



ARMACELL UK PRODUCT CATALOGUE - 2017


























HVAC-R & INDUSTRIAL
































Armaflex®


Arma-Chek®

ArmaSound®

	THERMAL INSULATION	Refrigeration	HVAC	Heating, Plumbing & Solar	Rail / Marine	Food & Beverage Production	Process Industries & Data Centres
11 - 19	AF/Armaflex Class O Black elastomeric foam rubber insulation for superior condensation control and energy saving performance.						
20 - 26	Armaflex Ultima Blue elastomeric closed cell insulation with improved fire performance and reduced smoke density.						
27 - 30	Armaflex Duct One and a half metre wide black elastomeric foam rubber sheets available with silver foil laminate.						
31 - 34	HT/Armaflex Black EPDM based synthetic foam rubber insulation suitable for outdoor use and temperatures up to 150°C.						
35 - 38	NH/Armaflex Dark grey halogen free elastomeric foam rubber certified for use in marine, rail and military sectors.						
39 - 48	Armaflex DuoSolar Pre-insulated corrugated steel pipes for solar hot water systems with external copolymer film for UV protection.						

	COVERING SYSTEMS	Refrigeration	Air Conditioning	Heating & Plumbing	Rail / Marine	Food & Beverage Production	Process Industries & Data Centres
50 - 54	Armaflex Tuffcoat AF/Armaflex Class O with polymeric Tuffcoat® covering for additional mechanical and UV protection.						
55 - 60	Arma-Chek Silver Silver pre-insulated PVC jacketing system to provide protection against UV and impact damage.						
61 - 63	Arma-Chek D Black woven glass covering with exceptional resistance to UV, salt water and mechanical impact.						
64 - 73	Okapak Pre-formed PVC covering system for insulated pipework. Full range of fittings available.						

OIL & GAS SYSTEMS	Oil, Gas, Marine	High Temperature	Cryogenic Insulation	Mechanical Protection	Acoustic System	
HT/Armaflex Industrial High density black EPDM synthetic foam rubber insulation for industrial applications and temperatures up to 125°C.						75 - 78
Armaflex LTD Blue elastomeric closed cell foam developed for use in cryogenic systems. Stays flexible to -180°C.						79 - 82
ArmaSound Ind. Systems Light-weight and flexible thermal-acoustic insulation system that reduces the risk of corrosion under insulation.						83 - 85
ArmaSound RD Flexible and light weight thermal-acoustic insulation layer for sound absorption across the frequency range.						86 - 89
ArmaSound Barrier Effective vinyl noise barrier mat for use with ArmaSound Industrial thermal-acoustic insulation systems.						90 - 92
Arma-Chek R Black or grey elastomeric covering offering exceptional resistance to UV, salt water and mechanical impact.						93 - 95

ACOUSTIC, FIRE PROTECTION, PIPE SUPPORTS & ACCESSORIES	Acoustic	Passive Fire Protection	Pipe Supports	Accessories	Toolkit	
ArmaComfort Thin sheet for acoustic insulation of commercial and domestic drainage and waste water pipes.						97 - 100
Armaflex Protect Flexible fire seal and insulation for use through fire-resistant walls and ceilings.						101 - 106
Armafix Insulated pipe and duct supports to eliminate thermal bridging and condensation at fixing points.						107 - 128
Armaflex Accessories Complete range of tapes, adhesives, paint and tools developed to work in harmony with the Armacell product range.						129 - 140
Armaflex Toolbox Professional toolkit containing everything required for measuring, drawing, cutting and gluing Armaflex.						141 - 143

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.



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.

Armcell 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.



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

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
- Environmental ratings for nitrile rubber insulation
- Building regulations for specifying nitrile rubber insulation

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

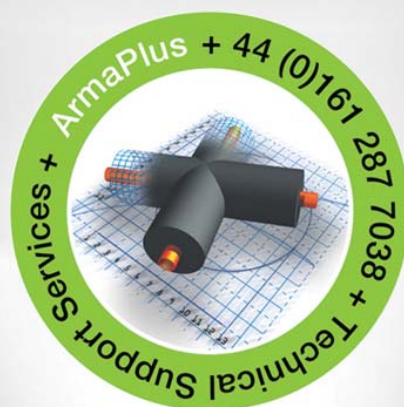
The product selector tool is available from the products section of the UK website and as a free app to download from the itunes and Google Play stores. By answering a series of set questions the user receives product and accessories recommendations to suit the relevant application criteria.

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

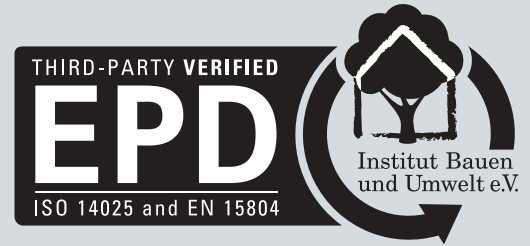
Armacell in the UK was the first flexible insulation manufacturer to make BIM objects available for elastomeric product ranges. These data-rich objects allow Armaflex products to be easily incorporated into 3D building models and are free to download from the NBS BIM library.



BRE Green Guide A rating for Armaflex materials

The BRE (Building Research Establishment) has added pipe insulation products to their Green Guide to Specification, with Armaflex nitrile rubber insulation materials receiving an A rating. Environmental Product Declarations (EPDs) are also available for Armaflex materials, meaning that under MAT 04 a tier 2 points uplift to 2.75 points is achieved.

The Green Guide ratings compare the environmental impact of construction products on a scale of A to E, with A referring to products with the lowest environmental impact and E rated products having a high impact. An A rating for nitrile rubber insulation validates the low environmental impact of Armaflex.



Environmental product declarations (EPDs) for Armaflex products

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.



THERMAL INSULATION



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

- 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
- A full variety of Armaflex products to meet the demands of different application requirements

AF/Armaflex® Class 0

THE FLEXIBLE INSULATION SYSTEM TO
PREVENT CONDENSATION AND ENERGY
LOSSES



- Reliable condensation control with closed-cell Armaflex structure
- High flexibility and ease of installation.
- Increases equipment life-cycle.
- Complete insulation system with compatible tapes, adhesive, fire sleeves and pipe supports
- Class 0 Fire Performance
- NEW! Improved thermal conductivity value $\lambda_{0\text{ }^{\circ}\text{C}} \leq 0.033 \text{ W/(m} \cdot \text{K)}$
- NEW! Improved water vapour resistance value $\mu \geq 10,000$
- Made in the UK



AF/Armaflex Class 0

TRIPLE SECURITY

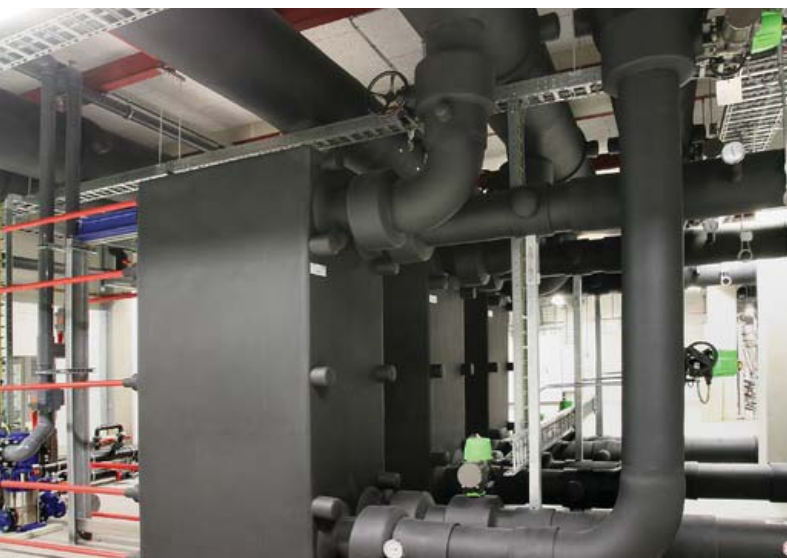
AF/Armaflex Class 0 is the professional flexible insulation for reliable condensation control. The combination of a low thermal conductivity value of $0.033 \text{ W/(m} \cdot \text{K)}$ and extremely high resistance to water vapour transmission ($\mu \geq 10,000$) prevents long-term energy losses, water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

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) Green Guide A rating = 2.75 points (2 points from Mat 04 + 0.75 uplift for tier 2 EPD)
Assembly	Light weight and flexible. Closed cell structure means no additional vapour barrier is required.
Remarks	Declaration of Performance is available in accordance with Article 7(3) of Regulation (EU) No 305/2011 on our homepage: www.armacell.com/DoP

Property	Value/Assessment				Test ¹	Special Remarks		
Temperature Range								
Temperature Range	Max. service temperature		+ 110 °C		(+ 85 °C if sheet or tape is glued to a flat object)	EU 5709	Tested acc. to EN 14706, EN 14707 and EN 14304	
	Min. service temperature ¹		-50 °C					
Thermal Conductivity								
Thermal Conductivity	ϑ_m		+/-0		°C	$\lambda=$	EU 5709	Declared acc. to EN ISO 13787 Tested acc. to EN 12667 EN ISO 8497
	Tubes 6-19 mm, sheet & tape 3-32 mm	λ	≤ 0.033		W/(m · K)	$[33 + 0,1 \cdot \vartheta_m + 0,0008 \cdot \vartheta_m^2]/1000$		
	Tubes 25-32 mm	λ	≤ 0.036		W/(m · K)	$[36 + 0,1 \cdot \vartheta_m + 0,0008 \cdot \vartheta_m^2]/1000$		
	Sheets, tape 3-32 mm	λ	≤ 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		μ	\geq	10,000	EU 5709	Tested acc. to EN 12086 EN 13469	
	Tubes 25-32 mm		μ	\geq	7,000			
Fire performance								
Reaction to fire ²	tubes				B _L -s3, d0	EU 5709	Classified acc. to EN 13501-1 Tested acc. to EN 13823 EN ISO 11925-2	
	sheets & tape				B-s3,d0			
	Surface Spread of Flames				Class 1	GB 5731 & GB 5732	Surface Spread of Flame: tested according to BS 476 Part 7:1997	
	Fire Propagation				Total Index Performance (I) ≤ 12 Sub Index (I ₁) ≤ 6			
	Fire Performance acc. to Building Regulations				Class 0	GB 5731 & GB 5732	Fire Propagation: tested according to BS 476 Part 6:1989	
Other fire class	FM-approved					D 5551	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 5709	Tested acc. to EN 822, EN 823, EN 13467	
UV resistance	Protection against UV-radiation with Armafinish 99 paint is required. Alternatively use Armaflex Tuffcoat or Arma-Chek Silver.							
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	
18	19.0 - 21.0	AF-CO-13X018 •	116		AF-CO-19X018 •	70	
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	
25	26.0 - 28.0	AF-CO-13X025 •	84		AF-CO-19X025	54	
28	29.0 - 31.5	AF-CO-13X028	78		AF-CO-19X028	50	
32	33.0 - 35.5	AF-CO-13X032 •	60		AF-CO-19X032 •	40	
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	
64	65.0 - 67.0	AF-CO-13X064 •	34		AF-CO-19X064 •	20	
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 mm insulation 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 %

• Not a stock item. Delivery on request.

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)

AF/Armaflex large diameter tubes



Length 2.0 m, Colour Black, Microban®

Pipe max. Outside-Ø [mm]	Inner Ø min/ max mm	AF-2				AF-3			
		Insulation thickness [mm]	Code	m/carton		Insulation thickness [mm]	Code	m/carton	
125	127 - 131	15.0	AF-2-125	12		19.0	AF-3-125	12	
140	142 - 146	15.5	AF-2-140	8		19.0	AF-3-140	8	
160	162 - 166	16.0	AF-2-160	8		19.0	AF-3-160	6	

Pipe max. Outside-Ø [mm]	Inner Ø min/ max mm	AF-4				AF-5			
		Insulation thickness [mm]	Code	m/carton		Insulation thickness [mm]	Code	m/carton	
125	127 - 131	23.5	AF-4-125	12		31.5	AF-5-125	6	
140	142 - 146	24.5	AF-4-140	10		32.0	AF-5-140	6	
160	162 - 166	25.0	AF-4-160	6		-	-	-	
168	170 - 174	25.0	AF-4-168	4		45.0	AF-5-168	4	

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 mm insulation		
		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 %

• Not a stock item. Delivery on request.

Thickness tolerance

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

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

• Not a stock item. Delivery on request.

AF/Armaflex Class 0 tubes endless (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
 ≤ 8 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, 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/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 FLEXIBLE INSULATION WITH
A Bs1, d0 FIRE RATING



- Low smoke emissions in the event of a fire
- Meets the requirements for sustainable construction
- Complete insulation system solution with compatible adhesives and pipe supports

EPD
Environmental Product Declaration



**BUREAU
VERITAS**



ARMAFLEX ULTIMA

Armaflex Ultima sets a new safety standard in technical insulation. Based on the patented Armaprene technology, Armaflex Ultima is the first flexible technical insulation material in the world to achieve the fire class B_L-s1, d0.

- Now available in 32mm insulation thickness for tubes and sheet
- New Armaflex solvent free cleaner available for compatibility with Armaflex Ultima adhesives

European
patent

No. 2 261 305

PATENTED



SOLVENT-FREE ACCESSORIES FOR A SUSTAINABLE INSULATION SYSTEM

In addition to the Armaflex Ultima 700 adhesive and the reduced solvent Armaflex Ultima RS850, Armacell also provides the new **Armaflex SF cleaner** for preparing and cleaning pipe and ductwork surfaces and the surface of insulation materials before installation. The cleaner is supplied in a practical spray bottle so that it can be applied sparingly and precisely.



1 - NEW SAFETY STANDARD IN TECHNICAL INSULATION

ARMAFLEX ULTIMA

95 % of fire fatalities occur due to smoke inhalation. In a fire, low smoke density can be a matter of life or death for those trapped. With the innovative Armaprene technology Armacell has been able to resolve the objectives between high flame resistance and minimal smoke development. Armaflex Ultima is the only elastomeric product in the market to achieve the fire class B_L-s1, d0. In comparison to a standard product, the flame-resistant insulation material exhibits 10 times less smoke development.



2 - THE FUTURE BELONGS TO SUSTAINABLE CONSTRUCTION

Today Armacell is the only manufacturer of flexible technical insulation materials to publish environmental product declarations based on an independent life cycle assessment (LCA). Environmental product declarations (EPDs) provide a transparent, independent and reproducible analysis of the environmental impacts of construction products and give detailed information based on 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, HQE or DGNB.

3 - EASY TO INSTALL

Using Armaflex Ultima on cold and HVAC installations provides installers with a flexible product combined with a good density that retains its shape whilst also being easy to cut and glue neatly with Armaflex Ultima 700 or RS850 adhesive.

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	dark blue
Material Special Information	Self-adhesive coating: pressure-sensitive adhesive coating on modified acrylate basis with mesh structure, covered with polyethylene foil. The protective backing present on the self-adhesive tubes and sheets may contain traces of silicon.
Applications	Insulation / protection of pipes, air ducts, vessels (incl. elbows, fittings, flanges etc.) to prevent condensation and save energy. Armaflex Ultima tape should also be used to fully secure self-adhesive tube seams.
Special Features	Low smoke performance
Safety and Environment	Meets the requirements for sustainable construction in combination with Armaflex Ultima RS850 adhesive such as BREEAM, LEED, DGNB. Type III Environmental Product Declaration (EPD): Declaration number "EPD-ARM-20150109-IBB1-DE", Institut Bauen und Umwelt e.V. (IBU)
Remarks	Declaration of Performance is available in accordance with Article 7(3) of Regulation (EU) No 305/2011 on our homepage: www.armacell.com/DoP

Property	Value/Assessment		Test*1	Special Remarks
Temperature Range				
Temperature Range	Max. service temperature	+110 °C	EU 5846	Tested acc. to EN 14706 EN 14707 and EN 14304
	Min. service temperature ¹	-50 °C		
Thermal Conductivity				
Thermal Conductivity	ϑ _m	±0 °C	EU 5846	Declared acc. to EN ISO 13787 Tested acc. to EN 12667 EN ISO 8497
	λ	≤ 0.040		
Water vapour diffusion resistance				
Water vapour diffusion resistance	μ	≥	7,000	EU 5846 Tested acc. to EN 12086 EN 13469
Fire performance				
Reaction to fire ²	Tubes, Tubes self-adhesive	B _L -s1,d0	EU 5846	Classified acc. to EN 13501-1 Tested acc. to EN 13823 and EN ISO 11925-2
	Sheets, sheets self-adhesive	B-s2,d0		
	Tape	B-s1,d0		
Other fire class	Ship Building	Bureau Veritas, Det Norske Veritas, Lloyds Register	D 5243 D 5244 D 5245	Classified acc. to MED 96/98/EC MODULE D Tested acc.to IMO Resolution
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames; low smoke density			
Fire resistance of structural element	EI 30 - EI 120		EU 5846 EU 5584	Classified acc. to EN 13501-2 Tested acc. to EN 1366-3
Other	FM-approved up to 25 mm		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 5846	Tested acc. to EN 822, EN 823, EN 13467
UV resistance	Protection against UV necessary using cladding systems such as Okabell for outdoor applications and Okatherm for indoor applications.		D 5813	Tested acc. to EN ISO 4892-1
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, B_L-s1,d0

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

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

Pipe max. Outside-Ø [mm]	32,0 mm insulation thickness					
	Code	m/carton				
15	UD-32X015 •	32				
18	UD-32X018 •	32				
20	UD-32X020 •	24				
22	UD-32X022 •	24				
28	UD-32X028 •	24				
35	UD-32X035 •	18				
42	UD-32X042	16				
48	UD-32X048	12				
54	UD-32X054	12				
60	UD-32X060	10				
64	UD-32X064 •	10				
76	UD-32X076	10				
89	UD-32X089	8				

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.	32 mm :	±3,0 mm

Armaflex Ultima self-adhesive tubes (Self Seal)



Length 2.0 m, Colour Blue, B_L-s1,d0

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

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

Armaflex Ultima continuous sheets (rolls)



Width 1.0 m, Colour Blue, B-s2,d0

Code	Thickness [mm]	Roll length [m]	m ² /carton	
UD-06-99/E	6.0	15	15	
UD-09-99/E	9.0	10	10	
UD-13-99/E	13.0	8	8	
UD-19-99/E	19.0	5	5	
UD-25-99/E	25.0	4	4	
UD-32-99/E ●	32.0	3	3	

Length tolerance for sheets	+5% to -1,5 %
Thickness tolerance for sheets	6 mm : ±1,0 mm 9 mm - 19 mm : ±1,5 mm 25 mm - 32 mm : ±2,0 mm

● Not a stock item. Delivery on request.

Armaflex Ultima continuous sheets self-adhesive (rolls)



Width 1.0 m, Colour Blue, B-s2,d0

Code	Thickness [mm]	Roll length [m]	m ² /carton	
UD-06-99/EA	6.0	15	15	
UD-09-99/EA	9.0	10	10	
UD-13-99/EA	13.0	8	8	
UD-19-99/EA	19.0	5	5	
UD-25-99/EA	25.0	4	4	
UD-32-99/EA •	32.0	3	3	

Length tolerance for sheets

+5% to -1.5%

Thickness tolerance for sheets

6 mm : ±1,0 mm

9 mm - 19 mm : ±1,5 mm

25 mm - 32 mm : ±2,0 mm

• Not a stock item. Delivery on request.

Armaflex Ultima self-adhesive tapes



Colour Blue, B-s1,d0

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

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	

Armaflex Ultima Cleaner



Code	Description	Pieces/carton	
SF-CLEANER/1,0	Solvent-free cleaner for use with Armaflex	6	

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 and covered with polyethylene foil.
Applications	Insulation of rectangular and cylindrical air ducts
Remarks	Declaration of Performance is available in accordance with Article 7(3) of Regulation (EU) No 305/2011 on our homepage: www.armacell.com/DoP

Property	Value/Assessment		Test ^{*1}	Special 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) $[36 + 0,1 \cdot \vartheta_m + 0,0008 \cdot \vartheta_m^2]/1000$		
	sheets 32 - 40 mm $\lambda \leq 0.038$	W/(m · K) $[38 + 0,1 \cdot \vartheta_m + 0,0008 \cdot \vartheta_m^2]/1000$		
Water vapour diffusion resistance				
Water vapour diffusion resistance	$\mu \geq 7,000$		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)
Material Special Information	Self-adhesive coating: pressure-sensitive adhesive coating on modified acrylate basis with mesh structure and covered with polyethylene foil.
Remarks	Declaration of Performance is available in accordance with Article 7(3) of Regulation (EU) No 305/2011 on our homepage: www.armacell.com/DoP

Property	Value/Assessment	Test ^{*1}	Special Remarks
Temperature Range			
Temperature Range	Max. service temperature +110 °C (+85 °C if sheet or tape is glued to a flat surface) Min. service temperature -50 °C		
Thermal Conductivity			
Thermal Conductivity	ϑ_m +/-0 °C $\lambda =$ sheets 9 - $\lambda \leq 0.036$ W/(m · K) [36 + 0,1 · ϑ_m + 0,0008 · (ϑ_m^2)/1000 32mm	EU 5697	Declared acc. to EN ISO 13787 Tested acc. to EN 12667 EN ISO 8497
Water vapour diffusion resistance			
Water vapour diffusion resistance	$\mu \geq 7,000$	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]	m²/ carton		Code	Thickness [mm]	Roll length [m]	Width [m]	m²/ 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 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.

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.

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 $\lambda_{40\text{ °C}} \leq 0.042 \text{ W/(m} \cdot \text{K)}$

EPD
Environmental Product Declaration



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-20150108-IBB1-DE", Institut Bauen und Umwelt e.V. (IBU)
Assembly	The Armaflex application guide should be consulted before use
Remarks	Declaration of Performance is available in accordance with Article 7(3) of Regulation (EU) No 305/2011 on our homepage: www.armacell.com/DoP

Property	Value/Assessment				Test ^{*1}	Super- vision ^{*2}	Special Remarks			
Temperature Range										
Temperature Range ¹	Max. service temperature ²		+ 150 °C		(+ 85 °C for tapes)		EU 5666		Tested acc. to EN14707 EN 14706	
	Min. service temperature		-50 °C							
Thermal Conductivity										
Thermal Conductivity	ϑ_m 40		°C		$\lambda =$		EU 5666	○/●	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	μ		\geq		4,000		EU 5666		Tested according to EN 12086 EN 13469
	sheets	μ		\geq		3,000				
Fire performance										
Reaction to fire	Class 1		·				GB5154	○/●	Tested according to: BS 476 Part 7: 1997	
	Euroclass sheets & tubes UL94		D-s3, d0 & D _L -s3, d0				EU 5316		Classified acc. to EN 13501-1. Tested acc. to EN 13823 & EN ISO 11925-2.	
	UL -approved		V-0				UL: EU 5837		UL: Tested according to UL94, IEC 60695 and Can/ CSA-C.22.2 No.0.17, UL 746C	
Other fire class	Lloyds Register		Material having Low Flame Spread Characteristics				Lloyd R: EU 6136		Lloyds Register: Tested acc to BS 476 Part 7	
	Self-extinguishing, does not drip, does not spread flames									
Practical fire behaviour										
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								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 UV: Very Good									
Environmental Aspects	ODP zero GWP zero						EU 5197			

- 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
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. 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 - 93.0	-	-		HT-13X089	18	

Pipe max. Outside-Ø [mm]	Inner Ø min/ max mm (tube)	19,0 mm insulation thickness			25 mm insulation 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 - 93.0	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]	m²/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

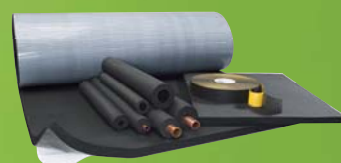


Code	Description	Pieces/carton	
ADH-HT625/0,25 •	Armaflex HT625 one-component adhesive, 0,25 litre cans (with brush)	40	
ADH-HT625/0,5	Armaflex HT625 one-component adhesive, 0,5 litre cans	12	
ADH-HT625/1,0	Armaflex® HT625 one-component adhesive, 1,0 litre cans	12	
CLEANER/1,0	Special cleaner for use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

• Not a stock item. Delivery on request.

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: $\lambda_{0\text{ }^{\circ}\text{C}} \leq 0.040 \text{ W/(m} \cdot \text{K)}$
- Excellent protection against water vapour diffusion



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	Declaration of Performance is available in accordance with Article 7(3) of Regulation (EU) No 305/2011 on our homepage: www.armacell.com/ DoP ¹ : www.armacell.com/DoP

Property	Value/Assessment			Test ^{*1}	Super- vision ^{*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 5664		Tested according to EN 14706 EN 14707 EN 14304	
	Min. service temperature ¹	-50 °C					
Thermal Conductivity							
Thermal Conductivity	ϑ _m	+/-0	°C	λ=	EU 5664	○	Tested acc. to BS 874 Part 2 1986 EN 12667 ENISO 8497
	λ	≤ 0.040	W/(m · K)	[40 + 0,1· ϑ _m + 0,0009 · ϑ _m ²]/1000			
Water vapour diffusion resistance							
Water vapour diffusion resistance	μ	≥	2,000	EU 5664		Tested according to DIN 52 615 EN 12086 EN 13469	
Fire performance							
Reaction to fire	Class 1			GB 5157	○/●	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	EU 5664			
	tubes		Euroclass D _L -s3, d0				
Other fire class	Ship Building: Bureau Veritas, Det Norske Veritas, Lloyds Register		low flammability	Ship Building: D 5555 / D 5348 EU 5475 & EU 6111	○/●	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 sheets up to 25 mm		S4 SR2 ST2				
	Railway sheets 6mm , 19 mm		M1 F1, M2 F2	Railway: D 6666 / D 5863 UL: EU 5837			
	UL approved		HF-1	FM: D 4266			
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					Tested acc. to EN 822, EN 823, EN 13467	
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			EU 5197			

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 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: $\pm 1.5 \%$
 Thickness tolerance
 9-13 mm $\pm 1.5 \text{ mm}$
 19-25 mm $\pm 2.0 \text{ mm}$

● 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: $\pm 1.5 \%$
 Thickness tolerance
 $\leq 13 \text{ mm}$ $\pm 1.5 \text{ mm}$
 $> 19 \text{ mm}$ $\pm 2.5 \text{ mm}$

● 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.

Armaflex[®]
DuoSolar

EFFICIENCY IN SOLAR APPLICATIONS



- Joint split technology reduces cost and saves time of assembly
- Resistant against UV damage and weather impact
- Reduces energy losses and minimises CO₂ emissions
- Patented join-split adhesive technology

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 cylinders.
Remarks	The solar system and heat transfer fluid has to be well matched in order to guarantee corrosion and interference-free operation. We recommend an annual laboratory test of the fluid medium (density, concentration, corrosion, pH). The heat transfer fluid has to be completely replaced in case the parameters no longer meet the requirements. EC Certificate of Conformity no. 0543 of Güteschutzgemeinschaft Hartschaum e.V. , Celle

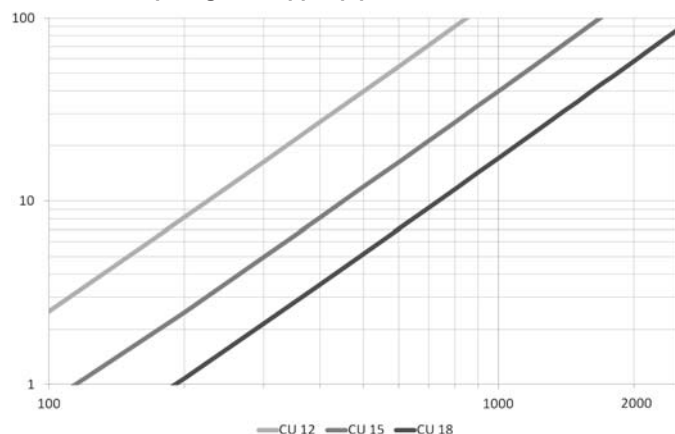
Property	Value/Assessment		Test ^{*1}	Super- vision ^{*2}	Special Remarks		
Temperature Range							
Temperature Range	Max. service temperature		+ 150 °C	EU 5670		Tested acc. to EN 14707	
	Min. service temperature		-50 °C			EN 14706	
Thermal Conductivity							
Thermal Conductivity	ϑ _m	40	°C	λ=	EU 5670	○	Declared acc. to EN ISO 13787
	λ	≤ 0.042	W/(m · K)	[36,92 + 0,125 · ϑ _m + 0,0008 · (ϑ _m -30) ²]/1000			Tested according to EN ISO 8497
Water vapour diffusion resistance							
Water vapour diffusion resistance	μ		≥	4,000	EU 5670		Tested according to EN 13469
Fire performance							
Reaction to fire	Euroclass		E	EU 5670	○/●		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 5670			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						
Max. operating pressure (bar)	ODP zero GWP zero			EU 5197			
Pipe volume (l/m)	CU12 = 0,085 CU15 = 0,141 CU18 = 0,201	DN16 = 0,272 DN20 = 0,430 DN25 = 0,633					

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

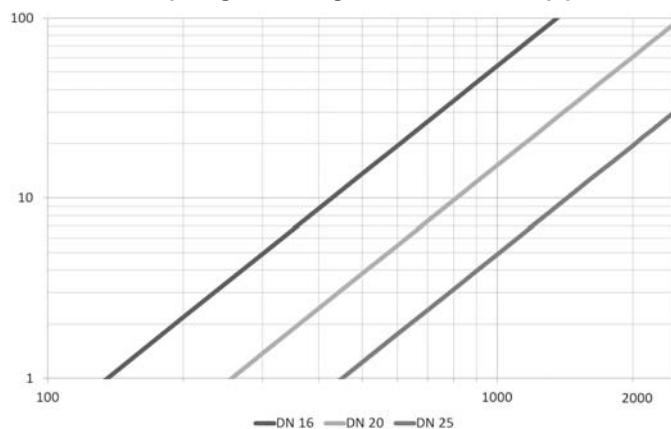
*2 ●: Official supervision by independent institutes and /or test authorities
○: In-house quality monitoring

Technical Data - Armaflex DuoSolar

Presssure drop diagram copper pipes



Presssure 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

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. For temperatures below -50 °C or above +150 °C, please consult our Technical Department for further information.

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 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 G½"	10	
DN 16	SO-SDN16-I3/4 ●	inside thread G¾"	10	
DN 16	SO-SDN16-I1 ●	inside thread G1"	10	
DN 20	SO-SDN20-I3/4 ●	inside thread G¾"	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 ¼"	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 G¾"	10	
DN 16	SO-SDN16-F1 ●	external thread G1"	10	
DN 20	SO-SDN20-F3/4 ●	external thread G¾"	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 R½"	10	
DN 16	SO-SDN16-E3/4 ●	external thread R¾"	10	
DN 16	SO-SDN16-E1 ●	external thread R1"	10	
DN 20	SO-SDN20-E3/4 ●	external thread R¾"	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 ¼"	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

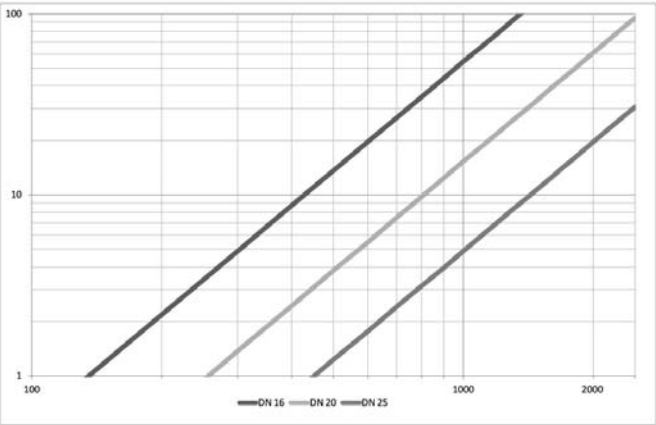
Technical Data - DuoSolar 220

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. Fulfill EN ISO 10380:2013 and EN 13618 p.B7.2 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 ^{*1}	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						
Other fire class	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.

Presssure 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 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.

DuoSolar 220 fitting with male straight thread



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.

DuoSolar 220 fitting with male tapered thread



Stainless steel VA	Code	Connection	Pieces/carton	
DN 16	SO-SDN16-E1/2 •	external thread R $\frac{1}{2}$ "	10	
DN 16	SO-SDN16-E3/4 •	external thread R $\frac{3}{4}$ "	10	
DN 16	SO-SDN16-E1 •	external thread R1"	10	
DN 20	SO-SDN20-E3/4 •	external thread R $\frac{3}{4}$ "	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 $\frac{1}{4}$ "	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.

COVERING SYSTEMS



- **ARMAFLEX TUFFCOAT**
- **ARMA-CHEK SILVER**
- **ARMA-CHEK D**
- **OKAPAK**

- Insulation solutions for solar thermal hot water, ground source heat pump and outdoor pipework applications with outer covering against UV, weathering and damage from mechanical impact
- Arma-Chek non-metallic coverings are designed to remain flexible for compatibility with Armaflex insulation materials

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 ^{*1}	Super-vision ^{*2}	Special Remarks
Temperature Range								
Temperature Range ¹	Max. service temperature		+110 °C			EU 5699		According to EN 14706, EN 14707 + EN14304
	Min. service temperature		-50 °C					
Thermal Conductivity								
Thermal Conductivity	ϑ_m +/-0		°C		$\lambda=$	EU 5699		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 5699		Tested acc. to EN 12086 EN 13469
Fire performance								
Reaction to fire ²	Euroclass (tubes and sheets)		E			GB5730	o/●	Surface Spread of Flame acc. to BS 476 Part 7: 1997 Fire Propagation acc. to BS 476 Part 6: 1989 Classified acc. to EN 13501-1 Tested acc. to EN ISO 11925-2
	Surface Spread of Flames		Class 1*					
	Fire Propagation		Total Index Performance (I) \leq 12 Sub Index (i ₁) \leq 6					
	Fire Performance acc. to Building Regulation		Class 0*					
	Euroclass		E					
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
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]	m²/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	3	16	
TUFF-TP-12,5/WH •	White	12.5	50	3	16	
TUFF-TP-25/BK •	Black	25.0	50	3	8	
TUFF-TP-25/WH •	White	25.0	50	3	8	
TUFF-TP-50/BK •	Black	50.0	50	3	4	
TUFF-TP-50/WH •	White	50.0	50	3	4	

• Not a stock item. Delivery on request.

Armaflex Tuffcoat accessories

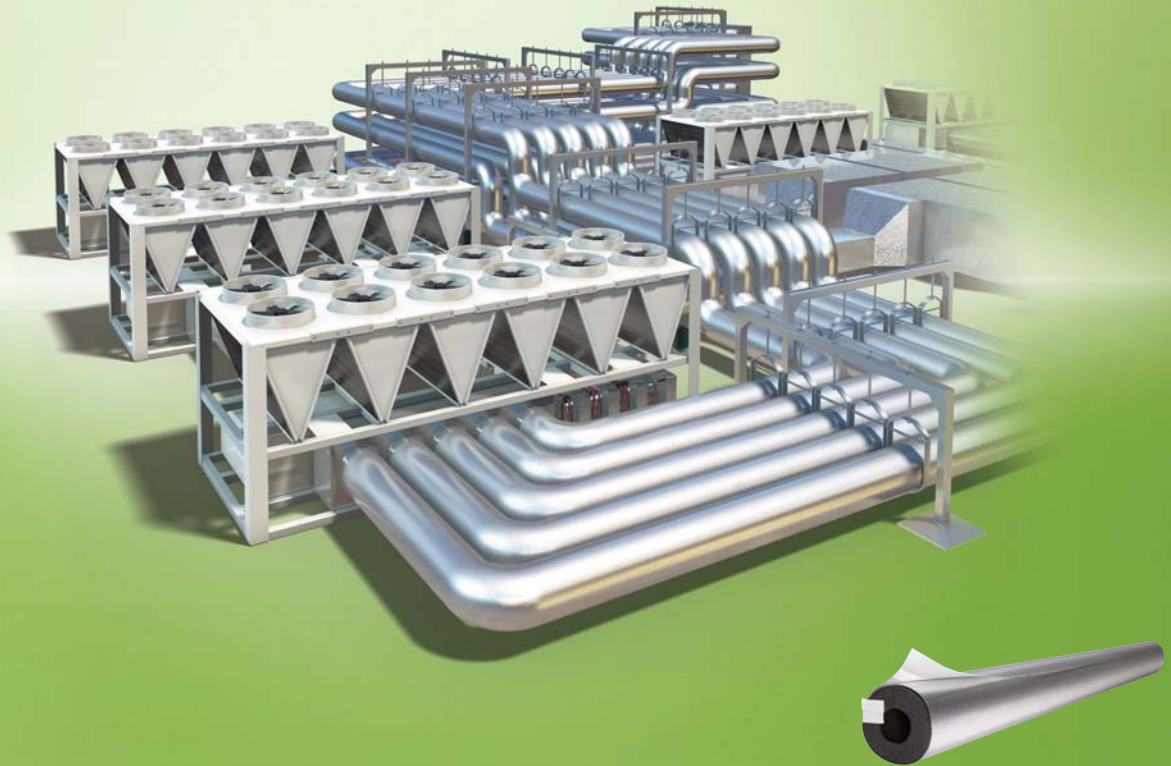


Code	Description	Pieces/carton	
ACH-MASTICD •	Mastic black. Sealing compound for installing Arma-Chek, 290 ml	12	
TC-MASTIC •	White mastic. Sealing compound for installing Armaflex Tuffcoat. Food safe, 310 ml.	6	

• 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
- Full system with Tape, Elbows and T-Parts
- 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 **Arma-Chek Silver video** on youtube and see the difference!



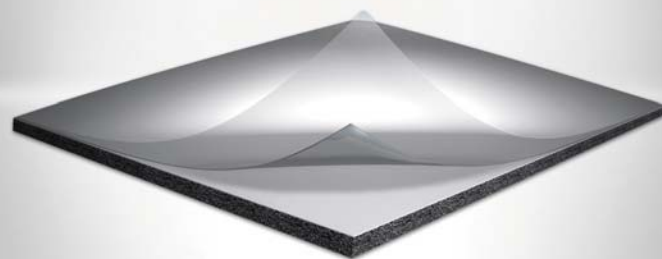
PRE-FORMED PARTS

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

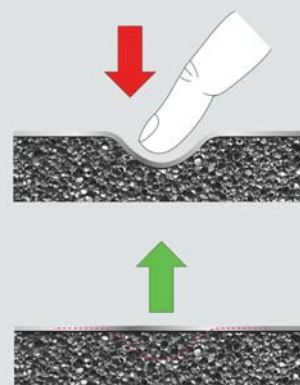
The UV-resistance of Arma-Chek Silver is tested with Weather-O-Metre equipment according to ISO 4892.



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	Declaration of Performance is available in accordance with Article 7(3) of Regulation (EU) No 305/2011 on our homepage: www.armacell.com/DoP
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 ^{*1}	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	-25 °C			
Thermal Conductivity					
Thermal Conductivity					Tested according to DIN EN 12667 EN ISO 8497
Water vapour diffusion resistance					
Water vapour diffusion resistance					Tested according to EN ISO 12086 EN 13469
Fire performance					
Reaction to fire	Surface Spread of Flames	Class 1		EU 5316	Classified acc. to EN 13501-1 Tested acc. to EN 13823 EN ISO 11925-2
	Fire Propagation	Total Index Performance (I) ≤ 12		GB 5574	Surface Spread of Flame: tested according to BS 476 Part 7:1997
		Sub Index (i ₁ ≤ 6			
	Fire Performance acc. to Building Regulations	Class O			
Other technical features					
Weight	approx. 340 g/m³ (covering)				Tested according to EN 22286
Material thickness	approx. 230 µm				Tested according to EN 22286
Resistance to mechanical impact	Good puncture and tear resistance.				
UV resistance ³	Excellent				Tested according to ASTM G 26A / ISO 4892-2 (Method A)
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 -30 °C or above +100 °C, please consult our Customer Service Center for further 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]	m²/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



Colour Silver

Code	Width [mm]	Roll length [m]	Rolls/carton	m²/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



Colour Silver, 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		ACHT-082	1	
48	ACHT-073 ●	1		ACHT-100 ●	1	
54	ACHT-082	1		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				
28	ACHT-082	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.

Arma-Chek® D

THE DURABLE PRE-COVERED
ARMAFLEX SYSTEM TO WITHSTAND
MECHANICAL STRESS



- Strongly reduces risk of damage and risk of corrosion under insulation (CUI)
- Fast installation thanks to pre-covered insulation
- Resistant to UV, oil and chemicals
- Insulation and jacketing system in one product
- Strong and fire resistant surface

Technical Data - Arma-Chek D

Brief description	Arma-Chek D is a flexible, woven glass fibre covering system for long term mechanical protection of Armaflex substrates.
Material type	Insulation: Highly flexible, closed-cell elastomeric foam material based on synthetic rubber. Covering: woven, glass fibre, dry-wrap flexible material.
Colour	Dark grey (covering)
Product Range	Arma-Chek D is available in a range of pre-insulated sheets. Covering also sold separately.
Applications	Insulation and protection of pipes, ducts, valves, vessels for refrigeration and air conditioning systems, clean room environments, food industries, etc.
Safety and Environment	ODP zero GWP zero Dust & fibre free
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	Declaration of Performance is available in accordance with Article 7(3) of Regulation (EU) No 305/2011 on our homepage: www.armacell.com/DoP (Armaflex substrate)

Property	Value/Assessment	Test ^{*1}	Super-vision ^{*2}	Special Remarks
Temperature Range				
Temperature Range	Max. service temperature ¹ +110 °C Min. service temperature ² -50 °C	(+85 °C if sheet or tape is glued to the object with its whole surface.)		Tested according to: EN 14706 EN 14707 EN 14304
Thermal Conductivity				
Thermal Conductivity	Depends on the Armaflex substrate used.	EU 5688	○	Tested according to: EN ISO 8497
Water vapour diffusion resistance				
Water vapour diffusion resistance	Depends on the Armaflex substrate used.	EU 5688	○	Tested according to EN ISO 12086 EN 13469
Fire performance				
Reaction to fire ³	Depends on Armaflex substrate used	EU 5688	○	Classified acc. to EN 13501-1 Tested acc. to DIN EN 13823 DIN EN ISO 11925-2
Acoustic performance				
Reduction of structure-borne sound transmission	Depends on Armaflex substrate used			
Other technical features				
Density	1,200 kg/m ³ (covering)			
Dimensions and tolerances	In accordance with EN 14304, table 1 (Armaflex substrate)	EU 5688		Tested acc. to EN 822, EN 823, EN 13467
Resistance to mechanical impact	Good			
UV resistance ⁴	Good, suitable for outdoor application			
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. The building materials classification is valid on metal or solid, mineral surfaces.

4. 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.

*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 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 D (NH) pre-covered sheets



Length 2.0 m

Code	Thickness [mm]	Width [m]	Pieces/carton	m ² /carton	
NHD-13-99 •	13.0	0.5	9	9	
NHD-19-99 •	19.0	0.5	7	7	
NHD-25-99 •	25.0	0.5	5	5	

Length tolerance for sheets ± 1.5 %

Thickness tolerance for sheets 13-19mm ± 1.5mm
25mm ± 2mm

Remark Delivery period for pre-covered tubes is 15 working days after receipt of order (ex warehouse).

• Not a stock item. Delivery on request.

Arma-Chek D (AF/Armaflex Class O) pre-covered sheets



Length 2.0 m, Colour Black

Code	Thickness [mm]	Width [m]	Pieces/carton	m ² /carton	
AFD-13MM •	13.0	0.5	9	9	
AFD-19MM •	19.0	0.5	7	7	
AFD-25MM •	25.0	0.5	5	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 D covering rolls



woven glassfibre

Code	Width [mm]	Roll length [m]	Rolls/carton	m ² /carton	
ACH-D25 •	1,100.0	25	1	27.5	
ACH-D25/100 •	100.0	25	3	7.5	

• Not a stock item. Delivery on request.

Arma-Chek D self-adhesive tapes



woven glass fibre

Code	Width [mm]	Length [m]	Thickness [mm]	Rolls/carton	
ACH-TAPED2025 •	20.0	25	0.18	12	
ACH-TAPED5050 •	50.0	50	0.18	6	
ACH-TAPED10025 •	100.0	25	0.18	3	

• Not a stock item. Delivery on request.

Arma-Chek D accessories



Code	Description	Pieces/carton	
ACH-MASTICD •	Mastic black. Sealing compound for installing Arma-Chek, 290 ml	12	

• Not a stock item. Delivery on request.

Okapak[®]

FULL RANGE OF IMPACT RESISTANT
AND EASY TO CLEAN PVC COVERINGS



- Long product lifetime
- Extensive range with tailor-made bends, t-pieces and tape
- Impact resistant hard PVC foil with fire protection properties
- Manufactured without the use of silicone / unplasticised
- Tensile impact strength: $\geq 400 \text{ kJ/m}^2$

OVERVIEW TWO-PIECE (WELDED) ELBOWS

Ø	20 mm	25 mm	30 mm	35 mm	40 mm	45 mm	50 mm	60 mm	80 mm	100 mm
15										
17										
21										
27										
33										
38										
42										
44										
48										
57										
60										
64										
70										
76										
83										
89										
102										
108										
114										
127										
133										
140										
159										
168										
194										
219										
267										

S W D G SML 45°



OKAPAK 90° TWO-PIECE BENDS

Two piece bends with welded back for additional strength and a perfect fit. Suitable for different application areas, depending on pipe radius and type:

Okapak S bends: Bends for standard S shaped seamless steel pipe according to EN 10253-1, type 3 (1.5d) with insulation ≤ 100 mm.

Okapak W bends: Bends for standard W shaped angled tempered cast fittings according to EN 10242, A1, A4 with insulation ≤ 50 mm.

Okapak D bends: Bends for D shaped short tempered cast fittings according to EN 10242, D1, D4 with insulation ≤ 50 mm.

Okapak G bends: Bends for G shaped long tempered cast fittings according to EN 10242, G1, G4, G8 with insulation ≤ 30 mm.

Okapak SML: Bends for application of cast iron pipes with insulation ≤ 40 mm.



OKAPAK 90° ONE-PIECE BENDS

Suitable for different application areas, depending on pipe radius and type:

Okapak S bends: Bends for standard S shaped seamless steel pipe according to EN 10253-1, type 3 (1.5d) with insulation ≤ 100 mm.

Okapak W bends: Bends for standard W shaped angled tempered cast fittings according to EN 10242, A1, A4 with insulation ≤ 50 mm.

Okapak D bends: Bends for D shaped short tempered cast fittings according to EN 10242, D1, D4 with insulation ≤ 60 mm.

Okapak G bends: Bends for G shaped long tempered cast fittings according to EN 10242, G1, G4, G8 with insulation ≤ 50 mm.

Okapak 5D bends: Bends for 5D shaped long insulated tempered cast fittings according to DIN2605-1 with insulation ≤ 50 mm.



OKAPAK 45° TWO-PIECE BENDS

Okapak 45°, welded bends with back strengthening perfectly match bends according to DIN 2605, Norm 3 (1,5 d) with insulation ≤ 50 mm.

Technical Data - Okapak

Brief description	Economic PVC jacketing system according to DIN 4140.
Material type	Shock resistant hard PVC covering with fire protection properties. Surface: semigloss and smooth
Colour	Light grey
Product Range	Rolls, bends, fitting caps, valve caps, flange caps, front caps, cut-outs and accessories
Applications	Covering jacket for insulated pipes (incl. bends, t-sections, fittings and flanges). Provides protection against mechanical impacts.
Manufacturing	Calendar sheeting method, extruded; straight vacuum formed. Manufactured without cadmium, lead, mercury, silicone, chrome or chrome compounds. Unplasticised

Property	Value/Assessment		Test ¹	Special Remarks
Temperature Range				
Temperature Range	Max. service temperature	+60 °C		If the object is correctly insulated and no direct contact exists with the jacket, the medium temperature can essentially be higher or lower.
	Min. service temperature	-20 °C		
Water vapour diffusion resistance				
Water vapour diffusion resistance	μ	approx. 60,000		Tested according to DIN 53122-1
Fire performance				
Reaction to fire	Okapak	Low flammability (DIN 4102-B2)	D5599	Tested according to DIN 4102-B1 (P-BWK03-I-165.49) DIN 4102-B2
Other technical features				
Density	Okapak	1.40 ± 0.02 g/cm³		Tested according to DIN EN ISO 1183
Biological / chemical behaviour	Ageing resistance: good. Stability against typical building materials: very good. Against chemicals: see separate list.		TB 037	
Tensile impact strength	≥ 400 KJ/m²			Tested according to DIN EN ISO 8256
Tensile strength	> 35 N/mm²			Tested according to DIN EN ISO 527
Health aspects	No adverse effects. Suitable for use in food processing plants. Odourless.			

*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.

Okapak bends, 90°, two-pieces (welded)



Pipe max. Outside-Ø [mm]	20 mm insulation				25 mm insulation			
	Code	Application angle type	Pieces/carton		Code	Application angle type	Pieces/carton	
15	PB1720	S,W	440		-	-	-	
17	PB1720	S,W	440		PB2720	S,W,D	300	
17	PB2120	G	360		-	-	-	
21	PB2120	S,W,D,G	360		PB3320	S,W,D,G	240	
27	PB2720	S,W,D,G	300		PB2725	S,W,D,G	240	
33	PB3320	S,W,D	240		PB3325	S,W,D	220	
38	PB2130	S	260		PB4820	S	240	
42	PB2130	S,W,D	260		PB3330	S,W,D	220	
44	PB2130	S,W,D	260		PB3330	S,W,D	220	
48	PB4820	S,W	240		PB4825	S,W,D	180	
57	PB6020	S	180		PB6025	S	160	
60	PB6020	S,W,G	180		PB6025	S,W,G	160	
60	PB6420 ●	D	160		PB6425 ●	D	160	
64	PB6420 ●	S	160		PB6425 ●	S	160	
70	PBS7020 ●	S	140		PB7025 ●	S	120	
76	PB7025 ●	S	120		PB4840	W	120	
76	-	-	-		PBS7625 ●	S	120	
83	PBS8325 ●	S	120		PBS8325 ●	S	120	
89	PBS8325 ●	S	120		PB6040	W	80	
89	-	-	-		PB8925 ●	S	80	
102	PBS10820 ●	S	60		-	-	-	
108	PBS10820 ●	S	60		-	-	-	
114	PBS10830	S	80		-	-	-	

Pipe max. Outside-Ø [mm]	30 mm insulation				35 mm insulation			
	Code	Application angle type	Pieces/carton		Code	Application angle type	Pieces/carton	
17	PB2725	S,D,G	240		-	-	-	
17	PBW1730	W	240		-	-	-	
21	PB2130	S,D	260		-	-	-	
21	PBW2130	W	260		-	-	-	
27	PB2730	S,W	260		-	-	-	
33	PB3330	S,W	220		PB4830	S	160	
38	PB4430	S	160		-	-	-	
42	PB4430	S,W,D	160		PB6030	S	160	
42	PB6420 ●	G	160		-	-	-	
44	PB4430	S,W,D	160		PB6030	S	160	
44	PB6420 ●	G	160		-	-	-	
48	PB4830	S,W,D	160		PB6030	S	160	
57	PB6030	S	160		PB6040	S	80	
60	PB6030	S,W	160		PB6040	S	80	
60	PB7025 ●	D	120		-	-	-	
64	PBS6430 ●	S	140		PBS7035 ●	S	80	
70	PBS7630	S	80		PBS7035 ●	S	80	
76	PBS7630	S	80		PBS7040 ●	S	80	
76	PBW7630	W	100		-	-	-	
83	PBS8930	S	80		PBS8935 ●	S	80	
89	PBS8930	S	80		PBS8935 ●	S	80	
89	PBW8930	W	80		-	-	-	
102	PBS10830	S	80		PBS10835	S	40	
108	PBS10830	S	80		PBS10835	S	40	
114	PBS10835	S	40		PBS11435 ●	S	40	
127	PBS13330	S	40		PBS13335	S	40	
133	PBS13330	S	40		PBS13335	S	40	

Okapak bends, 90°, two-pieces (welded)



Pipe max. Outside-Ø [mm]	40 mm insulation				45 mm insulation			
	Code	Application angle type	Pieces/carton		Code	Application angle type	Pieces/carton	€/pc
15	PB1740 ●	S,W	180		-	-	-	
17	PB1740 ●	S,W	180		-	-	-	
21	PB2140	S,W	160		-	-	-	
27	PB2740	S,W	160		-	-	-	
33	PB3340	S,W	160		-	-	-	
38	PB6030	S	160		-	-	-	
42	PB4240	S,W,D	120		-	-	-	
44	PB4240	S,W,D	120		-	-	-	
48	PB4840	S,D	120		PB6040	S	80	
48	PBW4840	W	120		-	-	-	
57	PB6040	S	80		PBW8930	S	80	
60	PB6040	S,D	80		PBW8930	S	80	
64	PBS7040 ●	S	80		PBS7045 ●	S	40	
70	PBS7040 ●	S	80		PBS7045 ●	S	40	
76	PB7640	S,W	60		PBS7050 ●	S	60	
83	PBS8940	S	40		PBS6060	S	60	
89	PBS8940	S	40		PBS6060	S	60	
89	PBW8940	W	40		-	-	-	
102	PBS10840	S	40		PBS11440	S	40	
108	PBS10840	S	40		PBS11445 ●	S	40	
114	PBS11440	S	40		PBS11445 ●	S	40	
114	PBW11440	W	40		-	-	-	
127	PBS13340	S	40		PBS13345 ●	S	40	
133	PBS13340	S	40		PBS13345 ●	S	40	
140	PBS14040	S	30		PBS14045 ●	S	40	
159	PBS15940	S	60		PBS15945 ●	S	60	
168	PBS16840	S	60		PBS15950	S	40	

Pipe max. Outside-Ø [mm]	50 mm insulation				60 mm insulation			
	Code	Application angle type	Pieces/carton		Code	Application angle type	Pieces/carton	
17	-	-	-		PB7670	S	40	
33	PB3350	S,W	80		-	-	-	
42	PB4250	S,W	80		-	-	-	
44	PB4250	S,W	80		-	-	-	
48	PBS4850	S	60		-	-	-	
57	PB6050	S	60		PBS6060	S	60	
60	PB6050	S,W,D	60		PBS6060	S	60	
64	PBS7050 ●	S	60		PBS6460 ●	S	40	
70	PBS7050 ●	S	60		PBS7660	S	40	
76	PB7650	S,W	40		PBS7660	S	40	
83	PB8950	S	40		PBS8960 ▲	S	40	
89	PB8950	S,W	40		PBS8960 ▲	S	40	
102	PBS10850	S	40		PBS10860 ▲	S	40	
108	PBS10850	S	40		PBS10860 ▲	S	40	
114	PBS11450	S	40		PBS11460 ▲	S	40	
114	PBW11450	W	40		-	-	-	
127	PBS13350	S	60		PBS13360 ▲	S	40	
133	PBS13350	S	60		PBS13360 ▲	S	40	
140	PBS14050	S	60		PBS14060 ▲	S	40	
159	PBS15950	S	40		PBS15960	S	40	
168	PBS16850	S	40		PBS16860	S	40	
194	PBS19450 ●	S	40		PBS19460 ●	S	40	
219	PBS21950	S	40		PBS21960 ●	S	40	
267	-	-	-		PBS26760 ●	S	40	

Okapak bends, 90°, two-pieces (welded)



Pipe max. Outside-Ø [mm]	80 mm insulation				100 mm insulation			
	Code	Application angle type	Pieces/carton		Code	Application angle type	Pieces/carton	
17	PB7670	S	40		-	-	-	
70	PBS7680	S	40		-	-	-	
76	PBS7680	S	40		-	-	-	
83	PBS8980 ▲	S	40		-	-	-	
89	PBS8980 ▲	S	40		-	-	-	
102	PBS10880 ▲	S	40		PBS108100 ▲	S	40	
108	PBS10880 ▲	S	40		PBS108100 ▲	S	40	
114	PBS11480 ▲	S	40		PBS114100 ▲	S	40	
127	PBS13380 ▲	S	40		PBS133100 ▲	S	40	
133	PBS13380 ▲	S	40		PBS133100 ▲	S	40	
140	PBS14080 ▲	S	40		PBS140100 ▲	S	40	
159	PBS15980 ●▲	S	40		PBS159100 ▲	S	40	
168	PBS16880 ▲	S	40		PBS168100 ▲	S	40	
194	PBS19480 ●▲	S	40		PBS194100 ●▲	S	20	
219	PBS21980 ●▲	S	20		PBS219100 ▲	S	20	
267	PBS26780 ●▲	S	20		PBS267100 ●▲	S	20	

▲ Segment-similar form

● Not a stock item. Delivery on request.

Okapak bends, 90°, welded, SML



Nominal width DN	20 mm insulation			30 mm insulation		
	Code	Pieces/carton		Code	Pieces/carton	
40	PB4820	240		PB4830	160	
50	-	-		PB6030	160	
50	PB6020	180		-	-	
50	PB6030	160		PBW7630	100	
100	PB7640	60		PB7650	40	
125	PB8950	40		PBW11440	40	
125	PBW11450	40		PBS7680	40	

Nominal width DN	40 mm insulation					
	Code	Pieces/carton				
40	PBW4840	120				
50	PB6040	80				
70	PB6050	60				
100	PBW11440	40				
125	PBW11450	40				
150	PBS8980 ▲	40				

▲ Segment-similar form

Okapak bends, 45°, welded



Pipe max. Outside-Ø [mm]	20 mm insulation			25 mm insulation		
	Code	Pieces/carton		Code	Pieces/carton	
21	PB452120 ●	400		-	-	
27	PB452720 ●	300		PB452725 ●	250	
33	PB453320 ●	260		PB453325 ●	200	
42	-	-		PB454225 ●	140	
44	-	-		PB454225 ●	140	
48	-	-		PB454825 ●	180	
60	-	-		PB456025 ●	160	

Okapak bends, 45°, welded



Pipe max. Outside-Ø [mm]	30 mm insulation			40 mm insulation		
	Code	Pieces/carton		Code	Pieces/carton	
27	PB452730 •	250		-	-	
33	-	-		PB453340 •	160	
42	PB454230 •	160		-	-	
44	PB454230 •	160		-	-	
48	-	-		PB454840 •	160	
60	PB456030 •	160		PB456040 •	160	
76	PB457630 •	140		PB457640 •	120	
89	PB458930 •	140		PB458940 •	100	

Pipe max. Outside-Ø [mm]	50 mm insulation					
	Code	Pieces/carton				
60	PB456050 •	140				
76	PB457650 •	100				
83	PB8950	40				
89	PB458950	100				
127	PBS13350	60				

- Not a stock item. Delivery on request.

Okapak t-pieces



20 mm insulation insulation thickness				
Pipe diameter main section [mm]	Pipe diameter Junction [mm]	Code	Pcs./collar	
27	21	PBA2721 •	10	
33	21	PBA3321 •	10	
33	27	PBA3327 •	10	
33	33	PBA3333 •	10	
42	21	PBA4221 •	10	
42	27	PBA4227 •	10	
42	33	PBA4233 •	10	
48	27	PBA4827 •	10	
48	33	PBA4833 •	10	
48	42	PBA4842 •	10	
60	27	PBA6027 •	10	
60	33	PBA6033 •	10	
60	42	PBA6042 •	10	
60	48	PBA6048 •	10	

Remark

Delivery ex stock 1-2 workdays from receipt of order.

- Not a stock item. Delivery on request.

Okapak valve caps



type: for straight line valves and inclined seat valves, without insulation layer, with integrated pressure closure

Diameter [mm]	Length [mm]	Without insulation layer		
		Code	Pieces/carton	
90	190	PVK1 •	25	
120	255	PVK2 •	25	
155	323	PVK3 •	25	

- Not a stock item. Delivery on request.

Okapak flange caps



type: without insulation, with integrated pressure closure

Diameter [mm]	Length [mm]	Without insulation layer		
		Code	Pieces/carton	
150	145	PFK15 •	25	
160	150	PFK20 •	25	
180	150	PFK25 •	25	
190	155	PFK32 •	25	
200	155	PFK40 •	25	
220	155	PFK50 •	25	
250	165	PFK65 •	25	
270	170	PFK80 •	25	
300	170	PFK100 •	25	
345	170	PFK125 •	25	

• Not a stock item. Delivery on request.

Okapak rosette endcapping



Length 5.0 m, Material: aluminium AL99.5, smooth surface

Light-grey with 2 fixing grooves					Aluminium with 2 fixing grooves				
Lamella length [mm]	Thickness [mm]	Code	Rolls/carton		Lamella length [mm]	Thickness [mm]	Code	Rolls/carton	
18	20.0	PEMBG18B •	10		18	20.0	PEMBA18B •	10	
28	30.0	PEMBG28B •	10		28	30.0	PEMBA28B •	10	
38	40.0	PEMBG38B •	10		38	40.0	PEMBA38B •	10	
48	50.0	PEMBG48B •	10		48	50.0	PEMBA48B •	10	
58	60.0	PEMBG58B •	10		58	60.0	PEMBA58B •	10	

• Not a stock item. Delivery on request.

Okapak rivets



Colour White or grey, Type: rivets

Code	Description	Pieces/bag	Pieces/carton	
PMN W •	rivet, white	1000	50000	
PMNG •	rivet, grey	1000	50000	

• Not a stock item. Delivery on request.

Okapak riveting tools



Type: riveting tools

Code	Description	Pieces/bag	Pieces/carton	
PMNWG •	riveting tool, straight	10	100	
PMNWW •	riveting tool, angular	10	100	

• Not a stock item. Delivery on request.

Okapak foils cut-outs



Width 1,000.0 mm, material: PVC-foil cut-outs SE DIN 4102-B1 available with 20% surcharge. Material thickness: 0.35 MM

PZA - with strong latch effect						PZB - with self-seal cap and strong latch effect					
max. total outer diameter with 30 mm overlapping	Cut-out length	Code	Pcs./collar	Pieces/carton		max. total outer diameter with 30 mm overlapping	Cut-out length	Code	Pcs./collar	Pieces/carton	
60	220	PZA22 ●	10	400		60	220	PZB22 ●	10	400	
65	240	PZA24 ●	10	400		65	240	PZB24 ●	10	400	
70	260	PZA26 ●	10	400		70	260	PZB26 ●	10	400	
82	290	PZA29 ●	10	400		82	290	PZB29 ●	10	400	
89	310	PZA31 ●	5	200		89	310	PZB31 ●	5	200	
95	330	PZA33 ●	5	200		95	330	PZB33 ●	5	200	
100	350	PZA35 ●	5	200		100	350	PZB35 ●	5	200	
105	360	PZA36 ●	5	200		105	360	PZB36 ●	5	200	
-	-	-	-	-		110	380	PZB38 ●	5	1	
124	420	PZA42 ●	5	1		124	420	PZB42 ●	5	1	
-	-	-	-	-		130	440	PZB44 ●	5	1	
-	-	-	-	-		136	460	PZB46 ●	5	1	
150	500	PZA50 ●	5	1		-	-	-	-	-	
165	550	PZA55 ●	5	1		165	550	PZB55 ●	5	1	
-	-	-	-	-		180	600	PZB60 ●	5	1	
-	-	-	-	-		195	650	PZB65 ●	5	1	
229	750	PZA75 ●	5	1		-	-	-	-	-	
-	-	-	-	-		308	1000	PZB100 ●	5	1	

Remark Delivery ex stock 1-2 workdays from receipt of order.
Other cuts-outs and carton content units available on request.

- Not a stock item. Delivery on request.

Okapak self-adhesive tapes

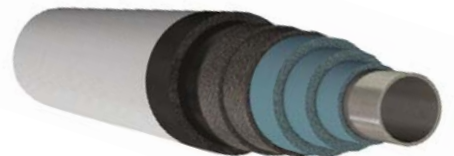


Length 25.0 m, Colour Light grey, type: plastic tape

Code	Width [mm]	Length [m]	Thickness [mm]	Rolls/carton	
PSKB19 ●	19.0	25	0,35	32	
PSKB25 ●	25.0	25	0,35	24	
PSKB30 ●	30.0	25	0,35	20	

- Not a stock item. Delivery on request.

OIL & GAS SYSTEMS



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

- Insulation specially engineered for oil & gas systems, including cryogenic and mid range temperatures (between -180°C to $+125^{\circ}\text{C}$) to prevent freezing and heat losses / gains on industrial process equipment
- Flexible Arma-Chek R covering to protect installations against UV, grease, oil, salt water, mechanical impact and chemicals
- Industrial acoustic insulation for the reduction of hazardous noise levels from process equipment

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

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	13, 19 and 25 mm thick tubes for pipe outer diameters ranging from 15 to 89 mm (½" to 3" NB). Continuous sheet (rolls) in 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	λ _d (θ _m)=0.04028+1.25×10 ⁻⁴ × θ _m +8×10 ⁻⁷ ×(θ _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/m³ Tubes: 60 - 75 kg/m³								Tested according to ISO 845 ASTM D 1622
Dimensions and tolerances ³	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
Leachable (water-soluble)chlorides	≤ 30 ppm (mg/kg or µg/g)								Tested according to EN 13468 and ASTM C871

Technical Data - HT/Armaflex Industrial

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.
3. During storage of the product blooming on the surfaces may occur, especially at wall thickness below 19mm. This blooming does not affect the technical properties of the material, but can affect the adhesion properties. Therefore, the surface needs to be cleaned (wiped off) before adhesives can be applied.

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 mm insulation 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 ^{*1}	Super-vision ^{*2}	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	ϑ _m		-180 °C	-100 °C	-50 °C	0 °C	+50 °C	λ _d (θ _m)=0.04+3×10 ⁻⁵ ×θ _m +6×10 ⁻⁷ ×θ _m ² +4×10 ⁻⁹ ×θ _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)		λ	≤ 0.031	0.039	0.040	0.040	0.044	[W/(m · K)]		
Water vapour diffusion resistance									EU 6658		
Water vapour diffusion resistance	For details on system performance please contact our Customer Service Centre										
Fire performance											
Reaction to fire	Surface spread of flames								EU 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						BS 476 Class 1 Approved by Lloyds
	ASTM E84 ²				Class A (< 25 flame spread)						
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames.										
Other technical features											
Density	sheets: 60 to 75 kg/m³ tubes: 60 to 80 kg/m³										Tested according to ISO 845, ASTM D1622
Dimensions and tolerances	According to EN 14304, for detailed values please refer to product range tables.										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.										
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										Tested according to ISO 6916-1 (equivalent method ASTM D1056)
Leachable (water-soluble)chlorides	≤ 80 ppm (mg/kg or µg/g)										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 mm insulation 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 - 93.0	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-1/50-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	

ArmaSound[®]
Industrial Systems

THE FIRST SOUND CONTROL SYSTEMS
TO MINIMISE THE RISK OF CORROSION
UNDER INSULATION (CUI)



- 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.

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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 is 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 ^{*1}	Super-vision ^{*2}	Special Remarks
Temperature Range										
Temperature Range	Max. service temperature +85 °C									
	Min. service temperature -20 °C									
Thermal Conductivity										
Thermal Conductivity	ϑ_m 0 °C							ES 6591		Tested according to EN 12667 (Equivalent methods ASTM C177 and C518)
	$\lambda \leq 0.062$ W/(m · K)									
Fire performance										
Reaction to fire	Euroclass E							D 4225	o	
Other fire class ¹	BS 476 Part 7 Class 1 ASTM E84 < 25 Flame Spread Index									BS 476 Class 1 Approved by Lloyds
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
										Tested according to ISO 345. rated according to EN ISO 11654
Calculated broadband insertion loss	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	0.150	0.400	0.600	0.750					
	(acc. to ASTM C 423)									
Other technical features										
Density	220 to 360 kg/m³									Tested according to ISO 845, ASTM D1622

Technical Data - ArmaSound RD240

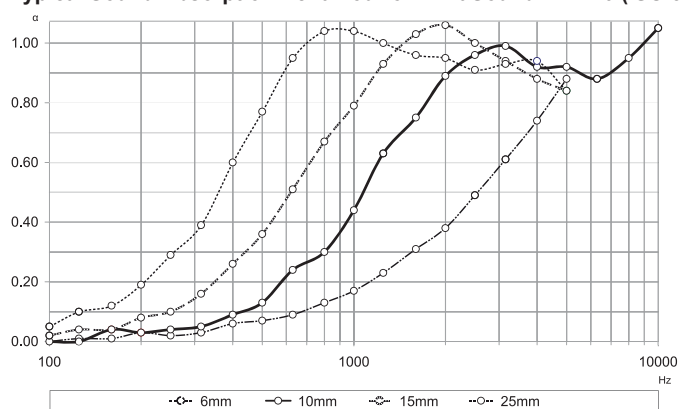
Tear strength	0.4 - 1.4 kN/m			Tested according to ISO 34-1
Tensile strength	MD 70 to 190 kPa			Tested according to ISO 1798
Elongation	MD 50 - 90 %			Tested according to ISO 1798
Health aspects	Fibre dust free			
Storage & Shelf life	Material shall be stored indoors, in clean and dry conditions, away 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
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		
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

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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.

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 $\mu > 50,000$



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	≥ 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/m³		
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]	m²/roll	
RCS-R10/2-07-GY	2	700.0	10	7	
RCS-R20/1-07-GY	1	700.0	20	14	

Arma-Chek R 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	
ACH-MASTICS	Sealing compound for installing Arma-Chek R, Cartridge 290 ml	12	

ACOUSTIC, FIRE STOP, PIPE SUPPORTS & ACCESSORIES



- **ARMACOMFORT AB ALU**
- **ARMAFLEX PROTECT**
- **ARMAFIX AF**
- **ARMAFIX ULTIMA**
- **ARMAFIX NH**
- **ARMAFIX X**
- **ARMAFLEX ACCESSORIES**

- Corresponding Armafix insulated pipe supports to match the different Armaflex materials and provide condensation control at fixing points
- Armaflex Protect fire sleeves to provide 120 minutes passive protection through wall and ceiling penetrations
- A full range of adhesives, tapes, paint and knives to achieve a professional installations

ArmaComfort®

ACOUSTIC INSULATION FOR
COMMERCIAL AND DOMESTIC
DRAINAGE PIPE APPLICATIONS



- Extraordinary absorption and damping performance for increased acoustic comfort on drainage pipes
- Specially designed to reduce noise from cast iron and plastic rain water and waste pipes
- Requires minimal space and highly flexible for ease of pipe connection
- Weighted sound reduction index (R_w) = 28 dB



NOISE CONTROL: KEY TERMS

Sound is a mechanical oscillation which is perceived by the human ear in the frequency range of 16 Hz to 16,000 Hz.

Frequency is the number of oscillations per second. The pitch rises as the frequency increases. The most important range for building acoustics lies between 100 Hz and 3,150 Hz.

Airborne sound is sound transmission through the air (e.g.: human voices, TV and radio). Sound waves spread through the air.

Structure-borne sound is transmission through building structures.

Decibel (dB) is a relative unit and represents the ratio between two acoustic quantities on a logarithmic scale.

Decibel (A), dB (A) weights the sound level according to frequency. In this way it is possible to achieve a measurable representation of noise as it is perceived.

Technical Data - ArmaComfort AB Alu

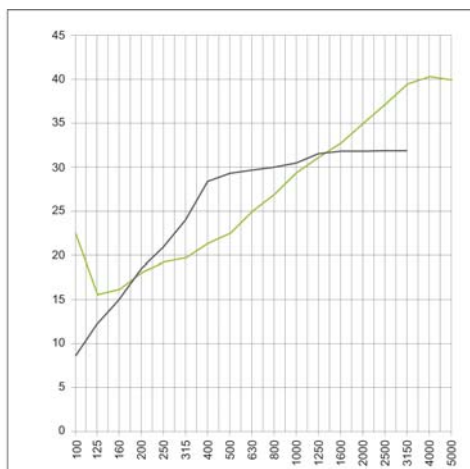
Brief description	ArmaComfort ® AB Alu combines excellent acoustic performance and excellent fire performance of B-s1,d0 making it suitable for commercial buildings.
Material type	Multilayer consists of an acoustic aluminium EPDM-EVA barrier of 2 mm thickness and 4 kg/m ² of weight and a decoupling polyurethane foam of 10 mm.
Colour	Aluminium covering a black acoustic barrier bonded to a black polyurethane foam.
Material Special Information	ArmaComfort® AB Alu offers outstanding durability.
Applications	ArmaComfort ® AB Alu is widely used as an acoustic insulation for waste water, rain water and sewage pipes. It has been specially designed for commercial buildings including offices, hotels, hospitals, schools, shopping centres and conference centres as well as large residential buildings.

Property	Value/Assessment		Test ^{*1}	Special Remarks
Temperature Range				
Temperature Range	Max. service temperature ¹ +100 °C Min. service temperature ¹			
Fire performance				
Reaction to fire ²	B-s1,d0		DIN EN ISO 13823	
Acoustic performance				
	Weighted sound reduction index			
Weighted sound reduction index	:			
Calculated broadband insertion loss	Rw	= 28 dB	EU 6439	UNI EN ISO 10140-1-2012 UNI EN ISO 10140-2-2010 UNI EN ISO 717-1: 2003
	(C; Ctr)	= (-1;-4) dB		
Other technical features				
Density	Density: ArmaComfort® AB Alu in thickness12 mm (barrier of 2,400+/- 500 kg/m3 and 10 mm of polyurethane foam : 92.5 +/- 17.5 kg /m3) 4.5 and 6.9 kg/m²			AIP 21/ DIN ISO 845 DIN EN ISO 2286-2:1998-07
Dimensions and tolerances	Thickness: 12 mm ± 1.5 mm Width: 1,000 mm ± 1.5% Length: 2,000 mm ± 1.5%		In accordance with DIN EN 822 (width and length) DIN EN 823 (wall thickness)	According to EN 822, EN 14314 table 1&2

1. For further information, please contact our Technical Department.

2. • Official supervision by independent institutes and /or test authorities

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



X-axis = Freq. (Hz)

Y-axis = Sound eduction index (db)

ArmaComfort AB Alu sheets



ArmaComfort® AB must be applied with Armaflex® 520 adhesive and ArmaComfort® AB Alu tape

12,0 mm insulation thickness					
Code	Width [mm]	Length [m]	Thickness [mm]	m ² /carton	
AO-12-99/E-AB-AL	1,000.0	2	12	2	

ArmaComfort AB Alu tapes



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

Armaflex®
Protect

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



- Single solution for hot and cold applications
- Quick and easy installation
- Suitable for ceilings, rigid walls and lightweight walls
- Provides structure borne noise reduction
- R-120 fire protection barrier for wall and ceiling pipe penetrations

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 non combustible pipes up to 323 mm and combustible pipes up to 75 mm.
Special Features	Armaflex Protect fulfils fire protection requirements irrespective of adjoining insulation.

Property	Value/Assessment		Test ^{*1}	Super- vision ^{*2}	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	W/(m · K)		
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 ^{*1}	Special Remarks
Thermal Conductivity					
Thermal Conductivity	ϑ_m		10 °C	EU 5738	Tested according to EN 12667
	λ	\leq	0.052 W/(m · K)		
Fire performance					
Reaction to fire	Non combustible (UK), Euroclass A1			D 5738	Classified acc. to EN 13501-1 Tested according to EN ISO 1182 EN ISO 1716
Other technical features					
Density	approx. 180 kg/m³ (after drying)				
Compression strength	0,4 N/mm²				Tested according to EN 1015-11
Drying time	48 hours				drying time takes longer in high humidity, low temperature and limited air flow conditions
Melting point	> 1000 °C			D 5738	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 months in original, sealed container.				Store in a cool, 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.

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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

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
- 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	- 20 °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
Practical fire behaviour	Self extinguishing, does not drip, does not spread flames.	Classified acc. to EN 13501-1 Tested acc. to EN 13823 EN ISO 11925-2
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 mm insulation 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	
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 mm insulation insulation thickness			Clamps 25 mm insulation		
		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.

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
- Easy installation thanks to self-adhesive closure

ARMAFIX AF

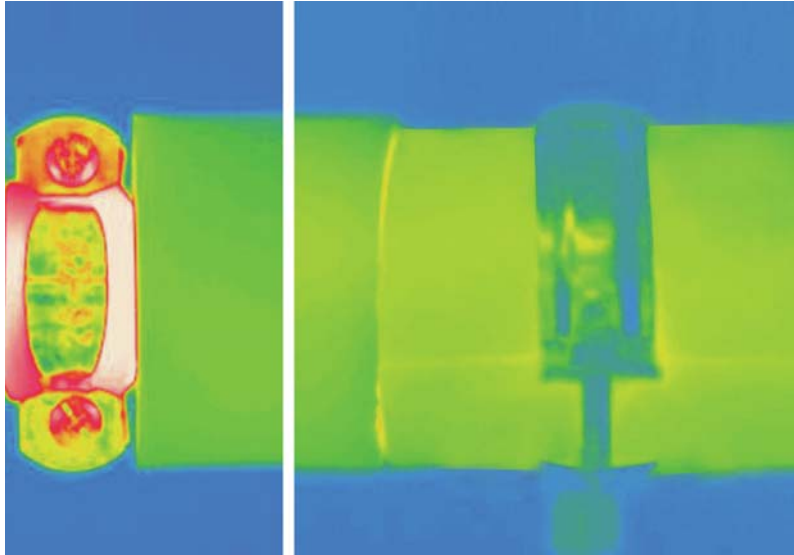
Pipe brackets represent a potential weak point in insulation systems. If the pipe isn't thermally isolated from the pipe bracket, thermal bridges occur and condensation can form. This leads to increased energy losses and the risk of corrosion and secondary damage. To prevent thermal bridges, direct contact 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.

PREVENTING THERMAL BRIDGES

AF/Armafix thermally isolates the pipe and bracket from each other. Installed together with AF/Armaflex tubes or sheet it guarantees an insulation system that provides long-term reliability in cold applications.

Armafix AF pipe supports are load bearing PET segments embedded in AF/Armaflex closed cell insulation material, with two outer shells made of aluminium sheeting. With its built-in water vapour barrier and self-adhesive secure joint on both sides, thermal bridging and condensation are prevented to ensure energy is not lost at fixings points.



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 ductwork 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/m³) 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 ^{*1}	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	λ	≤	0.033	w/(m · k)		
Water vapour diffusion resistance							
Water vapour diffusion resistance	Same as AF/Armaflex	μ	≥		10,000		Tested acc. to EN 12086 and EN 13469
Fire performance							
Reaction to fire	Pipe Hanger: Same as Armaflex		·			○	Classified acc. to EN 13501-1 Tested acc. to EN 13823 EN ISO 11925-2
	Entire System with Armaflex insulation: low flammability		B / B _L -s3, d0				
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/m³ (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 ●	74	75	20	PCX 068/073	10	
18	15	2.00	FX-6-15/18 ●	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

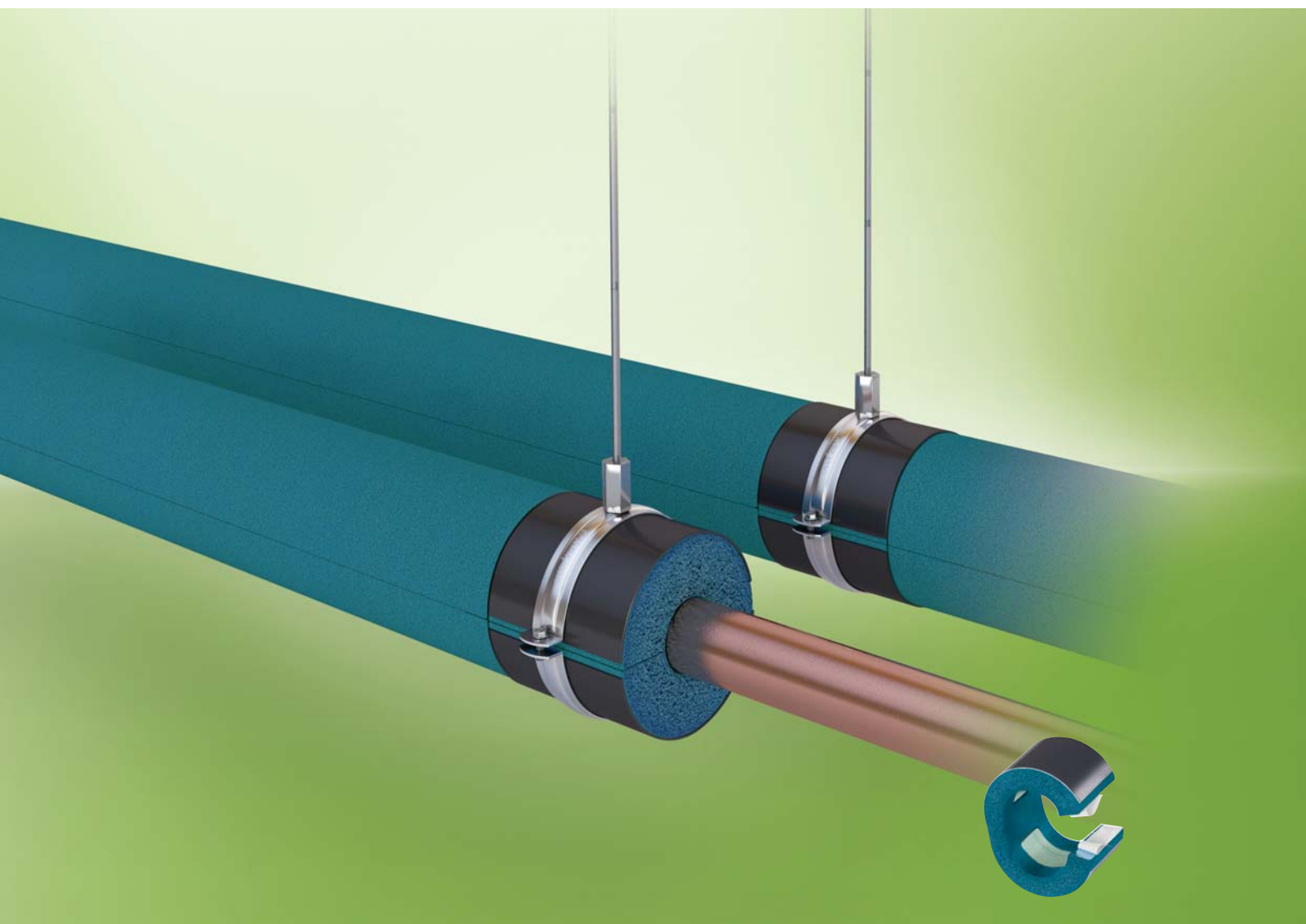


Code	Thickness [mm]	Width [mm]	Length [m]	Pieces/carton	
AS-19MM ●	19.0	100.0	2	5	
AS-25MM ●	25.0	100.0	2	4	

- Not a stock item. Delivery on request.

Armafix®
Ultima

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



- Prevents thermal bridges, reduces energy losses and minimizes CO₂ emissions
- One-piece pipe support with self-adhesive closure
- The only complete system solution with B-s1,d0 fire rating
- Excellent protection against water vapour diffusion for long-term performance

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 tubes	B _L -s1, d0
	Entire system with Armaflex Ultima sheets	B-s2,d0
	Entire system with Armaflex Ultima sheets with covering	B-s1,d0
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames	Classified acc. to EN 13501-1 Tested acc. to DIN EN 13823 DIN EN ISO 11925-2
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/m³ (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

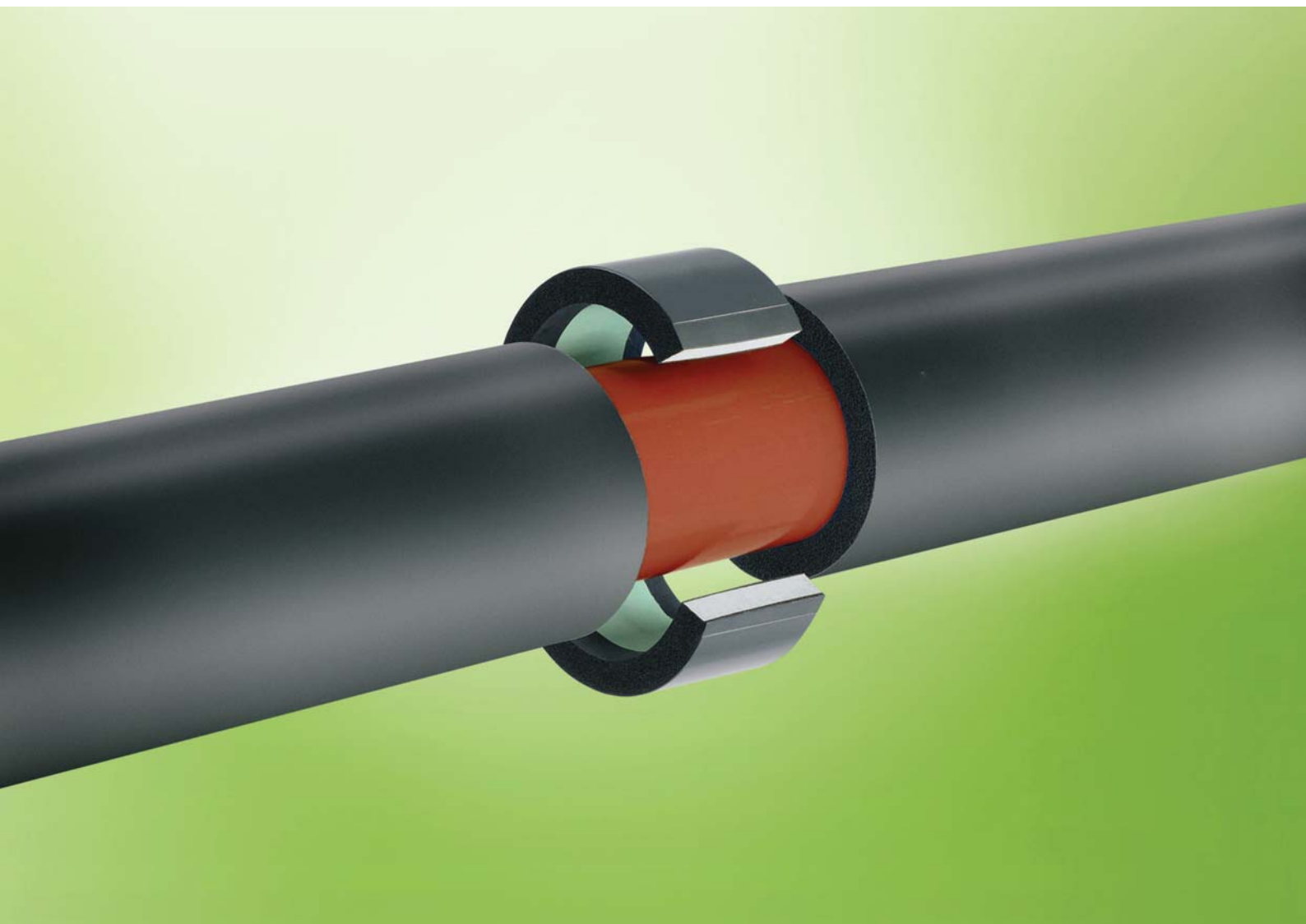


Pipe max. Outside-Ø [mm]	Max. permissible distance [m]	25 mm insulation insulation thickness			Clamps 25 mm insulation		
		Code	Pieces/carton		Code	Pieces/carton	
15	2.00	ULP25-15/18 ●	28		PCX 059/063	25	
18	2.00	ULP25-15/18 ●	28		PCX 059/063	25	
22	2.75	ULP25-22/25 ●	28		PCX 063/068	25	
25	2.75	ULP25-22/25 ●	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®



- Prevents condensation and saves energy
- Load-bearing segments made of recycled and recyclable PET
- High system security in combination with NH/ Armaflex
- 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						Super- vision ^{*1}	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)	λ= [34 + 0.1 · ϑm + 0.0008 · ϑm²]/1,000			
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					·		○	Classified acc. to EN 13501-1 Tested acc. to EN 13823 EN ISO 11925-2
	Entire system with Armaflex insulation: low flammability					D _L -s3, d0			
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/m³ (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 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	Outer- Ø [mm]	Length [mm]	Pieces/ carton	Code	Pieces/ carton	
10	10	2.00	PHN-13-10/12 ●	34	50	32	PCX 025/030	25	
12	10	2.00	PHN-13-10/12 ●	34	50	32	PCX 025/030	25	
15	10	2.00	PHN-13-10/12 ●	34	50	32	PCX 025/030	25	
15	15	2.00	PHN-13-15/18 ●	39	50	32	PCX 033/037	25	
18	15	2.00	PHN-13-15/18 ●	39	50	32	PCX 033/037	25	
22	22	2.75	PHN-13-22/25 ●	45	50	32	PCX 042/046	25	
25	22	2.75	PHN-13-22/25 ●	45	50	32	PCX 042/046	25	
28	28	3.00	PHN-13-28/30 ●	50	50	32	PCX 047/052	25	
30	28	3.00	PHN-13-28/30 ●	50	50	32	PCX 047/052	25	
32	-	3.50	PHN-13-32 ●	54	50	28	PCX 047/052	25	
35	35	3.50	PHN-13-35/38 ●	58	55	28	PCX 054/058	25	
38	35	3.50	PHN-13-35/38 ●	58	55	28	PCX 054/058	25	
40	-	3.75	PHN-13-40 ●	62	55	28	PCX 059/063	25	
42	42	3.75	PHN-13-42/45 ●	66	55	28	PCX 063/068	25	
45	42	3.75	PHN-13-42/45 ●	66	55	28	PCX 063/068	25	
48	48	4.25	PHN-13-48 ●	72	60	28	PCX 068/073	10	
54	54	4.25	PHN-13-54/57 ●	78	60	28	PCX 068/073	10	
57	54	4.25	PHN-13-54/57 ●	78	60	28	PCX 068/073	10	
60	60	4.75	PHN-13-60/64 ●	84	70	24	PCX 082/085	10	
64	60	4.75	PHN-13-60/64 ●	84	70	24	PCX 082/085	10	
76	76	5.50	PHN-13-76/80 ●	99	80	20	PCX 092/099	10	
80	76	5.50	PHN-13-76/80 ●	99	80	20	PCX 092/099	10	
89	89	6.00	PHN-13-89 ●	112	100	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	Outer- Ø [mm]	Length [mm]	Pieces/ carton	Code	Pieces/ carton	
10	10	2.00	PHN-19-10/12 ●	45	60	28	PCX 038/041	25	
12	10	2.00	PHN-19-10/12 ●	45	60	28	PCX 038/041	25	
15	10	2.00	PHN-19-10/12 ●	45	60	28	PCX 038/041	25	
15	15	2.00	PHN-19-15/18 ●	50	60	28	PCX 047/052	25	
18	15	2.00	PHN-19-15/18 ●	50	60	28	PCX 047/052	25	
22	22	2.75	PHN-19-22/25 ●	56	60	28	PCX 054/058	25	
25	22	2.75	PHN-19-22/25 ●	56	60	28	PCX 054/058	25	
28	28	3.00	PHN-19-28/30 ●	61	60	28	PCX 059/063	25	
30	28	3.00	PHN-19-28/30 ●	61	60	28	PCX 059/063	25	
32	-	3.50	PHN-19-32 ●	65	60	28	PCX 059/063	25	
35	35	3.50	PHN-19-35/38 ●	69	70	24	PCX 063/068	25	
38	35	3.50	PHN-19-35/38 ●	69	70	24	PCX 063/068	25	
42	42	3.75	PHN-19-42/45 ●	77	70	24	PCX 068/073	10	
45	42	3.75	PHN-19-42/45 ●	77	70	24	PCX 068/073	10	
48	48	4.25	PHN-19-48 ●	83	70	24	PCX 072/080	10	
54	54	4.25	PHN-19-54/57 ●	89	70	24	PCX 082/085	10	
57	54	4.25	PHN-19-54/57 ●	89	70	24	PCX 082/085	10	
60	60	4.75	PHN-19-60/64 ●	95	80	20	PCX 088/092	10	
64	60	4.75	PHN-19-60/64 ●	95	80	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 mm insulation insulation thickness				Clamps 25 mm insulation		
			Code	Outer- Ø [mm]	Length [mm]	Pieces/ carton	Code	Pieces/ carton	
15	15	2.00	PHN-25-15/18 ●	63	60	28	PCX 059/063	25	
18	15	2.00	PHN-25-15/18 ●	63	60	28	PCX 059/063	25	
22	22	2.75	PHN-25-22/25 ●	69	60	28	PCX 063/068	25	
25	22	2.75	PHN-25-22/25 ●	69	60	28	PCX 063/068	25	
28	28	3.00	PHN-25-28/30 ●	74	60	28	PCX 068/073	10	
30	28	3.00	PHN-25-28/30 ●	74	60	28	PCX 068/073	10	
32	-	3.50	PHN-25-32 ●	78	60	24	PCX 068/073	10	
35	35	3.50	PHN-25-35/38 ●	81	70	24	PCX 072/080	10	
38	35	3.50	PHN-25-35/38 ●	81	70	24	PCX 072/080	10	
42	42	3.75	PHN-25-42/45 ●	90	70	24	PCX 082/085	10	
45	42	3.75	PHN-25-42/45 ●	90	70	24	PCX 082/085	10	
48	48	4.25	PHN-25-48 ●	96	70	24	PCX 088/092	10	
54	54	4.25	PHN-25-54/57 ●	102	70	24	PCX 092/099	10	
57	54	4.25	PHN-25-54/57 ●	102	70	24	PCX 092/099	10	
60	60	4.75	PHN-25-60/64 ●	108	80	20	PCX 099/103	10	
64	60	4.75	PHN-25-60/64 ●	108	80	20	PCX 099/103	10	
76	76	5.50	PHN-25-76/80 ●	123	90	16	PCX 112/118	10	
80	76	5.50	PHN-25-76/80 ●	123	90	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.

Armaflex® Accessories

THE RIGHT TOOLS & ACCESSORIES TO
ENSURE PROFESSIONAL ARMAFLEX®
INSTALLATIONS



- Specially designed and optimised for use with Armaflex®
- Complete range with cleaner, knives, adhesives, tapes and paints

Armaflex Accessories

Elastomeric insulation materials not only have good technical properties, they are also very user-friendly due to their high flexibility and ease of application. When installing these insulation materials it is crucial that they are glued professionally. Therefore, Armacell offers a broad range of accessories specifically developed for its products and regularly adds innovative solutions. Alongside the tried-and-tested contact adhesives such as the Armaflex 520 adhesive, interesting alternatives are also available.

ARMAFLEX ULTIMA ADHESIVES

Armaflex Ultima synthetic rubber insulation materials based on the innovative Armaprene technology, require the use of adhesives that have been specially formulated for this type of foam. For these materials, in addition to the standard Armaflex Ultima 700 adhesive, Armacell offers the gel form non-drip product Armaflex Ultima RS850 adhesive.

Find out more about all accessories such as the Armaflex Toolbox under **www.armacell.eu**



SOLVENT-FREE ACCESSORIES

Armacell is the first manufacturer of elastomeric insulation materials to provide reduced solvent and solvent-free adhesives. Armaflex RS850 adhesive and Armaflex solvent free cleaner meet the requirements of green building schemes regarding environmental and health aspects of the building products.

DRIP-FREE GEL ADHESIVES

The drip-free, thixotropic (gel-like) adhesives Armaflex RS850 and Armaflex Ultima RS850 guarantee neat application. The special consistency of these products means that they are very drip-resistant, which is a great benefit when working overhead or when it is important that the insulation is not soiled by drops of adhesive. Since the adhesives release minimal quantities of solvents when idle, the Armaflex RS850 adhesives are particularly suitable for installations in workshops and confined spaces.

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	-17 °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	<p>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.</p> <p>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.</p>
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	<p>Please observe our installation instructions / product data. Application temperature: ideally + 20 °C, not below 0 °C.</p> <p>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.</p> <p>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.</p>
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	<p>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;</p> <p>Sheets: 3-4 m² per litre</p>	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:	<p>Clean dirty surfaces and the Armaflex surface with Armaflex Cleaner.</p> <p>Compatibility with bases: very good adhesion to metallic surfaces.</p> <p>Compatibility with colour coated surfaces needs to be tested.</p> <p>Incompatible with: Asphalt, bitumen or red lead paint (linseed oil based).</p>	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	<p>at 20 °C:</p> <p>1. Minimum drying time (airing time): 3-5 minutes</p> <p>2. Contact adhesion time: 15-20 minutes</p> <p>3. Setting time: 36 hours</p>	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	-17 °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 is being used.
Assembly	To ensure perfect adhesion all contaminated surfaces (including the Armaflex) must be cleaned. In addition, the cleaner can also be used to clean surfaces where 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 UV resistant paint that remains permanently elastic, is resistant to weathering and has good ageing resistance.
Material type	Non-drip
Colour	white (RAL 9001) or grey (RAL 7037)
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 when used indoors.
Assembly	All Armaflex insulation except HT/Armaflex and Armaflex Ultima (see relevant product data sheet) that is installed outdoors should 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 2 hours inbetween coats and 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 and Armafinish 99 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.

Technical Data - Armaflex SF Cleaner

Brief description	Water-soluble Cleaner
Colour	yellowish
Material Special Information	Liquid
Applications	Cleaning of surfaces where Armaflex Adhesive is to be used.
Assembly	To ensure perfect adhesion all contaminated surfaces - including contaminated Armaflex - must be cleaned.
Remarks	Armaflex SF Cleaner to be sprayed onto areas that require cleaning and allowed to settle (amount of time depending on the amount of dirt) before washing off.

Property	Value/Assessment	Special Remarks
Other technical features		
Storage & Shelf life	1 year in sealed original container	IKeep container tightly closed in a cool, well-ventilated place. Protect from frost, do not store it below of +5 °C.
Flash Point	> 100 °C	
Hazard Class	This product does not meet the classification and labelling criteria given in the Regulation (EC) No 1272/2008 (CLP).	
Transport classesRecycling	No hazardous material as defined by the transport regulations.	
Recycling	Dispose of waste according to applicable legislation. More details see relevant Safety Data Sheet.	

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 accessories self-adhesive tapes



Code	Colour	Width [mm]	Length [m]	Thickness [mm]	Rolls/carton	
AF-TAPE-MC	black	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	Glue-master extra brush points with cap (11mm diameter)	5x4	
GLUEM-BRUSH17MM	Glue-master extra brush points with cap (17mm diameter)	5x4	
GLUEMASTER B •	Armaflex Glue-master (adhesive pump)	12	
SLITTER	Special tube slitter-knife	10	

• Not a stock item. Delivery on request.

Armaflex Cleaner



Code	Description	Pieces/carton	
CLEANER/1,0	Special cleaner for use with Armaflex® Adhesive 520 and Armaflex® Adhesive HT625.	4	
SF-CLEANER/1,0	Solvent free cleaner for use with Ultima adhesives, 520 and Armaflex 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



- 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 - Tools for professionals!

When it comes to preventing condensation and energy losses on equipment, not only high-quality insulation material is crucial, but also the installation.

Armaflex insulation materials not only have the required technical properties, they can also be installed quickly and easily. Armacell already offers various tools and aids such as the Armaflex Application Manual and the installation videos.

Now all the tools and aids are available in a lightweight, robust, lockable aluminium case!



MEASURING CORRECTLY

- Armaflex Application Manual with fabrication and measuring instructions for Armaflex covers for complex-shaped components
- Folding rule with circumference scale
- Callipers (300 mm) to determine diameters precisely
- Edding marker pen, Armacell ballpoint pen and silver-ink marker pen for marking, making notes and transferring measurements to Armaflex insulation material
- Bow compass with a holder for the silver-ink marker pen and protective cap for use on Armaflex insulation material

CUT PERFECTLY

- Armaflex template
- 4 knives: with blade length of 9, 17 and 27 cm for different cut-outs and 1 ceramic knife
- Knife holster for attaching to a belt
- Sharpening stone for the knives
- Sharpened copper pipe ends (6 different diameters) for cut-outs in Armaflex insulation material
- Tool for re-sharpening the copper pipe ends

GLUE NEATLY

- Armaflex short-bristle brush 14, 70mm flat brush
- Armaflex Gluemaster (adhesive pump)
- Cleaning cloth for the tools

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



OLDHAM PLANT, UK

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

As the only nitrile rubber insulation producer in the UK, Armacell is able to respond quickly to customer requirements, from customised product solutions to fast delivery times supported by the technical, manufacturing, sales, finance and customer services departments in Oldham.



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.

ARMACELL UK LIMITED TERMS AND CONDITIONS FOR THE SALE OF ITS PRODUCTS (01/17)

1. Scope

These Conditions of Sale apply to all contracts between Armacell and the Buyer for of sale and purchase of the Products (the "Contract") to the exclusion of any other terms and conditions contained or referred to in any order, letter, form of contract or other communication sent by the Buyer to Armacell. These Conditions shall not be modified unless with the prior written approval of an officer of Armacell. These Conditions shall prevail over any and all of the Buyer's general and specific terms and conditions of purchase and shall supersede all previous communications with the Buyer, either oral or written. Any concession made or latitude allowed by Armacell to the Buyer shall not affect the strict rights of Armacell under the contract. If in any particular case any of these Conditions shall be or be held to be invalid or shall not apply to the contract the other Conditions shall continue in full force and effect.

2. Coming into effect

The contract between Armacell and the Buyer shall come into effect when the Buyer places an order upon these Conditions and it is accepted by Armacell.

3. Prices

- a. The prices of the Products shall be the Armacell list price current at the date of the order
- b. Prices are subject to change without notice [to take account of any variation in Armacell's costs]. The Products will be invoiced at the price ruling on the date of despatch from Armacell's premises. For any order for delivery at one place at one time where the net value is less than £200.00 a charge of £22.50 will be added to cover carriage and administrative charges. VAT will be added as a separate item of account. Quantity terms current from time to time are available on request.
- c. Unless otherwise stated on Armacell's invoice, payment by the Buyer must be made before the end of the month following the month in which Armacell's invoice is dated.
- d. Unless otherwise agreed in writing, Armacell operate to the following payment terms:
 - i. Net payment shall be made by the end of the month following the month of invoice. These payment terms shall appear on Armacell's invoices as follows: net-30th proximo".
- e. Without prejudice to any other rights it may have, Armacell shall be entitled (both before and after any judgment) to charge interest on any overdue amounts at 5% over the base lending rate, from time to time, of Barclays Bank PLC.
- f. The price of the Products shall be due in full to Armacell in accordance with the terms of the contract and the Buyer shall not be entitled to exercise any set off, lien or any other similar right or claim.
- g. The time of payment shall be of the essence of the contract.

4. Additional costs

The Buyer shall indemnify Armacell in respect of any loss, cost or expense incurred by Armacell as a result, directly or indirectly, of the Buyer's instructions or lack of instructions or through any failure or delay whatsoever in taking delivery or through any other act, neglect or default on the part of the Buyer, its servants, agents or employees.

5. Intellectual property

The Buyer shall indemnify Armacell against all costs, claims, losses, expenses and damages incurred by Armacell or for which it may be liable due to or arising directly or indirectly out of any infringement or alleged infringement of patents, trademarks, copyright, design right or other intellectual property right occasioned by the importation, manufacture or sale of the Products if made to the specification or special requirements of the Buyer.

6. Delivery and Passing of Risk and Title

- a. Delivery shall be completed when made to the place of delivery in mainland United Kingdom, Northern Ireland or the Republic of Ireland, specified by the Buyer at the time of order, at which time all risks or loss or damage to the Products shall pass to the Buyer who shall be solely responsible for their custody and maintenance. Upon delivery the Buyer shall sign the Armacell delivery receipt notice. The unloading of the Products at the place of delivery and subsequent storage is at the sole risk of the Buyer. Delivery elsewhere is subject to agreement by Armacell and an additional delivery charge. No part cartons will be supplied.
- b. Title to the Products shall only pass to the Buyer after full payment for all goods sold by Armacell to the Buyer under the contract and any other contract between Armacell and the Buyer and on any other account whatsoever has been made to Armacell. The Buyer may sell the Products in the normal course of business. However, in the event of any resale by the Buyer of the Products Armacell's beneficial entitlement shall attach to the proceeds of sale or other disposition thereof so that such proceeds or any claim therefore shall be assigned to Armacell and until such assignment shall be held on trust in a separate identified account for Armacell by the Buyer and such proceeds shall not be mingled with other moneys or paid into any overdrawn bank account and shall at all times be identifiable as Armacell's moneys. Until full payments for all such goods, and in addition to any other remedy available at law, Armacell has the right, at any time without notice for all goods sold by Armacell to the Buyer, to take possession of and re-sell the Products, and for that purpose the Buyer authorises Armacell to enter its premises and agrees to store the Products in such a way that they are readily identifiable as the property of Armacell.
- c. Pending payment of the full purchase price of the Products the Buyer shall at all times keep the Products comprehensively insured against loss or damage by accident, fire, theft and other risks usually covered by insurance in the type of business carried on by the Buyer in an amount at least equal to the balance of the price for the same from time to time remaining outstanding. The policy shall bear an endorsement recording Armacell's interest.
- d. All times dates or periods given for delivery of the Products are given in good faith but without any responsibility on Armacell's part. Time of delivery shall not be of the essence of the contract. Any period for delivery shall be calculated from the time of Armacell's acceptance of the Buyer's order or from Armacell's receipt of all information necessary to enable Armacell to manufacture or procure the manufacture of the Products (whichever shall be the later).
- e. Where the Products are handed to a carrier for carriage to the Buyer or to United Kingdom port for export any such carrier shall be deemed to be an agent of Armacell and not of the Buyer for the purposes of sections 44, 45 and 46 of the Sale of Goods Act 1979. The Buyer agrees that (i) section 32(3) of the Sale of Goods Act 1979 shall not apply to Products sent by Armacell; and (ii) it shall be responsible for complying with any legislation or regulations governing the importation of the Products into the country of destination, and into any country through which the Products are transported, and for the payment of any duties on or in respect of the importation or transportation of the Products.

- f. Additions to orders will not be accepted after a vehicle loading schedule has been finalised. The Buyer's instructions, which restrict the delivery vehicle, must be specified by the Buyer no later than the time of order, and may incur extra charges.
- g. In respect of each order Armacell will not consider delivering additional quantities after Armacell has dispatched an order.
- h. All Armaflex orders for pipe insulation shall be delivered by Armacell in tubular form unless the Buyer stipulates "slit" pipe insulation on order.
- i. If for any reason the Buyer is unable to accept delivery of the Products at the time when the Products are due and ready for delivery Armacell may at its sole discretion without prejudice to its other rights and for such period as Armacell may determine store the Products at the Buyer's risk and take all reasonable steps to safeguard and insure them at the Buyer's cost, provided that the Buyer shall be immediately informed thereof.

7. Products Returned

Products supplied in accordance with the contract cannot be returned without prior written authority from an Armacell salesman (and only unopened cartons and materials will be considered). Duly authorized returns shall be sent to Armacell's premises at Mars Street, Oldham, Lancashire, OL9 6LY or such other address as notified to the Buyer. Unless otherwise agreed in writing, the Buyer will be liable to pay to Armacell a charge of 15% of the invoice value of the Products dispatched for the returned Products to cover the costs, expenses, damages and losses incurred by Armacell associated with such returns.

8. Warranty and defects

- a. Armacell warrants Insulation Tube and Sheet products in general against defects in manufacturing and material and deviations from published technical characteristics for a period of twelve months from date of delivery or for three months after the date of completion of the building in which the products have been installed whichever is the shorter period of time, if installed, used and maintained in accordance with Armacell's then current instructions and recommendations and provided that Armacell receives notice of such defects within seven days of the Buyer becoming aware of such defects.
- b. Further, Armacell warrants Armaflex insulation tube and sheet products in particular against defects in manufacturing and material and deviations from published technical characteristics for a period of five years from the date of installation if installed, used and maintained in accordance with Armacell's then current instructions and recommendations.
- c. In substitution for all rights which the Buyer would or might have but for these Conditions, Armacell undertakes, in the case of Products manufactured by Armacell, that in the unlikely event that within 3 months of delivery of any Product a defect appears (being a defect which would not be obvious on reasonable inspection, whether or not such an inspection was carried out) or the Product proves to be unable to meet the relevant technical criteria, Armacell will at its option and as appropriate subject to proof of delivery, completion or installation date, either (i) remove and replace the defective Product at no charge or (ii) refund the cost of such Product by way of credit note to the Buyer, save always that Armacell shall have no responsibility if the Product in question was installed with the knowledge that the Product was defective.
- d. In order to exercise its rights under this condition 8, the Buyer shall inform Armacell with seven days of the date when such defect appeared or ought reasonably to have been discoverable.
- e. These warranties do not extend to ancillary materials such as adhesives, paint and/or tape and exclude minor deviations from samples as well as damage or performance problems arising out of improper use or installation and/or maintenance contrary to Armacell's then current recommendations.
- f. The contract shall not constitute a sale by description or sample. These warranties are, as far as the law permits, in lieu of and exclude all other conditions warranties and terms whether expressed or implied in respect of the condition of the Products, their saleability or quality or fitness for any particular purpose.
- g. Any guarantees are in addition to and do not affect your statutory rights.
- h. Armacell shall not be liable for:
 - i. imperfect or defective Products caused by any inaccuracies in any drawing, bill of quantities or specification supplied by the Buyer; nor
 - ii. any defect in the Products arising out of the acts, omissions, negligence or default of the Buyer, its employees or agents including (but without prejudice to the generality of the foregoing) any failure by the Buyer to comply with any recommendations of Armacell as to storage and handling of the Products.

9. Damage, Shortages, Delay in Transit

- a. No liability (whether in contract or for negligence or otherwise howsoever) for loss of or damage to the Products occurring prior to delivery or for any claim that any item delivered pursuant to the contract is defective or is otherwise not in accordance with the contract (being a defect or loss, damage or non-compliance which would be obvious upon a reasonable inspection of the Products) or for non-delivery will attach to Armacell unless claims to that effect are notified in writing by the Buyer to Armacell (and in the case of claims for loss, damage or non-delivery with a copy to the carrier if Armacell's own vehicles have not been used to deliver the Products):
 - ii. within three days of delivery for loss, damage, defect or non-compliance with the contract; or
 - iii. within ten days of the date of the invoice for non-delivery.
- b. In the event of a valid claim for loss, damage, or non delivery, Armacell undertakes at its option either to repair, reprocess or replace the items concerned at its expense but shall not be under any further or other liability in connection with such non-delivery, loss or damage.
- c. If the Buyer shall fail to give notice in accordance with 9(a) above the items delivered shall be deemed to be in all respects in accordance with the contract and without prejudice to earlier acceptance by the Buyer it shall be bound to accept and pay for the same accordingly and all claims in respect of non-delivery, loss, damage, defect or non-compliance shall (save as set out in 8 above) thereafter be wholly barred.
- d. If packaging is visibly damaged on delivery or there are delivery shortages, the carrier's delivery note must be signed accordingly.

10. Liability

- a. The aggregate liability of Armacell (whether in contract or for negligence or breach of statutory duty or otherwise howsoever) to the Buyer for any loss or damage of whatsoever nature and howsoever caused shall be limited to and in no circumstances shall exceed the price of the

Products the subject of the claim.

- b. Armacell shall not be liable for any costs, claims, damages or expenses arising out of any tortious act or omission or any breach of contract or statutory duty calculated by reference to profits, income, production or accruals or loss of such profits, income, production or accruals or by reference to accrual of such costs, claims, damages or expenses on a time basis.
- c. Nothing herein shall have the effect of excluding or restricting the liability of Armacell for death or personal injury resulting from its negligence in so far as the same is prohibited by United Kingdom statute.

11. Default or Insolvency of the Buyer

If the Buyer shall be in breach of any of its obligations under the contract or if any distress or execution shall be levied on the Buyer's property or assets or if the Buyer shall make or offer to make any arrangement or composition with his creditors or commit any act of bankruptcy or if any bankruptcy petition be presented against him or (if the Buyer is a company) if any resolution or petition to wind up such company shall be passed or presented or if a receiver, administrative receiver or administrator of the whole or any part of such company's undertaking property or assets shall be appointed Armacell in its discretion and without prejudice to any other right or claim may by notice in writing determine wholly or in part any and every contract between Armacell and the Buyer or may (without prejudice to Armacell's right subsequently to determine the contract for the same cause should it so decide) by notice in writing suspend delivery or any further deliveries (as the case may be) of Products until any default by the Buyer be remedied.

12. Rebates

- a. Any rebates, including (without limitation) rebates by means of a discount on the price of the Products ("Rebate") must be agreed in writing with Armacell and be subject to these Conditions of Sale.
- b. In the event that Armacell has agreed a Rebate with the Buyer, the Buyer must within 4 weeks of the date of delivery of the Products write to Armacell detailing its entitlement to a Rebate and provide a copy of Armacell's agreement to the Rebate (a "Rebate Claim").
- c. Provided that the Buyer has complied with the terms of clauses 12(a) and (b), Armacell will then calculate the Rebate due to the Buyer and will use its reasonable endeavors to provide a credit note to the Buyer for such sum within 4 weeks of the date of receipt by Armacell of the Rebate Claim.
- d. In the event that the Buyer does not comply with the terms of clauses 12(a) and (b), the Buyer shall not be entitled to a Rebate payment from Armacell unless Armacell otherwise agrees in writing.




13. Tactical Support Arrangements

- a. In circumstances where the Buyer is tendering for a large project or account which would require Armacell to supply it with a significant amount of the Products, Armacell and the Buyer may enter into a tactical support arrangement whereby they agree in writing to a specific discount provided that the Buyer
 - i. is successful with its tender; and
 - ii. demonstrates to Armacell's satisfaction (in its absolute discretion) that the Products will be used solely for the purpose of that specified project ("TSA Payment").
- b. In the event that Armacell has agreed a TSA Payment with the Buyer, the Buyer must within 4 weeks of the date of delivery of the Products write to Armacell detailing its entitlement to a TSA Payment and provide a copy of Armacell's agreement to the TSA Payment (a "TSA Payment Claim").
- c. Provided that the Buyer has complied with the terms of clauses 13(a) and (b), Armacell will then calculate the TSA Payment due to the Buyer and will use its reasonable endeavors to provide a credit note to the Buyer for such sum within 4 weeks of the date of receipt by Armacell of the TSA Payment Claim.
- d. In the event that the Buyer does not comply with the terms of clauses 13(a) and (b), the Buyer shall not be entitled to a TSA Payment from Armacell unless Armacell otherwise agrees in writing.

14. General

- a. All Product dimensions and weights are approximate.
- b. Each delivery of the Products shall constitute a separate contract.
- c. Armacell reserves the right to make changes in the design and specifications of the Products.
- d. In respect of any Products not appearing on the current Armacell product list from time to time, the Buyer must at the end of order provide complete details of such Products to Armacell. In respect of such products, additional terms and conditions may be agreed in writing between Armacell and the Buyer.
- e. Armacell reserves the right to discontinue the production of items appearing in its current product list.
- f. These Conditions of Sale and the orders accepted by Armacell pursuant thereto contain the entire agreement between Armacell and the Buyer and there are no other obligations between Armacell and the Buyer.
- g. No statement, description, information, warranty, condition or recommendation contained in any catalogue, price list, advertisement or communication or made verbally by any of Armacell's agents or employees shall be construed to enlarge, vary or override in any way any of these conditions.
- h. Armacell shall be entitled to delay or cancel delivery or to reduce the amount of Products delivered if and to the extent that it is prevented from or hindered in or delayed in manufacturing, obtaining or delivering the Products by normal route or means of delivery through any circumstances beyond its control including (but not limited to) strikes, lock-outs, accidents, war, fire, reduction in or unavailability of power at manufacturing plant, breakdown of plant or machinery or shortage or unavailability of raw materials from normal sources of supply.
- i. Save as provided for contracts may not be cancelled except by agreement in writing of both parties and upon the payment to Armacell of such amount as may be necessary to indemnify Armacell against all loss resulting from the said cancellation.
- j. Armacell may assign the contract with the Buyer or sub-contract the whole or any part thereof to any person, firm or company.
- k. A person who is not a party to the Contract has no right to enforce any of its terms under the Contracts (Rights of Third Parties) Act 1999.
- l. All contracts of sale pursuant to these Conditions of Sale shall be governed by, and construed in accordance with English Law and shall be deemed to have been made in England and the Buyer and Armacell agree to submit to the non-exclusive jurisdiction of the English courts.

PIPE DIAMETER CHART

<div><div></div><div></div><div></div></div>						
Insulation bore size (mm)	Copper Pipe		Steel Pipe			Plastic Pipe
	OD (mm)	OD (inch)	Nominal diameter (DN)	OD (mm)	OD (inch)	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	3/4	10	17.2	3/8	16
20	19	3/4				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	48	1 7/8	40	48.3	1 1/2	
54	54	2 1/8				50
60	60	2 5/8	50	60.3	2	
67	67	2 5/8				63
76	76	3	65	76.1	2 1/2	75
80	80	3 1/8				
89	89	3 1/2	80	88.9	3	
93	92	3 5/8				90
108	108	4 1/4				
114	114	4 1/2	100	114.3	4	110
Sheet 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	10	
						280
						315
			300	329.9	12	
			350	355.6	14	355
			400	406.4	16	400
			450	457	18	
			500	508	20	
			600	610	24	

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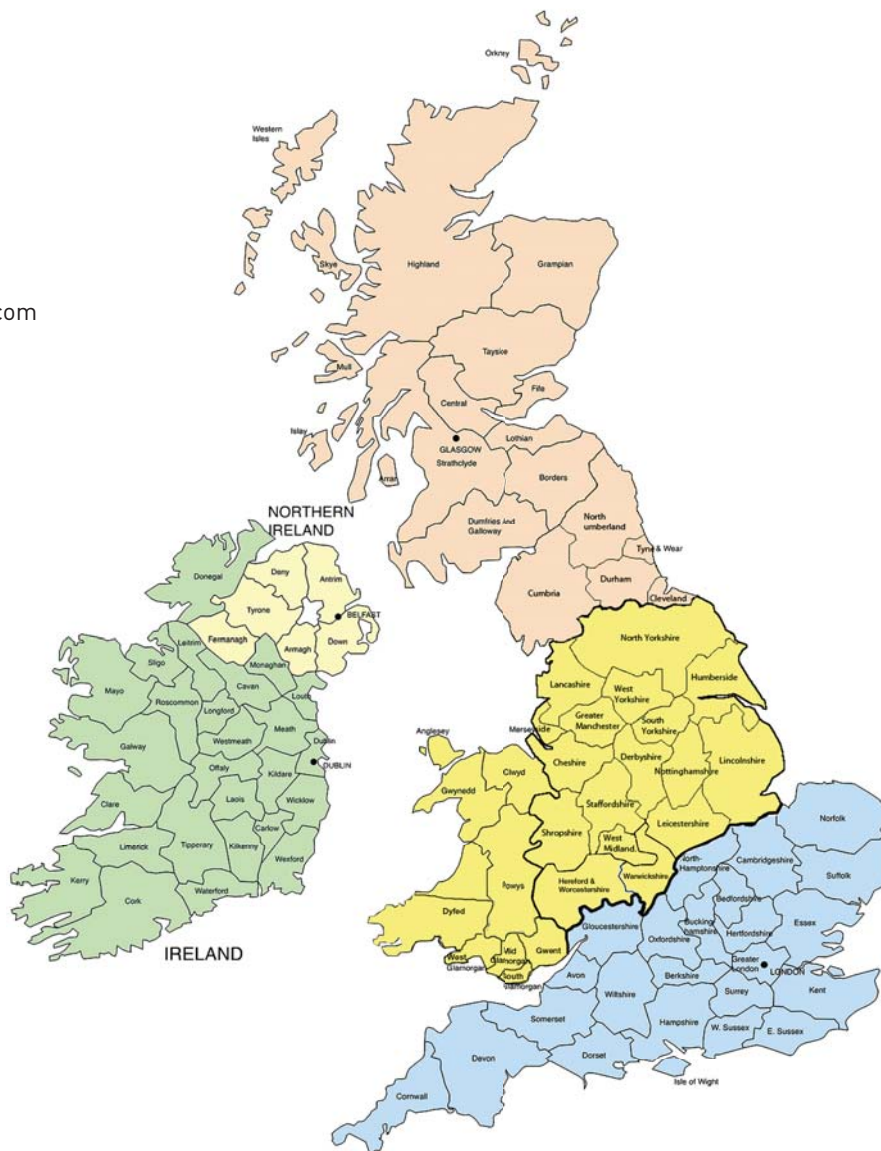
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