non-observance of the customer's specification.

ArmaSound RD240 sheets



Code	Thickness [mm]	Width [m]	Length [m]	m ² /carton	
ASD-240-06 •	6	1.0	1.0	8	
ASD-240-10 •	10	1.0	1.0	5	
ASD-240-15 •	15	1.0	1.0	3	
ASD-240-20 •	20	1.0	1.0	2	
ASD-240-25 •	25	1.0	1.0	2	

Remark

Further dimensions and insulation thicknesses available on request.

- Not a stock item. Delivery on request.

ArmaSound RD240 self-adhesive sheets



Code	Thickness [mm]	Width [m]	Length [m]	m ² /carton	
ASD-240-06/A •	6	1.0	1.0	8	
ASD-240-10/A •	10	1.0	1.0	5	
ASD-240-15/A •	15	1.0	1.0	3	
ASD-240-20/A •	20	1.0	1.0	2	
ASD-240-25/A •	25	1.0	1.0	2	

Remark

Further dimensions and insulation thicknesses available on request.

- Not a stock item. Delivery on request.

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_w : 28 dB
- Free of lead, unrefined aromatic oils and bitumen
- Integral component of ArmaSound Industrial Systems

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.
Colour	Black
Material Special Information	The material is free of lead, unrefined aromatic oils and bitumen.
Applications	Flexible sheet for noise control - designed as an integral component of the ArmaSound Industrial Systems.
Assembly	The ArmaSound Industrial Systems Application manual should be consulted before assembly. Please consult our Customer Service Centre.

Property	Value/Assessment	Special Remarks
Temperature Range		
Temperature Range	Max. service temperature + 65 °C Min. service temperature - 20 °C	Application temperature > +5 °C
Fire performance		
Other fire class	FMVSS 302 self-extinguishing	
Acoustic performance		
Reduction of structure-borne sound transmission	Mean sound reduction index R_W for 2mm	≥ 22 dB
	Mean sound reduction index R_W for 3mm	≥ 25 dB
	Mean sound reduction index R_W for 4mm	≥ 28 dB
Other technical features		
Density	2400 to 2750 kg/m ³	Tested according to ISO 845, ASTM D1622
Weight	2mm = 5 kg/m ² 3mm = 7.5 kg/m ² 4mm = 10 kg/m ²	
Tensile strength	MC/CD >1.8 MPa	Tested according to ISO 37
Elongation	MD/CD >25 %	Tested according to ISO 37
Mass per unit area	2mm = 4.8 to 5.5 kg/m ² 3mm = 7.2 to 8.25 kg/m ² 4mm = 9.7 to 11.0 kg/m ²	
Health aspects	Free of lead	
Storage & Shelf life	shall be stored indoors, in clean and dry conditions, away from direct sunlight storage: maximum 3 years	
Acoustic Insertion Loss	When used as part of a system ArmaSound Barrier E complies to ISO 15665 Classes A to C and Shell DEP 31.46.00.31-Gen Class D.	Tested according to ISO 3741

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Armaflex 520 or Armaflex HT 625 Adhesive must be used to guarantee proper installation. Armacell takes every precaution to ensure the accuracy of the data provided in this document and all statements, technical information and recommendations contained within are believed to be correct. However, Armacell cannot guarantee that the data are 100 % accurate. Furthermore, minor deviations in colour, quality and dimensions are unavoidable and in most cases do not influence the performance of the product. Armacell expressly disclaims any and all liability in relation to any results obtained or arising from any use of the product or reliance on such information. No warranty of fitness for any particular purpose, warranty of merchantability or any other warranty, expressed or implied, is made concerning the goods described or the information provided herein. All the statements and technical information within this document should be read in conjunction with the customer's own specification. It is the responsibility of the recipient to inform all involved parties about the content of these documents. The described and recommended methods should be strictly followed. If there is a requirement to deviate from our recommendations, please contact us in advance to discuss possible suitable alternatives. Armacell will not be liable for any claim resulting from a failure to observe our specification or any other agreed solutions and from non-observance of the customer's specification.

ArmaSound Barrier E sheets



Colour Black

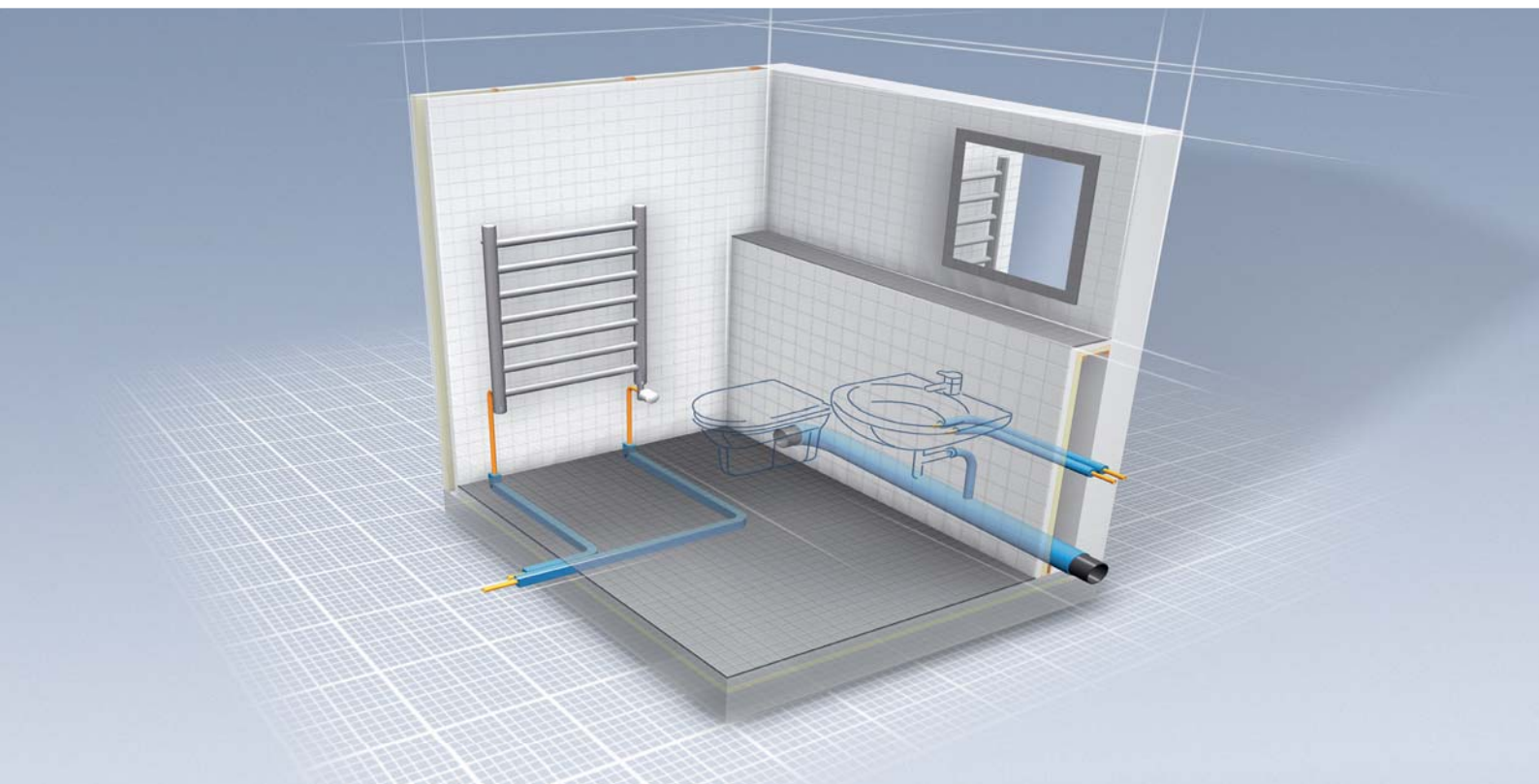
Sheets					
Code	Thickness [mm]	Width [m]	Length [m]	m ² /carton	
ASD-BAR-E-02 •	2	1.25	2	2.5	
ASD-BAR-E-03 •	3	1.25	2	2.5	
ASD-BAR-E-04 •	4	1.25	2	2.5	

Remark

ArmaSound Barrier E is part of the ArmaSound Industrial System and should only be installed as a part of it.

- Not a stock item. Delivery on request.

RESIDENTIAL SYSTEMS



- **TUBOLIT DG**
- **TUBOLIT S & S PLUS**
- **TUBOLIT SPLIT & DUOSPLIT**
- **TUBOLIT FONOBLOK**
- **TUBOLIT FONOWAVE**

Complete range of polyethylene thermal and acoustic products for domestic building services and Part L energy saving requirements.

Including the new Tubolit Split & DuoSplit range of pre-insulated aluminium tube for split air conditioning systems.

Tubolit® DG

THE ECONOMIC INSULATION FOR
EFFECTIVE ENERGY SAVING



- Flexible PE insulation material to save energy and improve acoustic comfort for domestic heating and plumbing applications
- Meets Domestic Building Services Compliance Guide Part L Guidance
- Matching range for plastic pipe sizes

- Euroclass E
- $\lambda_{40\text{ °C}} \leq 0,040 \text{ W/(m} \cdot \text{K)}$

Technical Data - Tubolit DG

Brief description	Flexible, closed-cell extruded insulation material to reduce heat losses and noise on domestic heating and plumbing installations.
Material type	Foam material based on polyethylene. Factory made polyethylene foam (PEF) according to EN 14313.
Colour	grey
Material Special Information	Self-adhesive coating on tapes: pressure-sensitive adhesive coating on modified acrylate basis with mesh structure, covered with polyethylene foil.
Applications	Insulation / protection of pipes (heating system pipes, domestic hot and cold water pipes) and other parts of heating and plumbing installations (incl. elbows, fittings, flanges, etc).
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. EC Certificate of Constancy of Performance no. 0551 and 0543 (tape) of Güteschutzgemeinschaft Hartschaum (GSH) e.V. , Celle

Property	Value/Assessment	Test ²	Special Remarks
Temperature Range			
Temperature Range	Max. service temperature + 100 °C (+ 85 °C for tapes)	EU 5673 EU 5681	Tested acc. to EN 14707 and EN 14313
	Min. service temperature (as typical for heating and plumbing installations)		
Thermal Conductivity			
Thermal Conductivity	ϑ_m 40 [°C] $\lambda =$	EU 5673 EU 5681	Declared acc. to EN ISO 13787 Tested acc. to EN ISO 8497
	Tubolit DG $\lambda \leq 0.040$ W/(m · K) $[36 + 0,1 \cdot \vartheta_m + 0,0008 \cdot (\vartheta_m - 40)^2] / 1000$		
	Tubolit DG self-adhesive tape $\lambda \leq 0.045$ W/(m · K) $[41 + 0,1 \cdot \vartheta_m + 0,0008 \cdot (\vartheta_m - 40)^2] / 1000$		
Fire performance			
Reaction to fire ¹	Tubolit DG standard tubes E	EU 5673 EU 5681	Classified acc. to EN 13501-1 Tested acc. to EN ISO 11925-2
	Tubolit DG self-adhesive tape E		
Other technical features			
Dimensions and tolerances	In accordance with EN 14313, table 1 and 2	EU 5673 EU 5681	Tested acc. to EN 822 EN 823 EN 13467
Storage & Shelf life	Tapes self-adhesive and tubes self-seal: 1 year		Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).

1. The building materials classification is valid on metal or solid, mineral surfaces.

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

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Installation instructions are available. Please consult our Technical Department before insulating stainless steel. Armaflex 520 adhesive must be used to guarantee correct installation.

Tubolit DG tubes



Length 2.0 m

Pipe max. Outside-Ø [mm]	9,0 mm insulation thickness			13,0 mm insulation thickness		
	Code	m/carton		Code	m/carton	
10	TL-10/9-DGU	520		TL-10/13-DGU	330	
15	TL-15/9-DGU	380		TL-15/13-DGU	256	
22	TL-22/9-DGU	250		TL-22/13-DGU	180	
28	TL-28/9-DGU	190		TL-28/13-DGU	140	
35	TL-35/9-DGU	150		TL-35/13-DGU	120	
42	TL-42/9-DGU	110		TL-42/13-DGU	90	
48	TL-48/9-DGU	90		TL-48/13-DGU	70	
54	-	-		TL-54/13-DGU	66	
60	-	-		TL-60/13-DGU	56	
76	-	-		TL-76/13-DGU	42	

Pipe max. Outside-Ø [mm]	19,0 mm insulation thickness			25,0 mm insulation thickness		
	Code	m/carton		Code	m/carton	
15	TL-15/19-DGU	134		TL-15/25-DGU	100	
22	TL-22/19-DGU	108		TL-22/25-DGU	80	
28	TL-28/19-DGU	96		TL-28/25-DGU	66	
35	TL-35/19-DGU	70		TL-35/25-DGU	56	
42	TL-42/19-DGU	60		TL-42/25-DG-B1	28	

Pipe max. Outside-Ø [mm]	30,0 mm insulation thickness					
	Code	m/carton				
35	TL-35/30-DGU ●	28				
54	TL-54/30-DGU ●	22				

● Not a stock item. Delivery on request.

Tubolit DG tubes [1m]



Length 1.0 m

Pipe max. Outside-Ø [mm]	9,0 mm insulation thickness			13,0 mm insulation thickness		
	Code	m/carton		Code	m/carton	
15	TL-15/9-DGU-1M	190		TL-15/13-DGU-1M	128	
22	TL-22/9-DGU-1M	125		TL-22/13-DGU-1M	90	
28	TL-28/9-DGU-1M	95		TL-28/13-DGU-1M	70	
35	TL-35/9-DGU-1M	75		TL-35/13-DGU-1M	60	

Pipe max. Outside-Ø [mm]	19,0 mm insulation thickness			25,0 mm insulation thickness		
	Code	m/carton		Code	m/carton	
15	TL-15/19-DGU-1M	67		TL-15/25-DGU-1M	50	
22	TL-22/19-DGU-1M	54		TL-22/25-DGU-1M	40	
28	TL-28/19-DGU-1M	48		TL-28/25-DGU-1M	33	
35	TL-35/19-DGU-1M	35		TL-35/25-DGU-1M	28	

Tubolit DG tubes DBSCG



Thicknesses required for adherence to Part L Domestic Building Services Compliance Guide regarding the maximum permissible heat losses from central heating pipework

Pipe max. Outside-Ø [mm]	Domestic Building Services Compliance Guide Range insulation thickness			
	Max. Permissible Heat loss [W/m]	Thickness [mm]	Code	m/carton
10	7.23	13.0	TL-10/13-DGU	330
15	7.89	19.0	TL-15/19-DGU	134
22	9.12	25.0	TL-22/25-DGU	80
28	10.07	25.0	TL-28/25-DGU	66
35	11.08	30.0	TL-35/30-DGU •	28
42	12.19	30.0	TL-42/30-DGU •	24
54	14.12	30.0	TL-54/30-DGU •	22

• Not a stock item. Delivery on request.

Tubolit Accessories



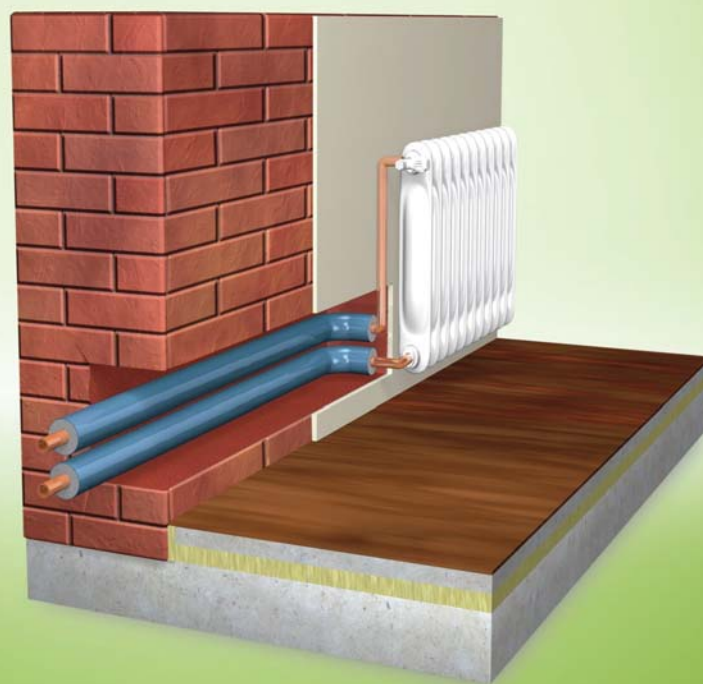
Code	Description	Pieces/carton	Pieces/bag
TLT-TAPE/50-DG •	Tubolit DG PE Tape Grey (10 m x 50mm width)	12	-
TL-CLIPS •	Tubolit Clips (bags of 100 clips)	25	100

Remark Delivery 10 working days

• Not a stock item. Delivery on request.

Tubolit® S

THE INSULATION TO PREVENT
TRANSMISSION OF STRUCTURE-BORNE
NOISE



- Polyethylene pipe insulation with durable PE-film covering
- Provides protection against aggressive building materials for in wall cavity pipes
- Improved acoustic de-coupling of the pipe from the building structure

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	Foam material based on polyethylene. Factory made polyethylene foam (PEF) according to EN 14313.
Colour	foam: grey; foil: blue
Applications	Insulation / protection of pipes (heating system pipes, domestic hot and cold water pipes) and other parts of heating and plumbing installations (incl. elbows, fittings, flanges, etc).
Special Features	Foil coating on outer surface for additional protection of insulation surface.
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. EC Certificate of Constancy of Performance no. 0551 of Güteschutzgemeinschaft Hartschaum (GSH) e.V. , Celle

Property	Value/Assessment	Test ²	Special Remarks
Temperature Range			
Temperature Range	Max. service temperature	+ 100 °C (+ 85 °C for tapes)	EU 5675 Tested acc. to EN 14707 and EN 14313
	Min. service temperature	(as is usual in plumbing and heating installations)	
Thermal Conductivity			
Thermal Conductivity	ϑ_m 40	[°C]	EU 5675 Declared acc. to EN ISO 13787 Tested acc. to EN ISO 8497
	Tubolit S $\lambda \leq 0.040$	W/(m · K)	
Fire performance			
Reaction to fire ¹	Tubolit S	E	EU 5675 Classified acc. to EN 13501-1 Tested acc. to EN ISO 11925-2
Other technical features			
Dimensions and tolerances	In accordance with EN 14313, table 1 and 2	EU 5675	Tested acc. to EN 822 EN 823 EN 13467

1. The building materials classification is valid on metal or solid, mineral surfaces.

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

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Installation instructions are available. Please consult our Technical Department before insulating stainless steel. Armaflex 520 adhesive must be used to guarantee correct installation.

Tubolit S tubes



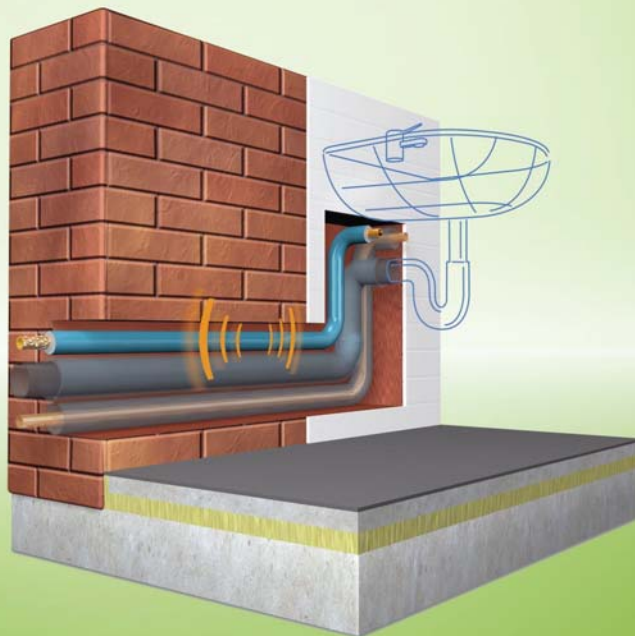
Length 2.0 m, Colour Blue, with hard-wearing PE-film

Pipe max. Outside-Ø [mm]	9,0 mm insulation thickness		13,0 mm insulation thickness	
	Code	m/carton	Code	m/carton
15	TL-15/9-S •	234	TL-15/13-S •	172
22	TL-22/9-S •	178	TL-22/13-S •	128
28	TL-28/9-S •	130	TL-28/13-S •	98
35	TL-35/9-S •	96	TL-35/13-S •	72
42	TL-42/9-S •	72	TL-42/13-S •	56
48	TL-48/9-S •	70	-	-

• Not a stock item. Delivery on request.

Tubolit[®] S Plus

THE PROTECTIVE TUBE FOR IN-WALL
INSTALLATIONS WITH LIMITED SPACE



- Optimized insulation thickness for installations in reduced in wall spaces
- Flexible and easy to sleeve with extra inner-foil lining
- Durable outer PE-film for additional protection
- Reduce structure borne sound

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.
Colour	foam: grey; foil: blue
Applications	Insulation / protection of pipes (heating system pipes, domestic hot and cold water pipes) and other parts of heating and plumbing installations (incl. elbows, fittings, flanges, etc).
Special Features	Foil coating on outer surface for for additional protection of insulation surface. Foil coating on inner surface for better sleeve-on installation.
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. EC Certificate of Constancy of Performance no. 0550 and 0551 of Güteschutzgemeinschaft Hartschaum (GSH) e.V. , Celle

Property	Value/Assessment	Test ²	Special Remarks
Temperature Range			
Temperature Range	Max. service temperature	+ 100 °C	(+ 85 °C for tapes)
	Min. service temperature		(as is usual in plumbing and heating installations)
Thermal Conductivity			
Thermal Conductivity ¹	ϑ_m	40	[°C]
	Tubolit S Plus	$\lambda \leq 0.045$	W/(m · K)
			$\lambda = \frac{[41 + 0,1 \cdot \vartheta_m + 0,0008 \cdot (\vartheta_m - 40)^2]}{1000}$
Fire performance			
Reaction to fire ²	Tubolit S Plus	E	
Other technical features			
Dimensions and tolerances	In accordance with EN 14313, table 1 and 2	EU 5676	Tested acc. to EN 822 EN 823 EN 13467

1. In accordance with testing methods and laboratory equipment, the thermal conductivity for Tubolit, S, S Plus and tape is measured in the conventional way

2. The building materials classification is valid on metal or solid, mineral surfaces.

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

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Installation instructions are available. Please consult our Technical Department before insulating stainless steel.

Tubolit S Plus tubes endless



Length 20.0 m, Colour Grey, Covering Colour Blue, with robust protective film on outside plus transparent inner film for fast and easy application

Pipe max. Outside-Ø [mm]	4,0 mm insulation thickness		
	Code	m/carton	Rolls/carton
15	TL-12-15/4-S+ ●	520	26
18	TL-18/4-S+ ●	440	22
22	TL-22/4-S+ ●	400	20
28	TL-28/4-S+ ●	320	16
30	TL-30/4-S+ ●	320	16
35	TL-35/4-S+ ●	280	14
42	TL-42/4-S+ ●	240	12

● Not a stock item. Delivery on request.

Tubolit®

Split & DuoSplit Alu

THE ECONOMIC ALTERNATIVE TO
COPPER

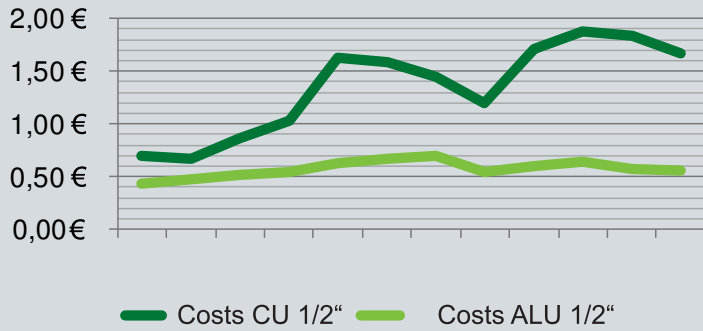


- Light, cost efficient and recyclable option
- Pre-insulated piping suitable for refrigerant gases R410A & R407C
- Fulfils the European Pressure Equipment Directive
- Bends easily without kinking

- High corrosion resistance
- Polyolefin-copolymer textured coating provides good resistance to UV radiation
- Patented join-split adhesive technology to easily split and join the pipes without any tools required
- Closed cell insulation prevents condensation

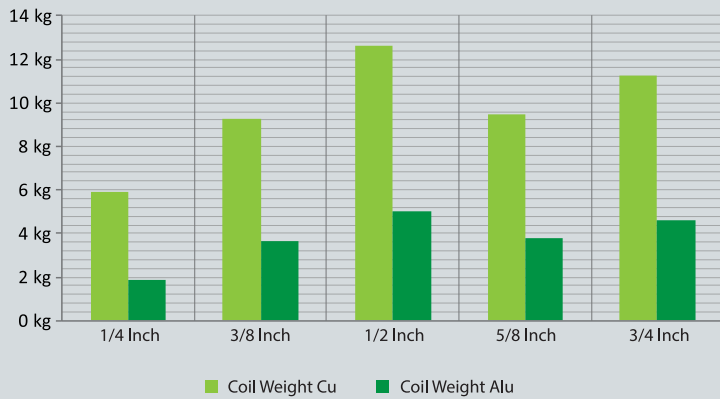
Economic Solution

Aluminum remains one of the most cost-effective materials you can use, with outstanding properties that enable considerable savings – it is three times cheaper than copper - and offers significant technological improvements. Aluminum represents an economic alternative to copper and is not subject to the same price fluctuations.



Light weight

Aluminium is installed like copper, with minor differences. The tools are the same and connection methods and precautions are already known to the industry. Above all, aluminium is easy to form and therefore reduces the cost of installation. For the equivalent burst pressure, aluminium tubes are on average 65% lighter than copper.

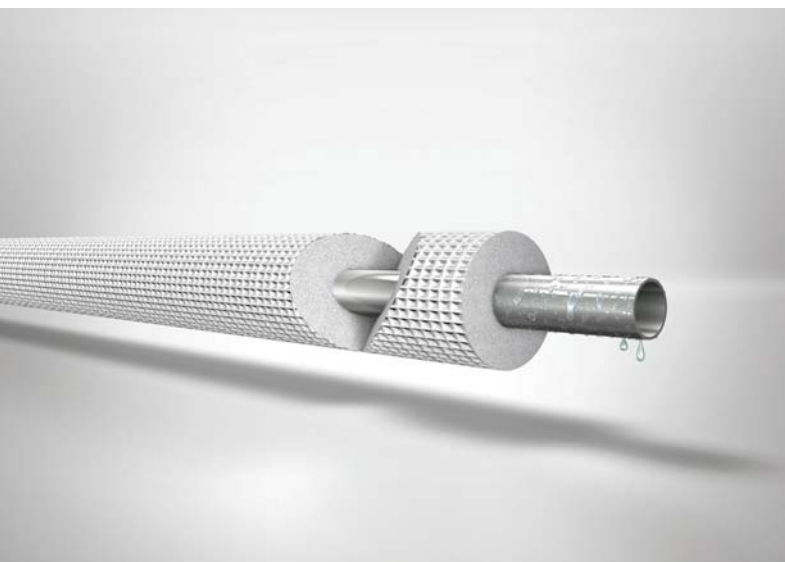
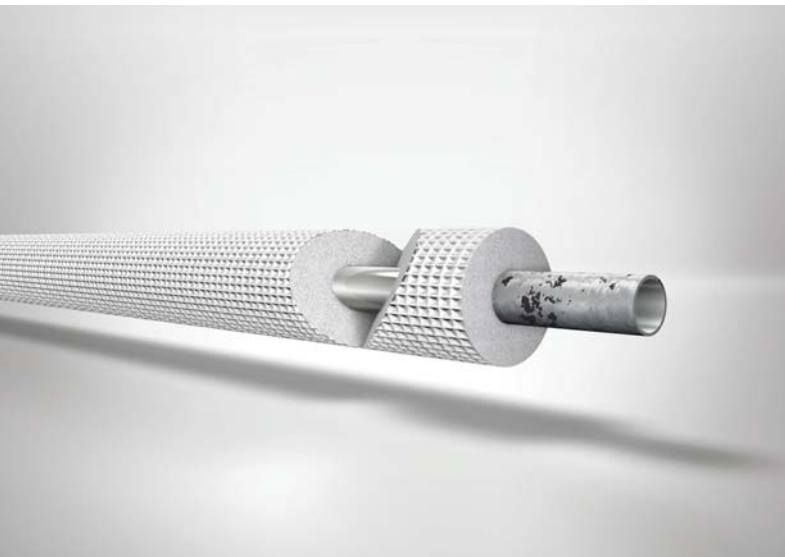


High corrosion resistance

Compared to steel and copper, aluminium has very low corrosion rates. This is due to the protecting oxide layer that forms immediately on the aluminium surface when exposed to the environment. This is a general characteristic that applies to aluminium as "stand alone."

Condensation control

With the original Tubolit closed cell insulation, Tubolit Split & DuoSplit Alu is the perfect solution to connect indoor and outdoor units of split and multi-split air conditioning systems. With proven quality Tubolit Split & DuoSplit protects against moisture and reduces energy losses. In addition it has very good structure-born noise properties.



Installation hints



Clean: Clean tool kit with a wire brush before working with aluminium.

Cut: Push back insulation and cut the pipe with a conventional cutting tool.

Connect: Standard flare nuts or mechanical connections can be used for joining aluminium pipes.

Protect: Protect the joint with a heat shrink sleeve to avoid galvanic corrosion!



Technical Data - Tubolit Split & DuoSplit Alu

Brief description	Tubolit Split/DuoSplit Alu is a reliable pre-insulated system solution to connect the indoor and outdoor units of split and multi-split air conditioning systems. The system consists of aluminium pipe(s), insulation material, a UV resistant coating and matching accessories.
Material type	Insulation: foam material based on polyethylene. Pipes: soft annealed seamless drawn refrigeration aluminium according to EN 754-2, 2008 Facing: polyolefin- copolymer coating.
Colour	White
Material Special Information	Tubolit closed cell insulation material with polyolefin-copolymer textured coating.
Applications	Split- and multi-split air conditioning systems and cooling counters.
Special Features	Durable solution, resistant against mechanical strain and UV radiation. Suitable for refrigeration gases R410A and R407C.
Assembly	No special tools required. Matching accessories to facilitate assembly. Insulation should be kept uncut at the whole applied length and glued to the pipe at both ends. Additional protection of insulation tube ends with tape is recommended.
Remarks	EC Certificate of Conformity no. 0551 and 0552 of Güteschutzgemeinschaft Hartschaum e.V. , Celle

Property	Value/Assessment	Test ²	Special Remarks																				
Temperature Range																							
Temperature Range	Max. service temperature	+ 100 °C	EU 5232 EU 6060 Tested acc. to EN 14707 and EN 14313																				
	Min. service temperature ¹	- 50 °C																					
Thermal Conductivity																							
Thermal Conductivity	ϑ_m 0 °C	EU 5232 EU 6060	Declared acc. to EN ISO 13787 Tested according to EN ISO 8497																				
	$\lambda \leq 0.036$ W/(m · K)	[36 + 0,1 · ϑ_m + 0,0008 · ϑ_m^2]/1000																					
Water vapour diffusion resistance																							
Water vapour diffusion resistance	Only for non-slit insulation and coating:	$\mu \geq 5,000$	EU 5232 EU 6060 Tested according to EN 13469																				
Fire performance																							
Reaction to fire	Euroclass	E	EU 5232 EU 6060																				
Other technical features																							
Dimensions and tolerances	In accordance with EN 14313, table 1 and 2		EU 5232 EU 6060 Tested acc. to EN 13467																				
UV resistance	Good																						
Pipe size and burst pressure	<table border="0"> <tr> <td>1/4" x 0.8 mm</td> <td>266 bar</td> <td>6 x 1.0 mm</td> <td>365 bar</td> </tr> <tr> <td>3/8" x 1.0 mm</td> <td>218 bar</td> <td>10 x 1.0 mm</td> <td>207 bar</td> </tr> <tr> <td>1/2" x 1.0 mm</td> <td>160 bar</td> <td>12 x 1.0 mm</td> <td>170 bar</td> </tr> <tr> <td>5/8" x 1.2 mm</td> <td>153 bar</td> <td>16 x 1.2 mm</td> <td>152 bar</td> </tr> <tr> <td>3/4" x 1.2 mm</td> <td>126 bar</td> <td>18 x 1.2 mm</td> <td>134 bar</td> </tr> </table>			1/4" x 0.8 mm	266 bar	6 x 1.0 mm	365 bar	3/8" x 1.0 mm	218 bar	10 x 1.0 mm	207 bar	1/2" x 1.0 mm	160 bar	12 x 1.0 mm	170 bar	5/8" x 1.2 mm	153 bar	16 x 1.2 mm	152 bar	3/4" x 1.2 mm	126 bar	18 x 1.2 mm	134 bar
1/4" x 0.8 mm	266 bar	6 x 1.0 mm	365 bar																				
3/8" x 1.0 mm	218 bar	10 x 1.0 mm	207 bar																				
1/2" x 1.0 mm	160 bar	12 x 1.0 mm	170 bar																				
5/8" x 1.2 mm	153 bar	16 x 1.2 mm	152 bar																				
3/4" x 1.2 mm	126 bar	18 x 1.2 mm	134 bar																				

1. For temperatures below -0 °C please contact our Technical Department to request the corresponding technical information.

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

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Armaflex 520 or Armaflex HT 625 Adhesive must be used to guarantee proper installation. Installation instructions are available.

Tubolit Split Alu pre-insulated coils (metric)



Code	Pipe diameter [mm]	Pipe wall thickness [mm]	Outer-Ø [mm] of insulation	Roll length [m]	Thickness [mm]	Rolls/carton	m/carton
TA-ME-09X06/E50	6	1.0	24	50	9.0	1	50
TA-ME-09X10/E50	10	1.0	28	50	9.0	1	50
TA-ME-09X12/E50	12	1.0	30	50	9.0	1	50
TA-ME-09X16/E25	16	1.2	34	25	9.0	1	25
TA-ME-09X18/E25	18	1.2	36	25	9.0	1	25

Tubolit Split Alu pre-insulated pipe, coils (inch)



Code	Pipe diameter [inch]	Pipe diameter [mm]	Pipe wall thickness [mm]	Outer-Ø [mm] of insulation	Roll length [m]	Thickness [mm]	Rolls/carton	m/carton
TA-ZO-09X06/E50	1/4	6.35	0.8	24	50	9.0	1	50
TA-ZO-09X10/E50	3/8	9.52	1.0	28	50	9.0	1	50
TA-ZO-09X12/E50	1/2	12.7	1.0	31	50	9.0	1	50
TA-ZO-09X16/E25	5/8	15.875	1.2	34	25	9.0	1	25
TA-ZO-09X19/E25	3/4	19.05	1.2	37	25	9.0	1	25

Tubolit DuoSplit Alu pre-insulated coils (metric)



Code	Pipe diameter [mm]	Pipe wall thickness [mm]	Outer-Ø [mm] of insulation	Roll length [m]	Thickness [mm]	Rolls/carton	m/carton
TAM-09X0610/E25	6/10	1,0 / 1,0	24 / 28	25	9.0	1	25
TAM-09X0612/E25	6/12	1,0 / 1,0	24 / 30	25	9.0	1	25
TAM-09X0616/E25	6/16	1,0 / 1,2	24 / 34	25	9.0	1	25
TAM-09X1016/E25	10/16	1,0 / 1,2	30 / 34	25	9.0	1	25
TAM-09X1018/E25	10/18	1,0 / 1,2	30 / 36	25	9.0	1	25

Tubolit DuoSplit Alu pre-insulated pipe, coils (inch)



Code	Pipe diameter [inch]	Pipe diameter [mm]	Pipe wall thickness [mm]	Outer-Ø [mm] of insulation	Roll length [m]	Thickness [mm]	Rolls/carton	m/carton
TAZ-09X0610/E25	1/4 / 3/8	6,35 / 9,525	1,0 / 1,0	24 / 28	25	9.0	1	25
TAZ-09X0612/E25	1/4 / 1/2	6,35 / 12,7	1,0 / 1,0	28 / 31	25	9.0	1	25
TAZ-09X0616/E25	1/4 / 5/8	6,35 / 15,87	1,0 / 1,2	24 / 34	25	9.0	1	25
TAZ-09X1012/E25	3/8 / 1/2	9,52 / 12,7	1,0 / 1,0	28 / 31	25	9.0	1	25
TAZ-09X1016/E25	3/8 / 5/8	9,52 / 15,87	1,0 / 1,2	28 / 34	25	9.0	1	25
TAZ-09X1019/E25	3/8 / 3/4	9,52 / 19,05	1,0 / 1,2	28 / 37	25	9.0	1	25

Tubolit Split & DuoSplit Alu shrinking tubes



Length 100.0 mm, Colour Black

Code	Description	Pieces/bag	Bag/carton
SK-TB-24/6	Heat shrinkable tubes for 1/4" and 6 mm pipes	10	10
SK-TB-32/8	Heat shrinkable tubes for 3/8-1/2" and 10-12 mm pipe	10	10
SK-TB-39/13	Heat shrinkable tubes for 5/8-3/4" and 16-18 mm pipes	10	10

Remark Total carton content is 10 bags/100 pieces.

Accessories

Split & DuoSplit

PROFESSIONAL ACCESSORIES FOR
SPLIT AIR CONDITIONING SYSTEMS



- Versatile range of fittings and tools for connecting Tubolit Split & DuoSplit aluminium pipes
- SAE Flare Fittings (metric and imperial sizes)
- Calibration tools (metric and imperial sizes)

Tubolit Split & DuoSplit Accessories sae-flare fittings



SAE Flare Fittings are suitable when the installation of refrigeration tubes is difficult due to soldering in restricted environments. They come with a nut and compression ferrule and can easily be installed using a wrench. The Armacell refrigeration connections fit most thermostatic valves, manometers, dehydrating filters and other components with flare type joints.

Metric measurements					Inch measurements				
Code	inch	Pieces/ bag	Pipe wall thickness [mm]	Bag/ carton	Code	inch	Pieces/ bag	Pipe wall thickness [mm]	Bag/ carton
SF-FM-006	-	10	1.0	10	SF-FZ-006	1/4	10	0.8	10
SF-FM-010	-	10	1.0	10	SF-FZ-010	3/8	10	0.8	10
SF-FM-012	-	10	1.0	10	SF-FZ-012	1/2	10	0.8	10
SF-FM-016	-	10	1.0	10	SF-FZ-016	5/8	10	1.0	10
-	-	-	-	-	SF-FZ-019	3/4	5	1.0	10

Remark

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.

Technical properties

No copper sealing necessary - compression ferrule - tight up to 10-7 mbar l/s respectively < 0,5 g/a Helium for all refrigerants (CFC, HFC, HCFC).

Tested by internal test procedures according to DIN 3859 and by CETIM:

* Reverse-bending strength test: no leakage after 10 Mio. 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.

Regulations

Corresponds to the new standards and regulations of the CEN for refrigeration installations (EN 378/1 - EN 378/2).

Tubolit Split & DuoSplit Accessories sae calibration tool



Calibration tools to match SAE-Flare Fittings.

Metric measurements				Inch measurements			
Code	Pieces/bag	Bag/carton	Outer- Ø [mm]	Code	Pieces/bag	Bag/carton	Outer- Ø [mm]
SF-CTM-006 ●	1	10	6	SF-CTZ-006 ●	1	10	1/4
SF-CTM-010 ●	1	10	10	SF-CTZ-010 ●	1	10	3/8
SF-CTM-012 ●	1	10	12	SF-CTZ-012 ●	1	10	1/2
SF-CTM-016 ●	1	10	16	SF-CTZ-016 ●	1	10	5/8
-	-	-	-	SF-CTZ-019 ●	1	5	3/4

● Not a stock item. Delivery on request.

Tubolit Split & DuoSplit Accessories toolbox sae calibration tool



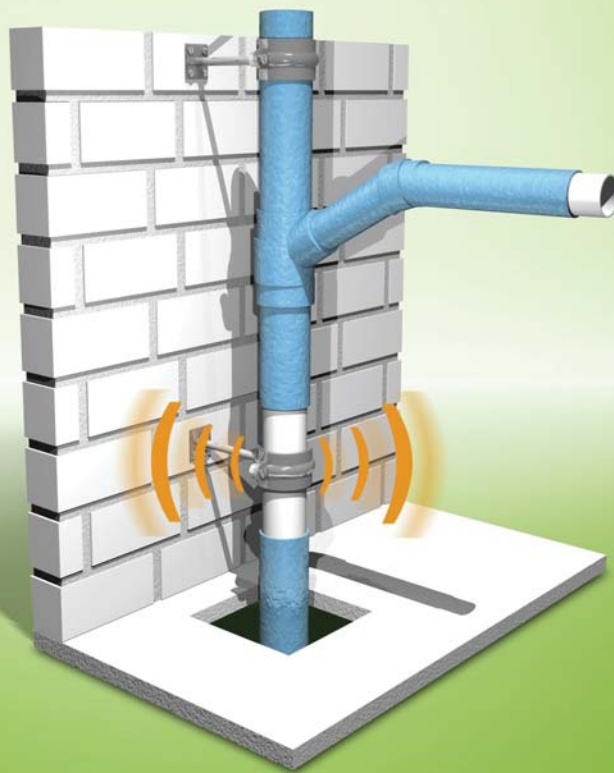
Inch measurements		
Code	Outer- Ø [mm]	Pieces/carton
SF-CBZ-06-16 ●	1/4" / 3/8" 1/2" / 5/8"	5

● Not a stock item. Delivery on request.

Tubolit[®] AR

Fonoblok

THE NOISE REDUCING INSULATION FOR
CAST IRON WASTE WATER PIPES



- Improved acoustic comfort
- Easy application over flanges and elbows
- < 15db(A) on cast iron pipes

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 and rain water pipes.
Material type	Foam material based on polyethylene. Factory made polyethylene foam (PEF) according to EN 14313.
Colour	blue
Material Special Information	Self-adhesive coating on tapes: pressure-sensitive adhesive coating on modified acrylate basis with mesh structure, covered with polyethylene foil.
Applications	Acoustic and thermal insulation of internal waste water and rain water 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 Armalex insulation.
Remarks	EC Certificate of Constancy of Performance no. 0551 and 0543 (tape) of Güteschutzgemeinschaft Hartschaum (GSH) e.V. , Celle

Property	Value/Assessment		Test ²	Special Remarks		
Temperature Range						
Temperature Range	Max. service temperature	+ 100 °C	(+ 85 °C for tapes)	EU 5677	Tested acc. to EN 14707 and EN 14313	
	Min. service temperature		(as per typical plumbing installations)			
Thermal Conductivity						
Thermal Conductivity ¹	ϑ_m	40	[°C]	EU 5677	Declared acc. to EN ISO 13787 Tested acc. to EN ISO 8497	
	Tubolit AR Fonoblok	$\lambda \leq 0.045$	W/(m · K)			$[41 + 0,1 \cdot \vartheta_m + 0,0008 \cdot (\vartheta_m - 40)^2] / 1000$
	Tubolit AR tape	$\lambda \leq 0.045$	W/(m · K)			$[41 + 0,1 \cdot \vartheta_m + 0,0008 \cdot (\vartheta_m - 40)^2] / 1000$
Fire performance						
Reaction to fire ²	Tubolit AR Fonoblok		E	EU 5677	Classified acc. to EN 13501-1 Tested acc. to EN ISO 11925-2	
	Tubolit AR tape		E			
Acoustic performance						
Reduction of structure-borne sound transmission	on cast-iron waste water pipes		≤ 15 dB(A)	D 2144	Tested acc. to EN 14366	
Other technical features						
Dimensions and tolerances	In accordance with EN 14313, table 1 and 2			EU 5677	Tested acc. to EN 822 EN 823 EN 13467	
Storage & Shelf life	Tapes self-adhesive: 1 year				Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).	

1. In accordance with testing methods and laboratory equipment, the thermal conductivity for Tubolit, S, S Plus and tape is measured in the conventional way

2. The building materials classification is valid on metal or solid, mineral surfaces.

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

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Installation instructions are available.

Tubolit AR Fonoblok tubes endless (coils)



Length 15.0 m, Thickness 5.0 mm, Colour Blue, structure-borne noise insulation for waste-water and metal drainage pipes

Pipe max. Outside- Ø [mm]	5,0 mm insulation thickness					
	Outer- Ø [mm]	Nominal width DN	Code	m/carton	Rolls/carton	
57	58	50	TL-50/5-AR ●	135	9	
76	78	70	TL-70/5-AR ●	105	7	
89	90	90	TL-90/5-AR ●	75	5	
108	110	100	TL-100/5-AR ●	75	5	
133	135	125	TL-125/5-AR ●	60	4	
160	160	150	TL-150/5-AR ●	45	3	

● Not a stock item. Delivery on request.

Tubolit AR Fonoblok self-adhesive tapes



Colour Blue, material from quality polyethelene

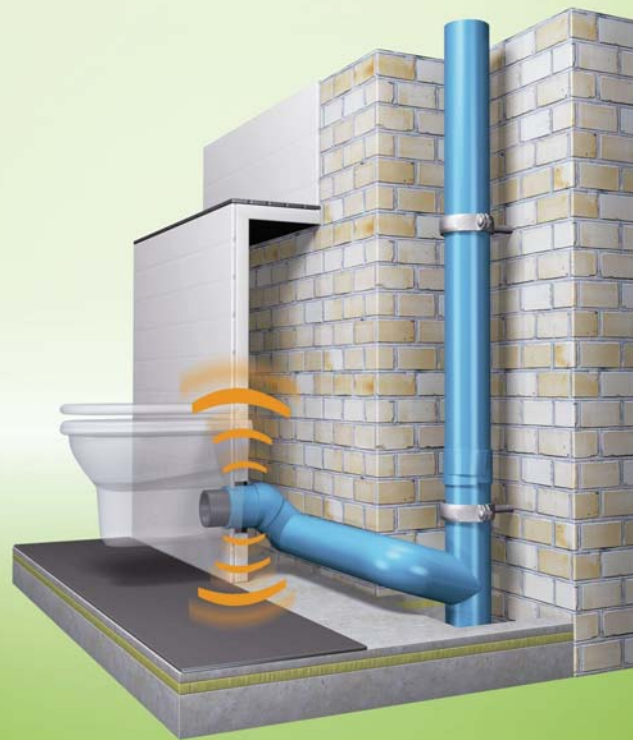
Code	Width [mm]	Length [m]	Thickness [mm]	Rolls/carton	
TL-TAPE/50-AR ●	50.0	15	3	12	
TL-TAPE/100-AR ●	100.0	15	3	6	

● Not a stock item. Delivery on request.

Tubolit[®] AR

Fonowave

THE NOISE REDUCING INSULATION FOR PLASTIC WASTE WATER PIPES



- Improved acoustic comfort
- Easy application over flanges and elbows
- < 11db(A) on plastic pipes
- Durable outside coating

Technical Data - Tubolit AR Fonowave

Brief description	Flexible, closed-cell extruded insulation material to reduce noise and prevent condensation, especially on plastic waste water and rain water pipes.
Material type	Foam material based on polyethylene. Factory made polyethylene foam (PEF) according to EN 14313.
Colour	blue
Material Special Information	Self-adhesive coating on tapes: pressure-sensitive adhesive coating on modified acrylate basis with mesh structure, covered with polyethylene foil.
Applications	Acoustic and thermal insulation of internal waste water and rain water 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.
Special Features	Foil coating on outer surface for additional protection of insulation surface. Special wave-shaped inner surface provides excellent acoustic performance on plastic pipes.
Remarks	EC Certificate of Constancy of Performance no. 0551 and 0543 (tape) of Güteschutzgemeinschaft Hartschaum (GSH) e.V. , Celle

Property	Value/Assessment		Test ²	Special Remarks	
Temperature Range					
Temperature Range	Max. service temperature	+ 100 °C	(+ 85 °C for tapes)	EU 5679 Tested acc. to EN 14707 and EN 14313	
	Min. service temperature		(as per typical plumbing installations)		
Thermal Conductivity					
Thermal Conductivity ¹	ϑ_m	40	[°C]	$\lambda =$	EU 5679 Declared acc. to EN ISO 13787 Tested acc. to EN ISO 8497
	Tubolit AR Fonowave	$\lambda \leq 0.045$	W/(m · K)	$[41 + 0,1 \cdot \vartheta_m + 0,0008 \cdot (\vartheta_m - 40)^2] / 1000$	
	Tubolit AR tape	$\lambda \leq 0.045$	W/(m · K)	$[41 + 0,1 \cdot \vartheta_m + 0,0008 \cdot (\vartheta_m - 40)^2] / 1000$	
Fire performance					
Reaction to fire ²	Tubolit AR Fonowave		E	EU 5679 Classified acc. to EN 13501-1 Tested acc. to EN ISO 11925-2	
	Tubolit AR tape		E		
Acoustic performance					
Reduction of structure-borne sound transmission	on plastic waste water pipes		≤ 11 dB(A)	D 4478 Tested acc. to EN 14366	
Other technical features					
Dimensions and tolerances	In accordance with EN 14313, table 1 and 2			EU 5679 Tested acc. to EN 822 EN 823 EN 13467	
Storage & Shelf life	Tapes self-adhesive: 1 year			Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).	

1. In accordance with testing methods and laboratory equipment, the thermal conductivity for Tubolit, S, S Plus and tape is measured in the conventional way

2. The building materials classification is valid on metal or solid, mineral surfaces.

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

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Installation instructions are available.

Tubolit AR Fonowave tubes endless (coils)



Length 10.0 m, Thickness 9.0 mm, Colour Blue, Covering Colour Blue, structure-borne noise insulation for waste-water and plastic sewage pipes with engineered wave profile and robust protective film

Pipe max. Outside- Ø [mm]	9,0 mm insulation thickness				
	Outer- Ø [mm]	Nominal width DN	Code	m/carton	Rolls/carton
57	50/56	50/56	TL-50/9-ARW •	80	8
76	75	70	TL-70/9-ARW •	60	6
110	110	100	TL-100/9-ARW •	50	5
133	125/135	125	TL-125/9-ARW •	40	4

• Not a stock item. Delivery on request.

Tubolit AR Fonowave self-adhesive tapes

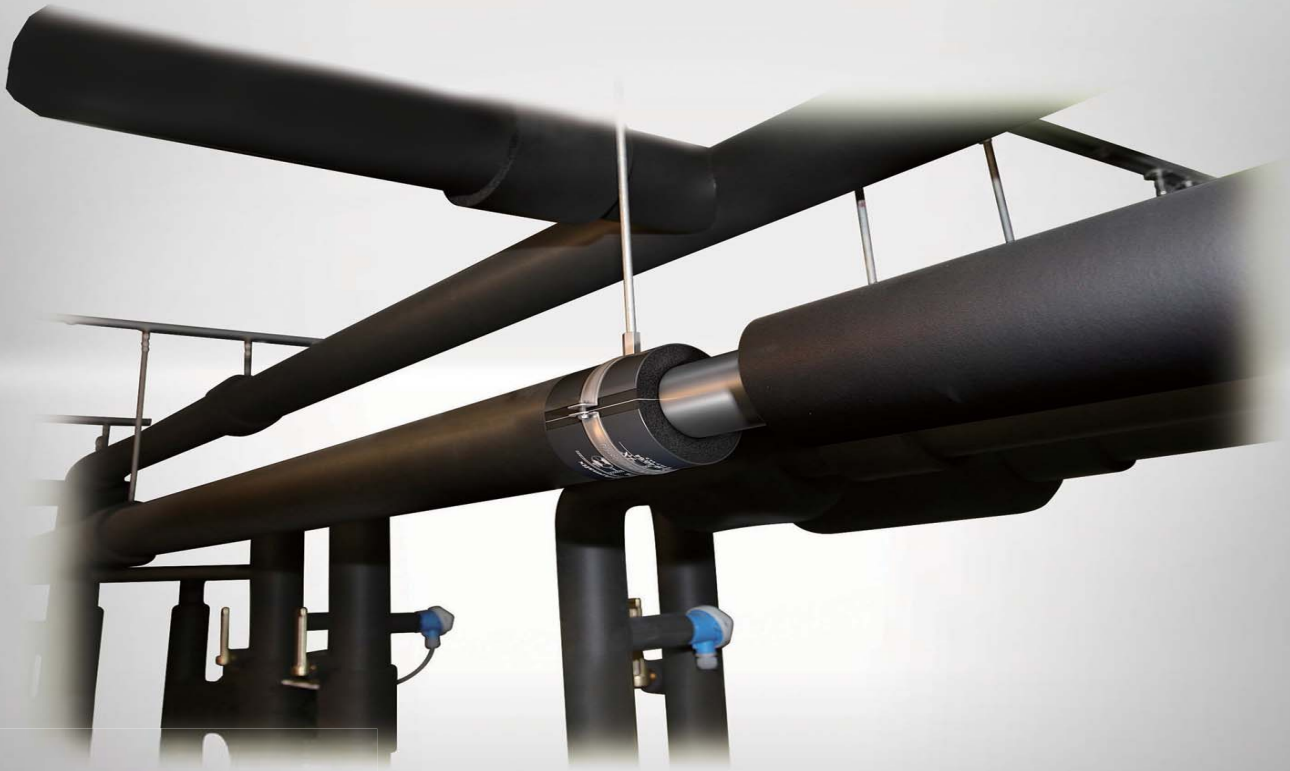


Colour Blue, DIN 4102-B1, made of polyethylene

Code	Width [mm]	Length [m]	Thickness [mm]	Rolls/carton
TL-TAPE/50-ARW •	50.0	15	3	12

• Not a stock item. Delivery on request.

PIPE SUPPORTS & ACCESSORIES



- **ARMAFIX AF**
- **ARMAFIX ULTIMA**
- **ARMAFIX NH**
- **ARMAFIX X**
- **ARMAFLEX PROTECT**
- **ARMAFLEX ACCESSORIES**

Corresponding Armafix insulated pipe supports available to match the different Armaflex materials to provide condensation control at fixing points.

Armaflex Protect for 120 minutes fire stop through wall and ceiling penetrations.

A full range of adhesives, tapes, paint and knives to achieve a professional installation.

Armafix® AF

PRE-INSULATED AF/ARMAFLEX® PIPE SUPPORTS FOR A COMPLETE CONDENSATION CONTROL SOLUTION



- Euroclass B-s3, d0 and high resistance to water vapour transmission (μ 10.000)
- NEW! 100% recycled ArmaFORM PET inserts with closed cell comb structure for improved load bearing capacity
- Built-in vapour barrier prevents thermal bridging and reduces risk of condensation
- Easy installation thanks to self-adhesive closure

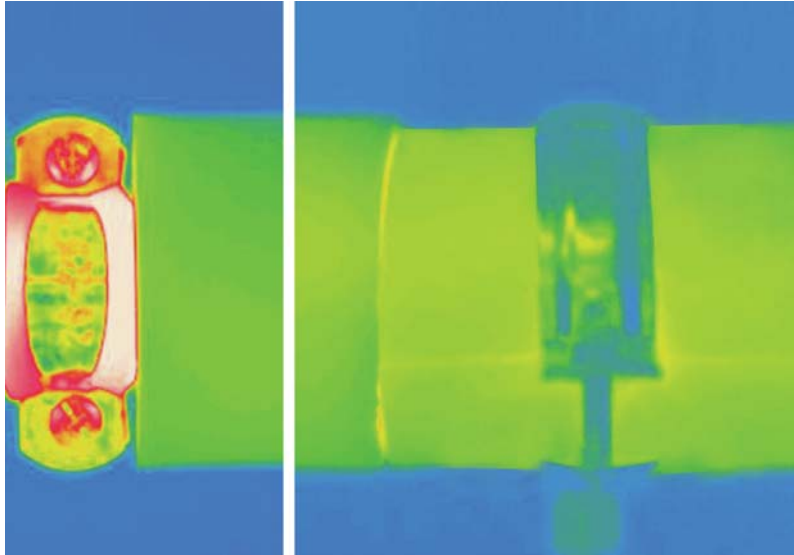
PREVENTING THERMAL BRIDGES

AF/Armafix thermally isolates the pipe and bracket and used as part of a system with AF/Armaflex Class 0 tubes or sheet provides long-term reliability for cold applications.

Armafix AF pipe supports are load bearing PET segments embedded in AF/Armaflex insulation, with two outer shells made of aluminium sheeting. With its closed cell structure acting as a built-in water vapour barrier and self-adhesive tape to secure the seams on both sides, thermal bridging and condensation are prevented to ensure energy is not lost at fixings points. Armafix has a quick and easy three step installation process to achieve a professional result whilst also saving time and money.

ARMAFIX AF

Pipe brackets represent a potential weak point in insulation systems. If the pipe isn't thermally isolated from the pipe bracket, thermal bridges occur and condensation can form. This leads to increased energy losses and the risk of corrosion and secondary damage. To prevent thermal bridges, direct contact between the pipe and its bracket should therefore be avoided. Armafix AF pipe supports, in combination with AF/Armaflex Class 0 are the key for a perfectly enclosed insulation system on refrigeration installations.



COMBI-PACK

The Armafix AF pipe supports are also available in convenient combination packs, including pipe supports with matching clamps.



DUCT SUPPORT

Armafix AF duct supports are also available to thermally decouple duct work from hanging brackets. The supports are 2 metres long, providing a tailored solution for duct sizes.



Technical Data - Armafix AF

Brief description	Insulated pipe and duct support system for refrigeration and air conditioning installations to prevent thermal bridging and condensation forming at pipe support fixing points. Single piece assembly with 2 ArmaFORM PET foam load bearing inserts (RG 100 kg/m ³) embedded in Armaflex insulation with self-adhesive closure. Armafix dimensions match Armaflex tube/sheet ranges.
Material type	PET foam bearing segments, embedded in and glued to Armaflex elastomeric foam material. Outside bearing shells made from painted aluminium sheeting 0.8mm thick.
Colour	Dark grey
Material Special Information	Traces of silicon can be found on the protective film used on the self-adhesive closures. Please contact our customer services for details.
Applications	Insulated pipe and duct supports to prevent thermal and acoustic bridging at fixing points on refrigeration systems and chilled water pipes.
Safety and Environment	ODP zero GWP zero Dust & fibre free
Remarks	When used in installations with intermittent temperatures, extensions and contractions of pipework may exert pressure on the insulation installation. This needs to be considered in the overall application by ensuring suitable compression of Armaflex at joining points.

Property	Value/Assessment	Super- vision ^{*2}	Special Remarks
Temperature Range			
Temperature Range	Max. service temperature + 110 °C Min. service temperature ¹ - 50 °C		
Thermal Conductivity			
Thermal Conductivity	ϑ +/-0 °C		Declared acc. to EN ISO 13787 Tested acc. to EN 12667 EN ISO 8497
	Same as AF/ Armaflex $\lambda \leq 0.033$ w/(m · k) $\lambda = [33 + 0.1 \cdot \vartheta m + 0.0008 \cdot \vartheta m^2]/1,000$		
Water vapour diffusion resistance			
Water vapour diffusion resistance	Same as AF/Armaflex $\mu \geq 10,000$		Tested acc. to EN 12086 and EN 13469
Fire performance			
Reaction to fire	Pipe Hanger: Same as Armaflex Entire System with Armaflex insulation: low flammability B / B _L -s3, d0	○	Classified acc. to EN 13501-1 Tested acc. to EN 13823 EN ISO 11925-2
Practical fire behaviour	Self extinguishing, does not drip, does not spread flames.		
Acoustic performance			
Reduction of structure-borne sound transmission	According to insulation material used in the clamp / pipe fastener		According to DIN 4109
Other technical features			
Density	95 - 105 kg/m ³ (pipe bearing segments)		
Storage & Shelf life	Products with self adhesive closures to be installed within 1 year.		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 Technical Department to request the corresponding technical information.

*1 ●: Official supervision by independent institutes and /or test authorities
○: In-house quality monitoring

Technical Data - Armafix Clamps

Brief description	Pipe clamp with quick release closing and combination nut for mounting.
Material type	Steel with an electrolytic zinc coating to protect the clamp from corrosion.
Colour	silver
Material Special Information	Clamps supplied with combination nut for fixing to threaded rod.
Applications	For use alongside Armaflex insulation at pipe hanging points to eliminate thermal bridging on refrigeration and air-conditioning installations.

Property	Value/Assessment
Fire performance	
Other	The insulation layer does not affect fire performance of the steel clamp itself.
Other technical features	
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

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended.

Armafix AF pipe supports and clamps



One-piece pipe support with self-seal fastener, complete with 2 ArmaFORM PET insert sections (RG 100 kg/m³). Available to fit a wide range of pipe diameters. Two half round steel pipe clamps with electrolytically applied zinc coating. Maximum clamp distances apply for vertical load effects on horizontal installations with predominantly static loads. Combined slot/cross tensioning screws supplied loosely secured.

Pipe max. Outside-Ø [mm]	Armaflex tube nom. Ø mm	Max. permissible distance [m]	AF-2 insulation thickness 9,5 mm - 16,0 mm				Clamps AF-2		
			Code	Outer- Ø [mm]	Length [mm]	Pieces/ carton	Code	Pieces/ carton	
10	10	2.00	FX-2-10/12 ●	34	45	32	PCX 025/030	25	
12	10	2.00	FX-2-10/12 ●	36	45	32	PCX 025/030	25	
15	15	2.00	FX-2-15/18 ●	40	45	32	PCX 033/037	25	
18	15	2.00	FX-2-15/18 ●	43	45	32	PCX 033/037	25	
22	22	2.75	FX-2-22/25 ●	47	45	32	PCX 042/046	25	
25	22	2.75	FX-2-22/25 ●	50	45	32	PCX 042/046	25	
28	28	3.00	FX-2-28/30 ●	53	45	32	PCX 047/052	25	
30	28	3.00	FX-2-28/30 ●	56	45	32	PCX 047/052	25	
35	35	3.50	FX-2-35/38 ●	61	50	28	PCX 054/058	25	
38	35	3.50	FX-2-35/38 ●	65	50	28	PCX 054/058	25	
42	42	3.75	FX-2-42/45 ●	69	50	28	PCX 063/068	25	
45	42	3.75	FX-2-42/45 ●	72	50	28	PCX 063/068	25	
48	48	4.25	FX-2-48 ●	76	55	28	PCX 068/073	10	
54	54	4.25	FX-2-54/57 ●	82	55	28	PCX 072/080	10	
57	54	4.25	FX-2-54/57 ●	85	55	28	PCX 072/080	10	
60	60	4.75	FX-2-60/64 ●	89	65	24	PCX 082/085	10	
64	60	4.75	FX-2-60/64 ●	92	65	24	PCX 082/085	10	
70	70	4.75	FX-2-70 ●	98	65	24	PCX 092/099	10	
76	76	5.50	FX-2-76/80 ●	105	75	20	PCX 099/103	10	
80	76	5.50	FX-2-76/80 ●	109	75	20	PCX 099/103	10	
89	89	6.00	FX-2-89 ●	118	95	16	PCX 112/118	10	
102	102	6.00	FX-2-102/108 ●	134	95	16	PCX 133/137	10	
108	102	6.00	FX-2-102/108 ●	141	95	16	PCX 133/137	10	
114	114	6.00	FX-2-110/114 ●	144	115	12	PCX 137/142	10	
125	125	6.00	FX-2-125 ●	158	115	12	PCX 145/152	10	
133	133	6.00	FX-2-133/140 ●	165	115	12	PCX 159/164	10	
140	133	6.00	FX-2-133/140 ●	172	115	12	PCX 159/164	10	
160	160	6.00	FX-2-160 ●	193	115	9	PCX 190	10	
165	165	6.00	FX-2-165/168 ●¹	198	125	9	PCX 199	10	
168	165	6.00	FX-2-165/168 ●¹	201	125	9	PCX 199	10	

Armafix AF pipe supports and clamps



One-piece pipe support with self-seal fastener, complete with 2 ArmaFORM PET insert sections (RG 100 kg/m³). Available to fit a wide range of pipe diameters. Two half round steel pipe clamps with electrolytically applied zinc coating. Maximum clamp distances apply for vertical load effects on horizontal installations with predominantly static loads. Combined slot/cross tensioning screws supplied loosely secured.

Pipe max. Outside-Ø [mm]	Armaflex tube nom. Ø mm	Max. permissible distance [m]	AF-4 (AF-3)* insulation thickness 15,5 mm - 25,0 mm				Clamps AF-4 (AF-3)*		
			Code	Outer- Ø [mm]	Length [mm]	Pieces/ carton	Code	Pieces/ carton	
10	10	2.00	FX-4(3)-10/12 ●	46	55	28	PCX 042/046	25	
12	10	2.00	FX-4(3)-10/12 ●	48	55	28	PCX 042/046	25	
15	15	2.00	FX-4(3)-15/18 ●	52	55	28	PCX 042/046	25	
18	15	2.00	FX-4(3)-15/18 ●	55	55	28	PCX 042/046	25	
22	22	2.75	FX-4(3)-22/25 ●	60	55	28	PCX 054/058	25	
25	22	2.75	FX-4(3)-22/25 ●	64	55	28	PCX 054/058	25	
28	28	3.00	FX-4(3)-28/30 ●	66	55	28	PCX 063/068	25	
30	28	3.00	FX-4(3)-28/30 ●	70	55	28	PCX 063/068	25	
35	35	3.50	FX-4(3)-35/38 ●	74	65	24	PCX 068/073	10	
38	35	3.50	FX-4(3)-35/38 ●	79	65	24	PCX 068/073	10	
42	42	3.75	FX-4(3)-42/45 ●	85	65	24	PCX 072/080	10	
45	42	3.75	FX-4(3)-42/45 ●	88	65	24	PCX 072/080	10	
48	48	4.25	FX-4(3)-48 ●	91	65	24	PCX 082/085	10	
54	54	4.25	FX-4(3)-54/57 ●	98	65	24	PCX 088/092	10	
57	54	4.25	FX-4(3)-54/57 ●	101	65	24	PCX 088/092	10	
60	60	4.75	FX-4(3)-60/64 ●	105	75	20	PCX 099/103	10	
64	60	4.75	FX-4(3)-60/64 ●	109	75	20	PCX 099/103	10	
70	70	4.75	FX-4(3)-70 ●	116	75	20	PCX 108/112	10	
76	76	5.50	FX-4(3)-76/80 ●	122	85	16	PCX 112/118	10	
80	76	5.50	FX-4(3)-76/80 ●	127	85	16	PCX 112/118	10	
89	89	6.00	FX-4(3)-89 ●	136	100	12	PCX 133/137	10	
102	102	6.00	FX-4(3)-102/108 ●	149	100	12	PCX 137/142	10	
108	102	6.00	FX-4(3)-102/108 ●	156	100	12	PCX 137/142	10	
114	114	6.00	FX-4(3)-110/114 ●	162	115	12	PCX 145/152	10	
125	125	6.00	FX-4(3)-125 ●	173	115	12	PCX 168/173	10	
133	133	6.00	FX-4(3)-133/140 ●	183	115	12	PCX 190	10	
140	133	6.00	FX-4(3)-133/140 ●	189	115	12	PCX 190	10	
160	160	6.00	FX-4(3)-160 ●	210	115	6	PCX 206	10	
165	165	6.00	FX-4(3)-165/168 ● ¹	216	125	6	PCX 222	10	
168	165	6.00	FX-4(3)-165/168 ● ¹	219	125	6	PCX 222	10	

Armafix AF pipe supports and clamps



One-piece pipe support with self-seal fastener, complete with 2 ArmaFORM PET insert sections (RG 100 kg/m³). Available to fit a wide range of pipe diameters. Two half round steel pipe clamps with electrolytically applied zinc coating. Maximum clamp distances apply for vertical load effects on horizontal installations with predominantly static loads. Combined slot/cross tensioning screws supplied loosely secured.

Pipe max. Outside-Ø [mm]	Armaflex tube nom. Ø mm	Max. permissible distance [m]	AF-6 insulation thickness 32,0 mm - 45,0 mm				Clamps AF-6		
			Code	Outer- Ø [mm]	Length [mm]	Pieces/ carton	Code	Pieces/ carton	
15	15	2.00	FX-6-15/18 ● ¹	74	75	20	PCX 068/073	10	
18	15	2.00	FX-6-15/18 ● ¹	77	75	20	PCX 068/073	10	
22	22	2.75	FX-6-22/25 ●	80	75	20	PCX 072/080	10	
25	22	2.75	FX-6-22/25 ●	84	75	20	PCX 072/080	10	
28	28	3.00	FX-6-28/30 ●	91	75	20	PCX 082/085	10	
30	28	3.00	FX-6-28/30 ●	95	75	20	PCX 082/085	10	
35	35	3.50	FX-6-35/38 ●	104	85	16	PCX 099/103	10	
38	35	3.50	FX-6-35/38 ●	109	85	16	PCX 099/103	10	
42	42	3.75	FX-6-42/45 ●	113	85	16	PCX 099/103	10	
45	42	3.75	FX-6-42/45 ●	116	85	16	PCX 099/103	10	
48	48	4.25	FX-6-48 ●	119	85	16	PCX 112/118	10	
54	54	4.25	FX-6-54/57 ●	126	85	16	PCX 112/118	10	
57	54	4.25	FX-6-54/57 ●	129	85	16	PCX 112/118	10	
60	60	4.75	FX-6-60/64 ●	134	100	12	PCX 133/137	10	
64	60	4.75	FX-6-60/64 ●	137	100	12	PCX 133/137	10	
70	70	4.75	FX-6-70 ●	144	100	12	PCX 137/142	10	
76	76	5.50	FX-6-76/80 ●	152	115	12	PCX 137/142	10	
80	76	5.50	FX-6-76/80 ●	156	115	12	PCX 137/142	10	
89	89	6.00	FX-6-89 ●	167	125	12	PCX 159/164	10	
102	102	6.00	FX-6-102/108 ●	179	125	12	PCX 190	10	
108	102	6.00	FX-6-102/108 ●	188	125	12	PCX 190	10	
114	114	6.00	FX-6-110/114 ●	196	145	12	PCX 199	10	
125	125	6.00	FX-6-125 ●	207	145	12	PCX 206	10	
133	133	6.00	FX-6-133/140 ●	219	145	8	PCX 231	10	
140	133	6.00	FX-6-133/140 ●	225	145	8	PCX 231	10	
160	160	6.00	FX-6-160 ●	248	145	6	PCX 249	10	
165	165	6.00	FX-6-165/168 ● ¹	254	165	5	PCX 259	10	
168	165	6.00	FX-6-165/168 ● ¹	257	165	5	PCX 259	10	

Remark Pipe supports for plastic and stainless steel pipes available on request.
outer Ø = installation Ø

All clamps delivery on request

Regulations Max. permissible distance (m) according to DIN 1988

● Not a stock item. Delivery on request.

¹ Sheets

Armafix AF duct supports

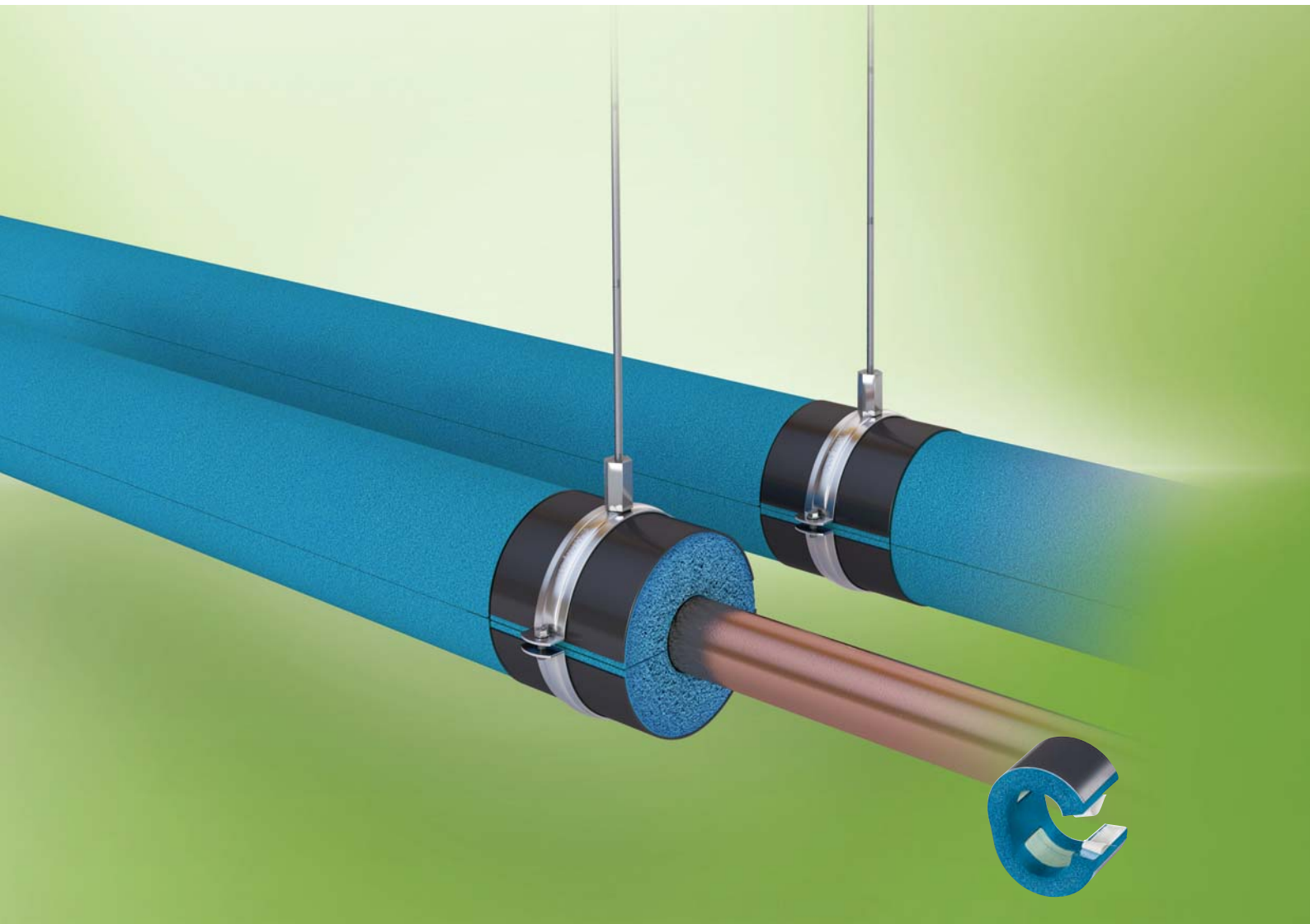


Code	Thickness [mm]	Width [mm]	Length [m]	Pieces/carton	
AS-19MM ●	19.0	100.0	2	5	
AS-25MM ●	25.0	100.0	2	4	

● Not a stock item. Delivery on request.

Armafix[®]
Ultima

THE COMPATIBLE PIPE SUPPORT FOR B-s1, d0 ARMAFLEX ULTIMA[®] SYSTEMS WITH LOW SMOKE REQUIREMENTS



- Increased safety through superior fire performance and reduced smoke density
- Prevents thermal bridges, reduces energy losses and minimizes CO₂ emissions
- Fully matches the Armaflex Ultima product range
- First flexible closed-cell insulation with Euroclass B_L-s1,d0
- Excellent protection against water vapour diffusion for long-term performance
- Low thermal conductivity for high energy savings

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 match the Armaflex Ultima tube/sheet 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.
Colour	Blue
Material Special Information	Traces of silicon can be found on protection paper/foil used to protect self-adhesive closures. Please contact customer services for details.
Applications	Thermally non-interacting mounting aid for tubes/sheets in refrigeration and air-conditioning applications, which are to be insulated with Armaflex Ultima.
Remarks	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	Special Remarks
Temperature Range		
Temperature Range	Max. service temperature + 110 °C Min. service temperature ¹ -50 °C	
Thermal Conductivity		
Thermal Conductivity	Same as Armaflex Ultima	Declared acc. to EN ISO 13787 Tested acc. to EN 12667 EN ISO 8497
Water vapour diffusion resistance		
Water vapour diffusion resistance	Same as Armaflex Ultima	Tested acc. to EN 12086 and EN 13469
Fire performance		
Reaction to fire	Euroclass E Entire system with Armaflex Ultima B _L -s1, d0	Classified acc. to EN 13501-1 Tested acc. to DIN EN 13823 DIN EN ISO 11925-2
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames	
Acoustic performance		
Reduction of structure-borne sound transmission	According to the insulation layer used in clamp / pipe fastener	According to DIN 4109
Other technical features		
Density	95 - 105 kg/m ³ (pipe bearing segments)	
Storage & Shelf life	Products with self adhesive closures to be installed within 1 year.	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 Technical Department to request the corresponding technical information.

Technical Data - Armafix Clamps

Brief description	Pipe clamp with quick release closing and combination nut for mounting.
Material type	Steel with an electrolytic zinc coating to protect the clamp from corrosion.
Colour	silver
Material Special Information	Clamps supplied with combination nut for fixing to threaded rod.
Applications	For use alongside Armaflex insulation at pipe hanging points to eliminate thermal bridging on refrigeration and air-conditioning installations.

Property	Value/Assessment
Fire performance	
Other	The insulation layer does not affect fire performance of the steel clamp itself.
Other technical features	
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

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended.

Armafix Ultima pipe supports and clamps



Pipe max. Outside-Ø [mm]	Max. permissible distance [m]	13,0 mm insulation thickness			Clamps 13,0 mm		
		Code	Pieces/carton		Code	Pieces/carton	
10	2.00	ULP13(9)-10/12 ●	32		PCX 025/030	25	
12	2.00	ULP13(9)-10/12 ●	32		PCX 025/030	25	
15	2.00	ULP13(9)-15/18 ●	32		PCX 033/037	25	
18	2.00	ULP13(9)-15/18 ●	32		PCX 033/037	25	
22	2.75	ULP13(9)-22/25 ●	32		PCX 042/046	25	
25	2.75	ULP13(9)-22/25 ●	32		PCX 042/046	25	
28	3.00	ULP13(9)-28/30 ●	32		PCX 047/052	25	
30	3.00	ULP13(9)-28/30 ●	32		PCX 047/052	25	
35	3.50	ULP13(9)-35/38 ●	28		PCX 054/058	25	
38	3.50	ULP13(9)-35/38 ●	28		PCX 054/058	25	
42	3.75	ULP13(9)-42/45 ●	28		PCX 063/068	25	
45	3.75	ULP13(9)-42/45 ●	28		PCX 063/068	25	
48	4.25	ULP13(9)-48 ●	28		PCX 068/073	10	
54	4.25	ULP13(9)-54/57 ●	28		PCX 068/073	10	
57	4.25	ULP13(9)-54/57 ●	28		PCX 068/073	10	
60	4.75	ULP13(9)-60/64 ●	24		PCX 082/085	10	
64	4.75	ULP13(9)-60/64 ●	24		PCX 082/085	10	
76	5.50	ULP13(9)-76/80 ●	20		PCX 092/099	10	
80	5.50	ULP13(9)-76/80 ●	20		PCX 092/099	10	
89	6.00	ULP13(9)-89 ●	16		PCX 108/112	10	

Pipe max. Outside-Ø [mm]	Max. permissible distance [m]	19,0 mm insulation thickness			Clamps 19,0 mm		
		Code	Pieces/carton		Code	Pieces/carton	
10	2.00	ULP19-10/12 ●	28		PCX 038/041	25	
12	2.00	ULP19-10/12 ●	28		PCX 038/041	25	
15	2.00	ULP19-15/18 ●	28		PCX 047/052	25	
18	2.00	ULP19-15/18 ●	28		PCX 047/052	25	
22	2.75	ULP19-22/25 ●	28		PCX 054/058	25	
25	2.75	ULP19-22/25 ●	28		PCX 054/058	25	
28	3.00	ULP19-28/30 ●	28		PCX 059/063	25	
30	3.00	ULP19-28/30 ●	28		PCX 059/063	25	
35	3.50	ULP19-35/38 ●	24		PCX 063/068	25	
38	3.50	ULP19-35/38 ●	24		PCX 063/068	25	
42	3.75	ULP19-42/45 ●	24		PCX 068/073	10	
45	3.75	ULP19-42/45 ●	24		PCX 068/073	10	
48	4.25	ULP19-48 ●	24		PCX 072/080	10	
54	4.25	ULP19-54/57 ●	24		PCX 082/085	10	
57	4.25	ULP19-54/57 ●	24		PCX 082/085	10	
60	4.75	ULP19-60/64 ●	20		PCX 088/092	10	
64	4.75	ULP19-60/64 ●	20		PCX 088/092	10	
76	5.50	ULP19-76/80 ●	16		PCX 099/103	10	
80	5.50	ULP19-76/80 ●	16		PCX 099/103	10	
89	6.00	ULP19-89 ●	12		PCX 112/118	10	

Armafix Ultima pipe supports and clamps

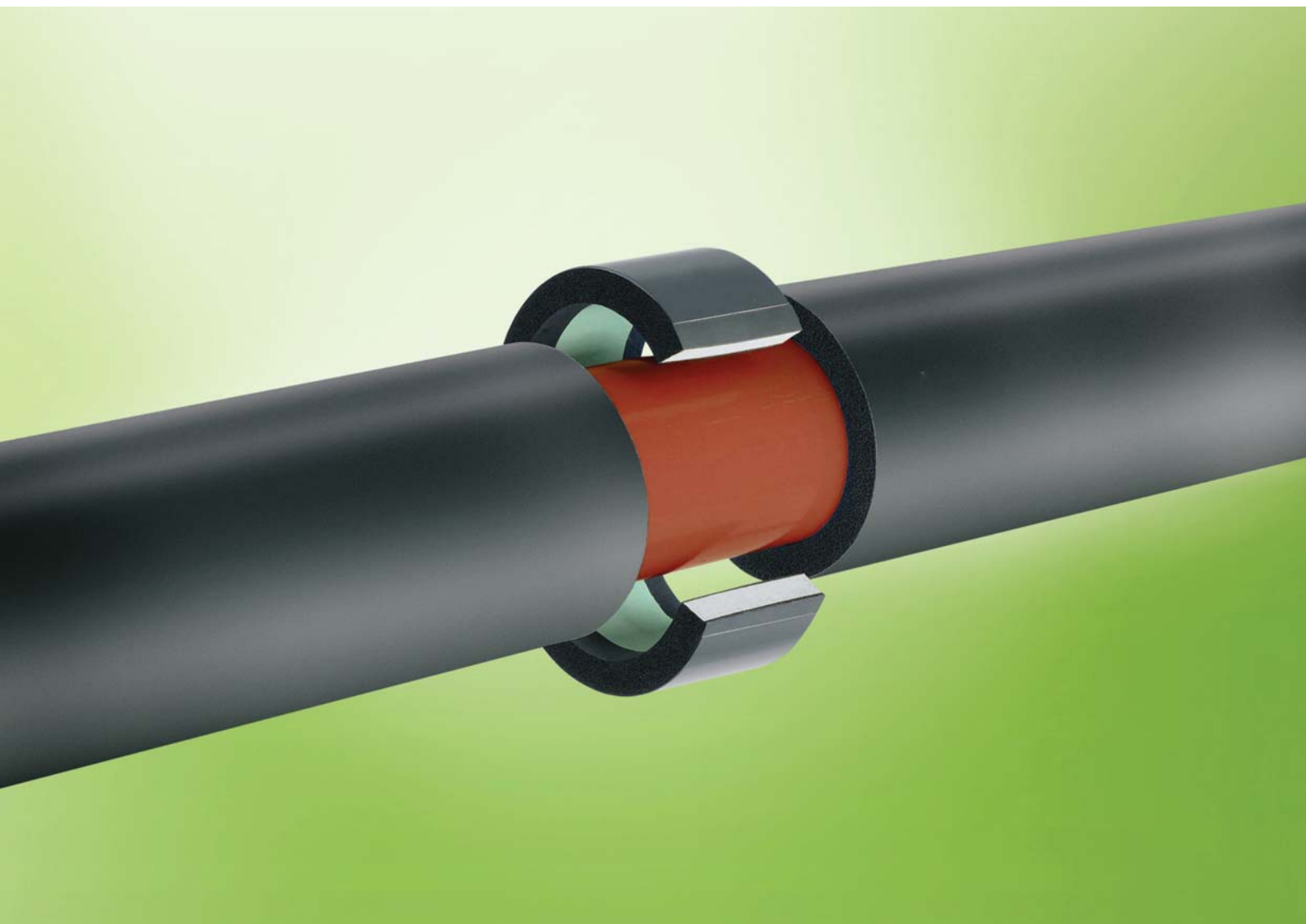


Pipe max. Outside-Ø [mm]	Max. permissible distance [m]	25,0 mm insulation thickness			Clamps 25,0 mm		
		Code	Pieces/carton		Code	Pieces/carton	
15	2.00	ULP25-15/18 •	28		PCX 059/063	25	
18	2.00	ULP25-15/18 •	28		PCX 059/063	25	
22	2.75	ULP25-22/25 •	28		PCX 063/068	25	
25	2.75	ULP25-22/25 •	28		PCX 063/068	25	
28	3.00	ULP25-28/30 •	28		PCX 068/073	10	
30	3.00	ULP25-28/30 •	28		PCX 068/073	10	
35	3.50	ULP25-35/38 •	24		PCX 072/080	10	
38	3.50	ULP25-35/38 •	24		PCX 072/080	10	
42	3.75	ULP25-42/45 •	24		PCX 082/085	10	
45	3.75	ULP25-42/45 •	24		PCX 082/085	10	
48	4.25	ULP25-48 •	24		PCX 088/092	10	
54	4.25	ULP25-54/57 •	24		PCX 092/099	10	
57	4.25	ULP25-54/57 •	24		PCX 092/099	10	
60	4.75	ULP25-60/64 •	20		PCX 099/103	10	
64	4.75	ULP25-60/64 •	20		PCX 099/103	10	
76	5.50	ULP25-76/80 •	16		PCX 112/118	10	
80	5.50	ULP25-76/80 •	16		PCX 112/118	10	
89	6.00	ULP25-89 •	12		PCX 137/142	10	

• Not a stock item. Delivery on request.

Armafix® NH

THE NON-HALOGEN PIPE SUPPORT FOR
SYSTEM COMPATIBILITY WITH NH/
ARMAFLEX®



- Enhanced system security in combination with NH/ Armaflex
- Simple joining with double self-adhesive layers
- Matching clamps for Armafix pipe supports
- Installed in three easy steps

- Halogen and PVC free pipe support to prevent corrosion
- Energy saving and condensation control



Technical Data - Armafix NH

Brief description	Insulated pipe and duct support system to prevent condensation at fixing points on refrigeration and air conditioning installations. Single piece assembly with 2 ArmaFORM PET-foam rigid inserts embedded in the insulation and self-adhesive closure. All dimensions to match the NH/Armaflex range.
Material type	PET-foam bearing segments, embedded in and glued to NH/Armaflex elastomeric foam material. Outside bearing shells made of painted aluminium sheeting 0.8mm thick, which simultaneously serve as a vapour barrier for the PET bearing segments.
Colour	Dark grey
Material Special Information	Traces of silicon can be found on the protective paper/foil used to protect self-adhesive closures.
Applications	For use with NH/Armaflex insulation tubes/sheets on refrigeration and air-conditioning applications.
Remarks	When used on installations with intermittent temperatures, extensions and contractions in pipework may exert pressure on the installation. This needs to be considered in the overall insulation construction by ensuring sufficient compression of joints.

Property	Value/Assessment	Test ^{*3}	Super-vision ^{*4}	Special Remarks
Temperature Range				
Temperature Range	Max. service temperature	+ 110 °C		
	Min. service temperature ¹	-50 °C		
Thermal Conductivity				
Thermal Conductivity	ϑ	± 0		Declared acc. to EN ISO 13787 Tested acc. to EN 12667 EN ISO 8497
	Same as NH/Armaflex. λ ≤	0.040 w/(m · k)		
Water vapour diffusion resistance				
Water vapour diffusion resistance	Same as NH/Armaflex. μ ≥	2,000		Tested acc. to EN 12086 and EN 13469
Fire performance				
Reaction to fire	Pipe Hanger: Same as NH/Armaflex Entire system with Armaflex insulation: low flammability	D 4702	○	Tested according to DIN EN ISO 11925-2
Practical fire behaviour	Self extinguishing, does not drip, does not spread flames.			
Acoustic performance				
Reduction of structure-borne sound transmission	According to insulation layer used in pipe fastener			According to DIN 4109
Other technical features				
Density	95 - 105 kg/m ³ (pipe bearing segments)			
Storage & Shelf life	Products with self adhesive closures to be installed within 1 year.			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 Technical Department to request the corresponding technical information.

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

*2 ●: Official supervision by independent institutes and /or test authorities
○: In-house quality monitoring

Technical Data - Armafix Clamps

Brief description	Pipe clamp with quick release closing and combination nut for mounting.
Material type	Steel with an electrolytic zinc coating to protect the clamp from corrosion.
Colour	silver
Material Special Information	Clamps supplied with combination nut for fixing to threaded rod.
Applications	For use alongside Armaflex insulation at pipe hanging points to eliminate thermal bridging on refrigeration and air-conditioning installations.

Property	Value/Assessment
Fire performance	
Other	The insulation layer does not affect fire performance of the steel clamp itself.
Other technical features	
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

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended.

Armafix NH pipe supports and clamps



One-piece pipe support with self-seal fastener, complete with 2 PET load-bearing segments (RG 100 kg/m³). All dimensions to match the pipe range.

Pipe max. Outside-Ø [mm]	Armaflex tube nom. Ø mm	Max. permissible distance [m]	13,0 mm insulation thickness			Clamps 13,0 mm		
			Code	Pieces/carton		Code	Pieces/carton	
10	10	2.00	PHN-13-10/12 ●	32		PCX 025/030	25	
12	10	2.00	PHN-13-10/12 ●	32		PCX 025/030	25	
15	10	2.00	PHN-13-10/12 ●	32		PCX 025/030	25	
15	15	2.00	PHN-13-15/18 ●	32		PCX 033/037	25	
18	15	2.00	PHN-13-15/18 ●	32		PCX 033/037	25	
22	22	2.75	PHN-13-22/25 ●	32		PCX 042/046	25	
25	22	2.75	PHN-13-22/25 ●	32		PCX 042/046	25	
28	28	3.00	PHN-13-28/30 ●	32		PCX 047/052	25	
30	28	3.00	PHN-13-28/30 ●	32		PCX 047/052	25	
32	32	3.50	PHN-13-32 ●	28		PCX 047/052	25	
35	35	3.50	PHN-13-35/38 ●	28		PCX 054/058	25	
38	35	3.50	PHN-13-35/38 ●	28		PCX 054/058	25	
40	40	3.75	PHN-13-40 ●	28		PCX 059/063	25	
42	42	3.75	PHN-13-42/45 ●	28		PCX 063/068	25	
45	42	3.75	PHN-13-42/45 ●	28		PCX 063/068	25	
48	48	4.25	PHN-13-48 ●	28		PCX 068/073	10	
54	54	4.25	PHN-13-54/57 ●	28		PCX 068/073	10	
57	54	4.25	PHN-13-54/57 ●	28		PCX 068/073	10	
60	60	4.75	PHN-13-60/64 ●	24		PCX 082/085	10	
64	60	4.75	PHN-13-60/64 ●	24		PCX 082/085	10	
76	76	5.50	PHN-13-76/80 ●	20		PCX 092/099	10	
80	76	5.50	PHN-13-76/80 ●	20		PCX 092/099	10	
89	89	6.00	PHN-13-89 ●	16		PCX 108/112	10	

Pipe max. Outside-Ø [mm]	Armaflex tube nom. Ø mm	Max. permissible distance [m]	19,0 mm insulation thickness			Clamps 19,0 mm		
			Code	Pieces/carton		Code	Pieces/carton	
10	10	2.00	PHN-19-10/12 ●	28		PCX 038/041	25	
12	10	2.00	PHN-19-10/12 ●	28		PCX 038/041	25	
15	10	2.00	PHN-19-10/12 ●	28		PCX 038/041	25	
15	15	2.00	PHN-19-15/18 ●	28		PCX 047/052	25	
18	15	2.00	PHN-19-15/18 ●	28		PCX 047/052	25	
22	22	2.75	PHN-19-22/25 ●	28		PCX 054/058	25	
25	22	2.75	PHN-19-22/25 ●	28		PCX 054/058	25	
28	28	3.00	PHN-19-28/30 ●	28		PCX 059/063	25	
30	28	3.00	PHN-19-28/30 ●	28		PCX 059/063	25	
32	32	3.50	PHN-19-32 ●	28		PCX 059/063	25	
35	35	3.50	PHN-19-35/38 ●	24		PCX 063/068	25	
38	35	3.50	PHN-19-35/38 ●	24		PCX 063/068	25	
42	42	3.75	PHN-19-42/45 ●	24		PCX 068/073	10	
45	42	3.75	PHN-19-42/45 ●	24		PCX 068/073	10	
48	48	4.25	PHN-19-48 ●	24		PCX 072/080	10	
54	54	4.25	PHN-19-54/57 ●	24		PCX 082/085	10	
57	54	4.25	PHN-19-54/57 ●	24		PCX 082/085	10	
60	60	4.75	PHN-19-60/64 ●	20		PCX 088/092	10	
64	60	4.75	PHN-19-60/64 ●	20		PCX 088/092	10	

Armafix NH pipe supports and clamps



One-piece pipe support with self-seal fastener, complete with 2 PET load-bearing segments (RG 100 kg/m³). All dimensions to match the pipe range.

Pipe max. Outside-Ø [mm]	Armaflex tube nom. Ø mm	Max. permissible distance [m]	25,0 mm insulation thickness		Clamps 25,0 mm			
			Code	Pieces/carton	Code	Pieces/carton		
15	15	2.00	PHN-25-15/18 ●	28		PCX 059/063	25	
18	15	2.00	PHN-25-15/18 ●	28		PCX 059/063	25	
22	22	2.75	PHN-25-22/25 ●	28		PCX 063/068	25	
25	22	2.75	PHN-25-22/25 ●	28		PCX 063/068	25	
28	28	3.00	PHN-25-28/30 ●	28		PCX 068/073	10	
30	28	3.00	PHN-25-28/30 ●	28		PCX 068/073	10	
32	32	3.50	PHN-25-32 ●	24		PCX 068/073	10	
35	35	3.50	PHN-25-35/38 ●	24		PCX 072/080	10	
38	35	3.50	PHN-25-35/38 ●	24		PCX 072/080	10	
42	42	3.75	PHN-25-42/45 ●	24		PCX 082/085	10	
45	42	3.75	PHN-25-42/45 ●	24		PCX 082/085	10	
48	48	4.25	PHN-25-48 ●	24		PCX 088/092	10	
54	54	4.25	PHN-25-54/57 ●	24		PCX 092/099	10	
57	54	4.25	PHN-25-54/57 ●	24		PCX 092/099	10	
60	60	4.75	PHN-25-60/64 ●	20		PCX 099/103	10	
64	60	4.75	PHN-25-60/64 ●	20		PCX 099/103	10	
76	76	5.50	PHN-25-76/80 ●	16		PCX 112/118	10	
80	76	5.50	PHN-25-76/80 ●	16		PCX 112/118	10	

Remark All clamps delivery on request
Technical properties Other sizes available on request.
 ● Not a stock item. Delivery on request.

Armafix[®] X

THE LOW COST ALTERNATIVE PIPE
SUPPORT WITH ARMAFLEX[®] SYSTEM
PERFORMANCE



- Light weight pipe support system for regular HVAC applications
- Easy match with Armaflex insulation range
- Self-adhesive closing seam
- Prevents thermal bridging

- Dust and fibre free
- Inserts joined under factory conditions
- Design tested and patented
- Matching clamps available in convenient combi-pack set

Technical Data - Armafix X

Brief description	Pipe support for fixing and hanging cooling, air conditioning and heating pipes.
Material type	Support element made from moulded plastic inserts, which are glued on two sides of the Armaflex elastomeric foam.
Colour	Black
Material Special Information	Traces of silicon can be found on the paper/foil used to protect self-adhesive closures.
Applications	Pipe support to prevent thermal bridging at fixing points on pipework insulated with Armaflex elastomeric foam.
Manufacturing	Inserts joined under factory conditions
Remarks	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	Special Remarks
Temperature Range		
Temperature Range	Max. service temperature + 110 °C Min. service temperature 0 °C	
Thermal Conductivity		
Thermal Conductivity	Same as Armaflex elastomeric foam	Declared acc. to EN ISO 13787 Tested acc. to EN 12667 EN ISO 8497
Water vapour diffusion resistance		
Water vapour diffusion resistance	Same as Armaflex elastomeric foam	Tested acc. to EN 12086 and EN 13469
Fire performance		
Reaction to fire	Euroclass E Entire System with Armacell elastomeric foam: B _L -s3, d0	Classified acc. to EN 13501-1 Tested acc. to EN 13823 EN ISO 11925-2
Practical fire behaviour	Self extinguishing, does not drip, does not spread flames.	
Acoustic performance		
Reduction of structure-borne sound transmission	According to the insulation used in the clamp / pipe fastener	According to DIN 4109
Other technical features		
Storage & Shelf life	Products with self adhesive closures to be installed within 1 year.	Can be stored in dry, clean rooms at normal relative humidity (50% to 70%) and ambient temperature (0 °C – 35 °C).

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended.

Technical Data - Armafix Clamps

Brief description	Pipe clamp with quick release closing and combination nut for mounting.
Material type	Steel with an electrolytic zinc coating to protect the clamp from corrosion.
Colour	silver
Material Special Information	Clamps supplied with combination nut for fixing to threaded rod.
Applications	For use alongside Armaflex insulation at pipe hanging points to eliminate thermal bridging on refrigeration and air-conditioning installations.

Property	Value/Assessment
Fire performance	
Other	The insulation layer does not affect fire performance of the steel clamp itself.
Other technical features	
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

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended.

Armafix X pipe supports combi pack



Pipe support supplied with corresponding clamp size. Especially designed for use with Armaflex.

Pipe max. Outside-Ø [mm]	13,0 mm insulation thickness nominal				19,0 mm insulation thickness nominal			
	Max. permissible distance [m]	Code	Pieces/carton		Max. permissible distance [m]	Code	Pieces/carton	
10	2.00	X-13-010K ●	50		2.00	X-19-010K ●	50	
12	2.00	X-13-012K ●	50		2.00	X-19-012K ●	50	
15	2.00	X-13-015K ●	50		2.00	X-19-015K ●	50	
18	2.25	X-13-018K ●	50		2.25	X-19-018K ●	50	
22	2.75	X-13-022K ●	50		2.75	X-19-022K ●	50	
25	2.75	X-13-025K ●	50		2.75	X-19-025K ●	50	
28	3.00	X-13-028K ●	50		3.00	X-19-028K ●	50	
30	3.00	X-13-030K ●	50		3.00	X-19-030K ●	50	
35	3.50	X-13-035K ●	50		3.50	X-19-035K ●	40	
42	3.75	X-13-042K ●	30		3.75	X-19-042K ●	30	
48	4.25	X-13-048K ●	30		4.25	X-19-048K ●	30	
54	4.25	X-13-054K ●	30		4.25	X-19-054K ●	30	
60	4.75	X-13-060K ●	30		4.75	X-19-060K ●	20	
64	4.75	X-13-064K ●	30		4.75	X-19-064K ●	20	
70	4.75	X-13-070K ●	20		4.75	X-19-070K ●	20	
76	5.50	X-13-076K ●	20		5.50	X-19-076K ●	10	
89	6.00	X-13-089K ●	10		6.00	X-19-089K ●	10	

Pipe max. Outside-Ø [mm]	25,0 mm insulation thickness nominal							
	Max. permissible distance [m]	Code	Pieces/carton					
15	2.00	X-25-015K ●	25					
18	2.25	X-25-018K ●	25					
22	2.75	X-25-022K ●	25					
25	3.00	X-25-025K ●	30					
28	3.00	X-25-028K ●	30					
30	3.00	X-25-030K ●	30					
35	3.50	X-25-035K ●	30					
42	3.75	X-25-042K ●	20					
48	4.25	X-25-048K ●	20					
54	4.25	X-25-054K ●	20					
60	4.75	X-25-060K ●	20					
64	4.75	X-25-064K ●	10					
70	4.75	X-25-070K ●	10					
76	5.50	X-25-076K ●	10					
89	6.00	X-25-089K ●	10					

● Not a stock item. Delivery on request.

Armafix X pipe supports and clamps



Pipe support and clamps sold separately.

Pipe max. Outside-Ø [mm]	Max. permissible distance [m]	13,0 mm insulation thickness			Clamps 13,0 mm		
		Code	Pieces/carton		Code	Pieces/carton	
10	2.00	X-13-010 ●	36		PCX 025/030	25	
12	2.00	X-13-012 ●	36		PCX 033/037	25	
15	2.00	X-13-015 ●	36		PCX 033/037	25	
18	2.25	X-13-018 ●	36		PCX 033/037	25	
22	2.75	X-13-022 ●	36		PCX 047/052	25	
25	2.75	X-13-025 ●	32		PCX 047/052	25	
28	3.00	X-13-028 ●	30		PCX 047/052	25	
30	3.00	X-13-030 ●	30		PCX 047/052	25	
35	3.50	X-13-035 ●	30		PCX 054/058	25	
42	3.75	X-13-042 ●	30		PCX 063/068	25	
48	4.25	X-13-048 ●	30		PCX 068/073	10	
54	4.25	X-13-054 ●	24		PCX 068/073	10	
60	4.75	X-13-060 ●	24		PCX 072/080	10	
64	4.75	X-13-064 ●	24		PCX 082/085	10	
70	4.75	X-13-070 ●	24		PCX 088/092	10	
76	5.50	X-13-076 ●	24		PCX 088/092	10	
89	6.00	X-13-089 ●	18		PCX 099/103	10	

Pipe max. Outside-Ø [mm]	Max. permissible distance [m]	19,0 mm insulation thickness			Clamps 19,0 mm		
		Code	Pieces/carton		Code	Pieces/carton	
10	2.00	X-19-010 ●	32		PCX 047/052	25	
12	2.00	X-19-012 ●	32		PCX 047/052	25	
15	2.00	X-19-015 ●	30		PCX 047/052	25	
18	2.25	X-19-018 ●	30		PCX 047/052	25	
22	2.75	X-19-022 ●	30		PCX 054/058	25	
25	2.75	X-19-025 ●	30		PCX 054/058	25	
28	3.00	X-19-028 ●	30		PCX 059/063	25	
30	3.00	X-19-030 ●	30		PCX 059/063	25	
35	3.50	X-19-035 ●	30		PCX 068/073	10	
42	3.75	X-19-042 ●	24		PCX 072/080	10	
48	4.25	X-19-048 ●	24		PCX 082/085	10	
54	4.25	X-19-054 ●	24		PCX 082/085	10	
60	4.75	X-19-060 ●	24		PCX 088/092	10	
64	4.75	X-19-064 ●	24		PCX 092/099	10	
70	4.75	X-19-070 ●	24		PCX 099/103	10	
76	5.50	X-19-076 ●	18		PCX 099/103	10	
89	6.00	X-19-089 ●	12		PCX 125/130	10	

Pipe max. Outside-Ø [mm]	Max. permissible distance [m]	25,0 mm insulation thickness			Clamps 25,0 mm		
		Code	Pieces/carton		Code	Pieces/carton	
15	2.00	X-25-015 ●	30		PCX 059/063	25	
18	2.25	X-25-018 ●	30		PCX 063/068	25	
22	2.75	X-25-022 ●	27		PCX 063/068	25	
25	2.75	X-25-025 ●	27		PCX 068/073	10	
28	3.00	X-25-028 ●	27		PCX 068/073	10	
30	3.00	X-25-030 ●	27		PCX 072/080	10	
35	3.50	X-25-035 ●	24		PCX 072/080	10	
42	3.75	X-25-042 ●	20		PCX 082/085	10	
48	4.25	X-25-048 ●	20		PCX 088/092	10	
54	4.25	X-25-054 ●	20		PCX 092/099	10	
60	4.75	X-25-060 ●	18		PCX 099/103	10	
64	4.75	X-25-064 ●	18		PCX 108/112	10	
70	4.75	X-25-070 ●	18		PCX 112/118	10	
76	5.50	X-25-076 ●	15		PCX 112/118	10	
89	6.00	X-25-089 ●	15		PCX 133/137	10	

● Not a stock item. Delivery on request.

Armaflex®
Protect

THE FLEXIBLE FIRE BARRIER FOR
CONDENSATION CONTROL TO MATCH
WITH ARMAFLEX INSULATION AT PIPE
PENETRATIONS



- One solution for hot and cold applications
- For steel, copper and plastic pipes
- Covers rigid-walls, ceilings and light-walls
- Quick and easy installation

- Up to 120 minutes fire resistance according to EN13501
- Applicable with all Armaflex insulation products
- Provides structure borne noise reduction
- Professional training provided by Armacell

Technical Data - Armaflex Protect

Brief description	Flexible fire seal and insulation for non-combustible, combustible pipes and pipes containing combustible medium for use through fire-resistant walls and ceilings (R30 to R 120).
Material type	Elastomeric foam based on synthetic rubber.
Colour	Black
Applications	Insulation and R-120 fire protection barrier for heating, plumbing and refrigeration of non combustible pipes up to 323 mm diameter and combustible pipes up to 75 mm.
Special Features	Armaflex Protect fulfils fire protection requirements irrespective of adjoining insulation.

Property	Value/Assessment	Test ^{*3}	Super-vision ^{*4}	Special Remarks
Temperature Range				
Temperature Range	Max. service temperature	+85 °C		
	Min. service temperature	-50 °C		
Thermal Conductivity				
Thermal Conductivity	ϑ_m	0	°C	○ Tested according to EN 12667 EN ISO 8497
	λ	≤	0.056	
Water vapour diffusion resistance				
Water vapour diffusion resistance	μ	≥	7,000	○ Tested acc. to EN 12086 and EN 13469
Fire performance				
Reaction to fire	product range			○ Classified acc. to EN 13501-1 Tested acc. to EN ISO 11925-2
	tubes	E _L		
	sheets	E		
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames			
Fire resistance of structural element		R30 - R120	EU 4384	○ Classified acc. to DIN 4102-11 & EN 1366-3
Other technical features				
UV resistance	Suitable for indoor use only			
Storage & Shelf life	3 years from production date			○ Can be stored in dry, clean rooms at normal relative humidity (50 % - 70 %) and ambient temperature (0 °C - 35 °C) Cartons shall be stored horizontally. Minimum temperature for transport -50 °C under condition of frost-free storage before installation.

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

*2 ●: Official supervision by independent institutes and /or test authorities
○: In-house quality monitoring

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Installation instructions are available in our Armaflex installation manual. Please consult our Technical Department before insulating stainless steels. Adhesive Armaflex 520 must be used to guarantee correct installation. With some refrigerants, the discharge temperature may exceed +110 °C; please consult our Customer Service Department for further information. For outside use, Armaflex should be protected within 3 days of installation with Armafinish 99 Paint or Arma-Chek covering.

Armaflex Protect tubes



Length 1.0 m

Pipe max. Outside-Ø [mm]	Thickness [mm]	Code	m/carton	
10	19.0	PRO-AX-19X010 ●	18	
12	19.0	PRO-AX-19X012 ●	17	
15	19.0	PRO-AX-19X015 ●	16	
16	20.0	PRO-AX-20X016 ●	14	
18	20.0	PRO-AX-20X018 ●	13	
20	20.0	PRO-AX-20X020 ●	12	
22	20.0	PRO-AX-20X022 ●	12	
25	20.0	PRO-AX-20X025 ●	11	
28	25.0	PRO-AX-25X028 ●	9	
32	25.0	PRO-AX-25X032 ●	8	
35	25.0	PRO-AX-25X035 ●	8	
40	25.0	PRO-AX-25X040 ●	6	
42	25.0	PRO-AX-25X042 ●	6	
48	25.0	PRO-AX-25X048 ●	5	
50	25.0	PRO-AX-25X050 ●	5	
54	25.0	PRO-AX-25X054 ●	5	
60	25.0	PRO-AX-25X060 ●	4	
64	25.0	PRO-AX-25X063 ●	4	
76	25.0	PRO-AX-25X076 ●	4	
89	25.0	PRO-AX-25X089 ●	4	

● Not a stock item. Delivery on request.

Armaflex Protect continuous sheets (rolls)



Code	Roll length [m]	Width [m]	Thickness [mm]	m ² /carton	Rolls/carton	
PRO-AX-13MM/E	6	0.5	13.0	2 x 3	2	

Regulations

For sealing purposes at least two layers of sheet material must be installed

Armaprotect[®]
1000

QUICK AND EASY TO APPLY FIRESTOP
FILLER FOR PIPE PENETRATIONS WITH
ARMAFLEX PROTECT



- Delivered ready to use
- Easy to apply by hand - no toolings and formwork required
- Can is recloseable, no material waste
- System solution for pipe and cable penetrations

- Non-combustible A1 EN 13501
- Melting point > 1000 °C

Technical Data - Armaprotect 1000

Brief description	Armaprotect 1000 Firestop Filler is a practical, ready-to-use, mortar with excellent fire-protection, thermal insulation and noise control properties. It is self-hardening and very easy to apply by hand. Use to seal around gaps, with no formwork required and easy to apply in tight spaces.
Material type	High-temperature resistant mortar with hollow microspheres and inorganic binding agents.
Colour	Light grey
Applications	Ideal system solution for sealing annular gaps in applications using Armaflex Protect. Armaprotect 1000 can be used for penetrations with individual pipes and electricity cables. Only for indoor use.
Special Features	Can be used in combination with Armaflex Protect systems.
Assembly	The ready-to-use, Armaprotect 1000 Firestop Filler is supplied in tubs and can be applied using either a spatula or by hand. 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.
Remarks	.

Property	Value/Assessment	Test ^{*2}	Special Remarks
Thermal Conductivity			
Thermal Conductivity	ϑ_m	10 °C	D 5531
	λ	≤ 0.051 W/(m · K)	
Fire performance			
Reaction to fire	Non combustible (UK), Euroclass A1	D 5528	Classified acc. to EN 13501-1 Tested according to EN ISO 1182 EN ISO 1716
Other technical features			
Density	approx. 180 kg/m ³ (after drying)		
Compression strength	0,4 N/mm ²		Tested according to EN 1015-11
Melting point	> 1000 °C	D 5530	Tested according to DIN 4102-17
Water-soluble chlorides	< 0,001 %		Tested according to DIN EN 1015-17
Yield	1:1		
Storage & Shelf life	24 month in sealed original container.		in a cool and dry place. Protect from temperatures below +5 °C!

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

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Installation instructions are available in our Armaflex installation manual. Please consult our Technical Department before insulating stainless steels. Adhesive Armaflex 520 must be used to guarantee correct installation. With some refrigerants, the discharge temperature may exceed +110 °C, please consult our Customer Service Department for further information. For outside use, Armaflex should be protected within 3 days of installation with Armafinish 99 Paint or Arma-Chek covering.

Armaprotect 1000 fire protection compound



Ready to use in plastic tubs

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

Remark other packaging available on request

Armaflex® Accessories

THE RIGHT TOOLS & ACCESSORIES TO
ENSURE PROFESSIONAL ARMAFLEX®
INSTALLATIONS



- Complete set of professional tools and accessories
- Specially designed and optimised for use with Armaflex®
- Complete range with cleaner, knives, adhesives, tapes and paints

Technical Data - Armaflex Ultima 700

Brief description	One-component adhesive specifically developed for Armaflex Ultima and insulating materials based on Armaprene® synthetic rubbers.
Material type	Contact adhesive on polychloroprene basis, free of aromatic components.
Colour	blue
Applications	Application on pipes and tanks with service temperatures up to +110 °C. Gluing of Armaflex Ultima and insulation materials based on Armaprene® synthetic rubbers.
Special Features	Specially formulated adhesive for uniform and safe seam bonding of Armaflex Ultima and insulating materials based on Armaprene® synthetic rubbers.
Assembly	Please observe our installation instructions / product data. Application temperature: ideally between +15 °C and + 20 °C, not below 0 °C. At temperatures below + 5 °C or high humidity (above approx. 80%), increased condensation may form on the surfaces to be glued or adhesive films. In these cases bonding is bad or impossible. This can be tested by using absorbent paper (blotting or crepe paper). Work should not be carried out on operating plant or areas exposed to strong sunlight.
Remarks	The adhesive achieves its final strength after 36 hours. Only then should plant be put into operation. Wait 36 hours before applying coatings (exception: Armafinish 99), adhesive tape, coverings etc.

Property	Value/Assessment	Special Remarks
Temperature Range		
Temperature Range	Max. service temperature	+110 °C
	Min. service temperature	-50 °C
Other technical features		
Yield	Minimum consumption with the adhesive applied to both surfaces: Armaflex tubes (thickness > consumption unslit tubes > consumption slit tubes): 10 mm > 1120 m/litre > 140 m/litre; 20 mm > 280 m/litre > 70 m/litre; 30 mm > 175 m/litre > 45 m/litre; 40 mm > 130 m/litre > 35 m/litre; Sheets: 3-4 m ² /litre	These figures are a guide only.
Storage & Shelf life	12 months in a closed (unopened) container	As cool as possible, but protected from frost. In the event of frost any gelling is reversible on warming.
Flash Point	approx: -26 °C	
Explosion limits	Lower: approx. 1,1 Vol. % Upper: approx. 12,8 Vol. %	
Hazard Class	highly flammable	Regulation of inflammable liquids
Ageing stability	Very good	
Resistance to weathering	Very good	
Pre-treatment of surface to be bonded	Clean dirty surfaces and Armaflex Ultima surface with Armaflex Cleaner Compatibility with bases: very good adhesion to metallic surfaces. The adhesive's compatibility with colour coated surfaces needs to be tested. Incompatible with Asphalt, bitumen or red lead (linseed oil-based).	For more information see Technical Bulletin no. 17
Transport Classes	Depending on the type of transport	
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. More details see relevant Safety Data Sheet.	Packaging must be emptied of all residues. Packaging with traces of cured product can be recycled. Packaging with uncured product must be recycled into new product.
Working time	at 20 °C: 1. Minimum drying time (airing time): 3 - 5 minutes 2. Contact adhesion time: 15 - 20 minutes 3. Setting time: 36 hours	The open time depends on the quantity as well as indoor climate conditions. Before operating plant the setting time needs to be allowed to elapse.

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Installation instructions are given in our Armaflex installation manual. With some refrigerants the discharge temperature may exceed +110 °C, please consult our Technical Department for further information.

Technical Data - Armaflex Ultima RS850

Brief description	Non-drip one component adhesive in gel form. Specifically designed for processing Armaflex Ultima and insulating materials based on Armaprene® synthetic rubbers.
Material type	Thixotropic one component contact adhesive based on polychloroprene.
Colour	blue
Material Special Information	Gel based
Applications	Application on pipes, ducts and tanks with service temperature up to +70 °C. Gluing of Armaflex Ultima and insulation materials based on Armaprene® synthetic rubbers.
Assembly	Please observe our installation / product data. Application temperature: ideally between +15 °C and +25 °C, not below +10 °C. At temperatures below + 5 °C or high humidity (above approx. 80%), increased condensation may form on the surfaces to be glued or adhesive films. In these cases bonding is bad or impossible. This can be tested by using absorbent paper (blotting or crepe paper). Work should not be carried out on operating plant or areas exposed to strong sunlight.
Remarks	Adhesive bond reaches full strength after 24 hours. The system should not be operated during this period and any self-adhesive tape or protective coatings should only be applied after this period has elapsed.

Property	Value/Assessment	Special Remarks
Temperature Range		
Temperature Range	Max. service temperature	+70 °C
	Min. service temperature	-40 °C
Other technical features		
Yield	Minimum consumption with the adhesive applied to both surfaces: Armaflex tubes (thickness > consumption unslit tubes > consumption slit tubes): 10 mm > 1120 m/litre > 140 m/litre; 20 mm > 280 m/litre > 70 m/litre; 30 mm > 175 m/litre > 45 m/litre; 40 mm > 130 m/litre > 35 m/litre; Sheets: 3-4 m ² /litre	These figures are a guide only.
Storage & Shelf life	18 months in a closed (unopened) container; Store between 0 °C and 35 °C in a dry place. Do not store together with explosive substances; spontaneously combusting substances.	As cool as possible, but protected from frost. Cold or frozen adhesive (under +5 °C) will become fully usable again if slowly acclimatised up to working temperature (approx. +20 °C).
Flash Point	-19 °C	
Explosion limits	Lower: 1,1 Vol. % Upper: 11,5 Vol. %	
Hazard Class	highly flammable	Regulation of inflammable liquids
Ageing stability	Very good	
Resistance to weathering	Very good	
Pre-treatment of surface to be bonded	Clean dirty surfaces and Armaflex Ultima surface with Armaflex Cleaner. Compatibility with bases: very good adhesion to metallic surfaces. The adhesive's compatibility with colour coated surfaces needs to be tested. Incompatible with: Asphalt, bitumen, red lead (linseed oil-based), polystyrene and plasticised PVC.	For more information see Technical Bulletin No. 17.
Transport classes	Depending on the type of transport	
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. More details see relevant Safety Data Sheet.	Packaging must be emptied of all residues. Packaging with traces of cured product can be recycled. Packaging with uncured product must be recycled into new product.
Working time	at 20 °C 1. Minimum drying time (airing time): > 2 minutes 2. Contact adhesion time: 10 to 15 minutes 3. Setting time: 24 hours	The open time depends on the quantity as well as indoor climate conditions. Before operating plant the setting time needs to be allowed to elapse.

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Installation instructions are given in our Armaflex installation manual. With some refrigerants the discharge temperature may exceed +110 °C, please consult our Technical Department for further information.

Technical Data - Armaflex 520

Brief description	Specially formulated adhesive for installing Armaflex insulation materials (with the exception of HT/Armaflex).
Material type	Contact adhesive on polychloroprene basis, free of aromatic solvent.
Colour	Beige
Material Special Information	Liquid
Applications	Gluing of all flexible Armaflex insulation materials, with the exception of HT/Armaflex.
Special Features	Specially formulated adhesive for uniform and safe seam bonding of flexible Armaflex insulation materials.
Assembly	Please observe our installation instructions / product data. Application temperature: ideally + 20 °C, not below 0 °C. At temperatures below + 5 °C or high humidity (above approx. 80%), increased condensation may form on the surfaces to be glued or adhesive films. In these cases bonding is poor or impossible. This can be tested by using absorbent paper (blotting or crepe paper). Work should not be carried out on operating plant or areas exposed to strong sunlight. Shake and stir well before use. Apply thinly to the areas to be bonded with a brush or spatula. For contact adhesion press together with force during the contact adhesion time. Detailed application guidance is available.
Remarks	The adhesive achieves its final strength after 36 hours. Only then should plant be put into operation. Never insulate plant which is in operation or work in strong sunlight. Wait 36 hours before applying further coats (exception: Armafinish 99), adhesive tape, coverings etc.

Property	Value/Assessment	Special Remarks
Temperature Range		
Temperature Range	Max. service temperature + 105 °C Min. service temperature ¹ - 50 °C	
Other technical features		
Yield	Minimum consumption with the adhesive applied to both surfaces: Armaflex tubes (thickness > consumption unslit > consumption slit): 10 mm > 1120 m per litre > 140 m per litre; 20 mm > 280 m per litre > 70 m per litre; 30 mm > 175 m per litre > 45 m per litre; 40 mm > 130 m per litre > 35 m per litre; Sheets: 3-4 m ² per litre	These figures are a guide only.
Storage & Shelf life	Approx. 1 year	In a cool, frost-free place. Gelification due to frost is reversible.
Flash Point	approx. - 20 °C	
Explosion limits	Lower: approx. 1.0 Vol.%; Upper: approx. 13.0 Vol. %	
Hazard Class	highly flammable	Regulation of inflammable liquids
Ageing stability	Very good	
Resistance to weathering	Very good	
Pre-treatment of surface to be bonded.	Clean dirty surfaces and the Armaflex surface with Armaflex Cleaner. Compatibility with bases: very good adhesion to metallic surfaces. The compatibility with colour coated surfaces needs to be tested. Incompatible with: Asphalt, bitumen or red lead paint (linseed oil based).	For more information pls. see Technical Bulletin no. 17.
Transport Classes	Dependent on transport sector	
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. More details see relevant Safety Data Sheet.	Can must be emptied prior to recycling. Cans containing adhesive must be recycled into new product.
Working time	at 20 °C: 1. Wet adhesion time: up to 2 minutes 2. Minimum drying time (airing time): 3-5 minutes 3. Contact adhesion time: 15-20 minutes 4. Setting time: 36 hours	The setting time must be allowed to lapse before plant can be operated.

1. For temperatures below -50 °C please contact our Technical Department to request the corresponding technical information.

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Installation instructions are given in our Armaflex installation manual. With some refrigerants the discharge temperature may exceed +110 °C, please consult our Technical Department for further information. Armaflex 520 adhesive must be used to guarantee correct installation.

Technical Data - Armaflex HT625

Brief description	Specially formulated one-component adhesive developed for bonding Armaflex insulation applied at high temperatures, especially developed for use with HT/Armaflex, but also suitable for all other Armaflex synthetic rubber based insulation materials.
Material type	Contact adhesive on polychloroprene basis, free of aromatic components.
Colour	Beige
Material Special Information	Liquid
Applications	Application on pipes and tanks with service temperatures up to 150 °C. Gluing of HT/Armaflex insulation material and other Armaflex synthetic rubber based insulation materials (except Armaflex Ultima).
Special Features	Specially formulated adhesive for uniform and safe seam bonding of flexible Armaflex insulation materials applied on high temperature lines.
Assembly	Please observe our installation instructions / product data. Application temperature: ideally + 20 °C, not below 0 °C. At temperatures below + 5 °C or high humidity (above approx. 80%), increased condensation may form on the surfaces to be glued or adhesive layers. In these cases bonding is poor or impossible. This can be tested using absorbent paper (blotting or crepe paper). Work should not be carried out on operating plant or areas exposed to strong sunlight. Shake and stir well before use. Apply thinly to the areas to be bonded with a brush or spatula. For contact adhesion press together with force during the contact adhesion time. Detailed application guidance is available.
Remarks	The adhesive achieves its final strength after 36 hours. Only then should plant be put into operation. Wait 36 hours before applying coatings (exception: Armafinish 99), adhesive tape, coverings etc.

Property	Value/Assessment	Special Remarks
Temperature Range		
Temperature Range	Max. service temperature ¹ + 150 °C Min. service temperature ² -50 °C	
Other technical features		
Yield	Minimum consumption with the adhesive applied to both surfaces: Armaflex tubes (thickness > consumption unslit > consumption slit): 10 mm > 1120 m per litre > 140 m per litre; 20 mm > 280 m per litre > 70 m per litre; 30 mm > 175 m per litre > 45 m per litre; 40 mm > 130 m per litre > 35 m per litre; Sheets: 3-4 m ² per litre	These figures are a guide only.
Storage & Shelf life	12 months in a closed (unopened) container . Do not store together with: explosive substances; spontaneously combusting substances.	In a cool, frost-free place. Gelification due to frost is reversible.
Flash Point	approx. -26 °C	
Explosion limits	Lower: approx. 1,1 Vol.% Upper: approx. 12,8 Vol.%	
Hazard Class	highly flammable	Regulation of inflammable liquids
Ageing stability	Very Good	
Resistance to weathering	Very Good	
Pre-treatment of surface to be bonded:	Clean dirty surfaces and the Armaflex surface with Armaflex Cleaner. Compatibility with bases: very good adhesion to metallic surfaces. Compatibility with colour coated surfaces needs to be tested. Incompatible with: Asphalt, bitumen or red lead paint (linseed oil based).	For more information pls. see Technical Bulletin no. 17.
Transport classes	Dependent on transport sector.	
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. More details see relevant Safety Data Sheet.	Can must be emptied prior to recycling. Cans containing adhesive must be recycled into new product.
Working time	at 20 °C: 1. Minimum drying time (airing time): 3-5 minutes 2. Contact adhesion time: 15-20 minutes 3. Setting time: 36 hours	The setting time must be allowed to lapse before plant can be operated.

1. For temperatures above +150 °C please contact our Technical Department to request the corresponding technical information.

2. For temperatures below -50 °C please contact our Technical Department to request the corresponding technical information.

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Installation instructions are given in our Armaflex installation manual. Armaflex HT625 adhesive must be used to guarantee correct installation.

Technical Data - Armaflex RS850

Brief description	Non-drip one-component adhesive in gel form. Specifically for processing all Armaflex insulating materials based on synthetic rubber with the exception of HT/Armaflex & Armaflex Ultima.
Material type	Thixotropic contact adhesive on polychloroprene basis
Colour	Yellowish
Material Special Information	Jellylike
Applications	Application on pipes, ducts and tanks with service temperature up to +70 °C. Gluing of all Armaflex insulation materials with the exception of HT/Armaflex and Armaflex Ultima.
Special Features	Specifically formulated adhesive for uniform and safe seam-bonding of flexible Armaflex insulation materials.
Assembly	Please observe our installation instructions / product data. Application temperature: ideally between +15 °C and 25 °C, not below +10 °C. At temperatures below + 5 °C or high humidity (above approx. 80%), increased condensation may form on the surfaces to be glued or adhesive films. In these cases bonding is bad or impossible. This can be tested by using absorbent paper (blotting or crepe paper). Work should not be carried out on operating plant or areas exposed to strong sunlight.
Remarks	Adhesive bond reaches full strength after 24 hours. The system should not be operated during this period and any self-adhesive tape or protective coatings, except Armafinish 99 paint, should only be applied after this period has elapsed.

Property	Value/Assessment	Special Remarks
Temperature Range		
Temperature Range	Max. service temperature +70 °C Min. service temperature -40 °C	
Other technical features		
Yield	Minimum consumption with the adhesive applied to both surfaces: Armaflex tubes (thickness > consumption unslit tubes > consumption slit tubes): 10 mm > 1120 m/litre > 140 m/litre; 20 mm > 280 m/litre > 70 m/litre; 30 mm > 175 m/litre > 45 m/litre; 40 mm > 130 m/litre > 35 m/litre; Sheets: 3-4 m ² /litre	These figures are a guide only.
Storage & Shelf life	36 months in a closed (unopened) container; Store between 0 °C and 35 °C in a dry place. Do not store together with explosive substances; spontaneously combusting substances.	As cool as possible, but protected from frost. Cold or frozen adhesive (under +5 °C) will become fully usable again if slowly acclimatised up to working temperature (approx. +20 °C).
Flash Point	-19 °C	
Explosion limits	Lower: 1,1 Vol. % Upper: 11,5 Vol. %	
Hazard Class	highly flammable	Regulation of inflammable liquids
Ageing stability	Very good	
Resistance to weathering	Very good	
Pre-treatment of surface to be bonded	Clean dirty surfaces and Armaflex surface with Armaflex Cleaner. Compatibility with bases: The adhesives compatibility with colour coated surfaces needs to be tested. Incompatible with: Asphalt, bitumen, red lead (linseed oil-based), polystyrene and plasticised PVC	For more information see Technical Bulletin No. 17
Transport classes	Depending on type of transport	
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. More details see relevant Safety Data Sheet.	Packaging must be emptied of all residues. Packaging with traces of cured product can be recycled. Packaging with uncured product must be recycled into new product.
Working time	at 20 °C 1. Minimum drying time (airing time): > 2 minutes 2. Contact adhesion time: 10 to 15 minutes 3. Setting time: 24 hours	The open time depends on the quantity as well as indoor climate conditions. Before operation of plant the setting time needs to be allowed to elapse.

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Installation instructions are given in our Armaflex installation manual. With some refrigerants the discharge temperature may exceed +110 °C, please consult our Technical Department for further information.

Technical Data - Armaflex Cleaner

Brief description	Special cleaner for use with all Armaflex adhesives
Colour	Clear
Material Special Information	Liquid
Applications	Cleaning of surfaces where Armaflex Adhesive 520 or Adhesive HT625 are being used.
Assembly	To ensure perfect adhesion all contaminated surfaces - including contaminated Armaflex - must be cleaned. In addition, the cleaner can also be used to clean surfaces when Armafinish 99 is to be applied.
Remarks	Armaflex Cleaner can also be used to clean tools.

Property	Value/Assessment	Special Remarks
Other technical features		
Storage & Shelf life	Approx. 1 year	Keep container tightly closed in a cool, well ventilated place. Protect from heat and direct sunlight. Do not store together with: explosive substances; spontaneously combusting substances.
Flash Point	approx. - 20 °C	
Explosion limits	Lower: approx. 1 Vol-% Upper: approx. 13 Vol-%	
Hazard Class	highly flammable	Regulation of inflammable liquids
Transport classes	Dependent on the transport sector	
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. More details see relevant Safety Data Sheet.	Can must be emptied prior to recycling. Cans containing adhesive must be recycled into new product.

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Installation instructions are available.

Technical Data - Armafinish 99

Brief description	Armafinish 99 is a paint, which remains permanently elastic, is resistant to weathering and has good ageing resistance.
Material type	Non-drip
Colour	white (RAL 9001), grey (RAL 7037) or black
Material Special Information	Normal consumption: 0.55 litres per m ² when two coats are applied (corresponds to a dry film thickness of 0.26mm).
Applications	Protection of Armaflex insulation materials when installed outdoors and for marking purposes for interior use.
Assembly	All Armaflex insulation (except HT/Armaflex and Armaflex Ultima, see relevant product data sheet) which is installed outdoors must be covered with two complete coats of Armafinish 99. Application temperature: + 10 °C to + 30 °C, maximum relative humidity 80%. Drying time at + 20 °C: approx. 2 hours. It is also necessary to allow this time between coats; the second coat must be applied within 7 days. Paint may be applied using a brush or roller. Clean 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. Refer to special instruction / safety data sheet.

Property	Value/Assessment	Special Remarks
Other technical features		
Storage & Shelf life	Shelf-life in unopened container: 12 months.	Keep container tightly closed and store in a cool, well ventilated and frost-free place.
Explosion limits	Lower: none Upper: none	
Hazard Class	Environmentally hazardous substance as defined by the transport regulations (ADR/RID, IMDG-Code, ICAO-TI/IATA-DGR).	
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. More details see relevant Safety Data Sheet.	Can must be emptied prior to recycling. Cans containing adhesive must be recycled into new products.

All statements and technical information are based on results obtained under typical conditions. It is the responsibility of the recipient to verify with us that the information is appropriate for the specific use intended. Installation instructions are given in our Armaflex installation manual.

Armaflex accessories self-adhesive tapes



Code	Colour	Width [mm]	Length [m]	Thickness [mm]	Rolls/carton
AF-TAPE-MC		50.0	15	3	12
HT-TAPE	black	50.0	15	3	12
NH-TAPE	black	50.0	15	3	12

Armaflex accessories adhesive



Code	Description	Pieces/carton
ADH-HT625/0,25 •	Armaflex HT625 one-component adhesive, 0,25 litre cans (with brush)	40
ADH-HT625/0,5	Armaflex HT625 one-component adhesive, 0,5 litre cans	12
ADH-HT625/1,0	Armaflex® HT625 one-component adhesive, 1,0 litre cans	12
ADH-RS850/0,7	Armaflex Adhesive RS850, 0.75 litre cans	6
ADH520/0,25E	Armaflex adhesive 520, 0.25 litre cans (with brush)	24
ADH520/0,5E	Armaflex adhesive 520, 0.5 litre cans	12
ADH520/1,0E	Armaflex adhesive 520, 1.0 litre cans	12
ADH520/2,5E	Armaflex® 520 adhesive, 2.5 litre cans	8
AHU-700/1,0 •	Armaflex Ultima Adhesive 700, blue one component adhesive, 1 litre cans	12
AHU-RS850/0,7 •	Armaflex Ultima Adhesive RS850, reduced solvent, non-drip blue gel form adhesive, 0.75 litre cans	6

• Not a stock item. Delivery on request.

Armaflex accessories paint



Code	Description	Pieces/carton
FINISH/GY-2,5	Protective coat for Armaflex, silver grey (RAL-Nr. 7037), 2.5 litre buckets	4
FINISH/WH-2,5	Protective coat for Armaflex, white (RAL-Nr. 9001), 2.5 litre buckets	4
FINISH/BK-2,5	Protective coat for Armaflex, black, 2.5 litre buckets	4

Armaflex accessories tools



Code	Description	Pieces/carton
BLADES	Spare blades for tube slitter-knife (50x6 pcs)	50x6
BLADES-PCS	Spare blades for tube slitter-knife (6 pcs)	6
CERAMIC KNIFE	knife with ceramic blade (10 cm) and rubber grip (9 cm)	1
CUTTING-SET	Armaflex knite-set (3 knives + 1 sharpening stone)	1
GLUEM-BRUSH11MM	Gluemaster extra brush points with cap (11mm diameter)	5x4
GLUEM-BRUSH17MM	Gluemaster extra brush points with cap (17mm diameter)	5x4
GLUEMASTER B •	Armaflex Gluemaster (adhesive pump)	12
SLITTER	Special tube slitter-knife	10

• Not a stock item. Delivery on request.

Armaflex Cleaner Cleaner



Code	Description	Pieces/carton	
CLEANER/1,0	Special cleaner for use with Armaflex® Adhesive 520 and Armaflex® Adhesive HT625.	4	

Armaflex Toolbox accessories



Length 570.0 mm, Width 325.0 mm, Thickness 160.0 mm, Aluminium Toolbox

Code	Description	Pieces/carton	
Toolbox	Case containing tools to install Armaflex	1	

Armaflex® Toolbox

THE RIGHT TOOLS TO ENSURE A
PROFESSIONAL INSTALLATION

NEW



- Professional, high quality tools for installing Armaflex - everything you need for measuring, drawing, cutting and gluing
- All the tools come in a practical, lockable aluminium case, which is robust yet lightweight

Armaflex Toolbox accessories



Length 570.0 mm, Width 325.0 mm, Thickness 160.0 mm, Aluminium Toolbox

Code	Description	Pieces/carton	
Toolbox	Case containing tools to install Armaflex	1	

ABOUT ARMACELL

Armacell is a world leader in flexible insulation foams for the equipment insulation market and also a leading provider of engineered foams. In the year 2014, the company with currently 2,600 employees generated net sales of EUR 452.2 million. With its 23 manufacturing plants in 16 countries on four continents, Armacell follows a strategy of internationalisation. The company operates within two main businesses: the Advanced Insulation business develops flexible insulation foam products for the insulation of mechanical equipment. The Engineered Foams business develops and markets light foams for use in a broad range of end-markets.

In addition to ARMAFLEX, the world's leading brand for flexible technical insulation, Armacell offers thermoplastic insulation materials, covering systems, fire protection and noise control solutions as well as special foams for a multitude of industrial applications. In recent years, Armacell has developed new insulation systems for the oil and gas market, core foams for composite materials, and low-smoke products that have set new standards in the industry.

Further information on Armacell can be found at www.armacell.com



REGIONAL HEADQUARTER

Oldham, UK

AF/Armaflex Class O, the first elastomeric insulation to meet the British Standards on product fire performance, is manufactured at our Oldham plant. The facility is also one of the principle locations for Tubolit domestic pipe insulation and ArmaSound RD.

As the only nitrile rubber insulation manufacturer in the UK, Armacell can respond quickly to local requirements, from customised product solutions to meet UK building regulations, to fast delivery times.



General information

Order and delivery details

- Please check that the goods are complete as soon as you receive them. Any deviation such as over or under delivery must be noted on the freight papers and signed by the driver
- All items in this price list which are not held in stock in our warehouse and items which are made to your requirements cannot be returned
- We reserve the right to over or under deliver quantities by up to 6 % in the case of items which are custom made for you
- You will be charged for the handling costs resulting from returns
- All orders under £200 are subject to a minimum order charge of £22.50



Armacell is a member of the UN initiative Global Compact. The participants of the GlobalCompact commit themselves to promoting the implementation of ten fundamental principles regarding the general protection of human rights, compliance with labour standards, environmental protection and combating corruption within their sphere of influence. They also undertake to advocate publicly for the objectives of the pact.

PIPE DIAMETER CHART

Insulation bore size (mm)	Copper Pipe		Steel Pipes			Plastic Pipes
	OD (mm)	OD (inch)	Nominal diameter (DN)	OD (mm)	Inches	OD (mm)
6	6	1/4				6
10	10	3/8	6	10.2	1/8	10
12	12	1/2				12
15	15	5/8	8	13.5	1/4	
18	18		10	17.2	3/8	16
20						20
22	22	7/8	15	21.3	1/2	
28	28	1 1/8	20	26.9	3/4	25
35	35	1 3/8	25	33.7	1	
42	42	1 5/8	32	42.4	1 1/4	40
48			40	48.3	1 1/2	
54	54	2 1/8				50
60			50	60.3	2	
67						63
76	76	3	65	76.1	2 1/2	75
80	80	3 1/8				
89			80	88.9	3	
93						90
108	108	4 1/4				
114			100	114.3	4	110
Sheet Option Required						125
	133					
			125	139.7	5	140
	159					160
			150	168.3	6	
						180
	219		200	219.1	8	
						225
						250
	267					
			250	273.0	10	
						280
						315
			300	323.9	12	
			350	355.6	14	355
		400	406.4	16	400	
		450	457.0	18		
		500	508.0	20		
		600	610.0	24		



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