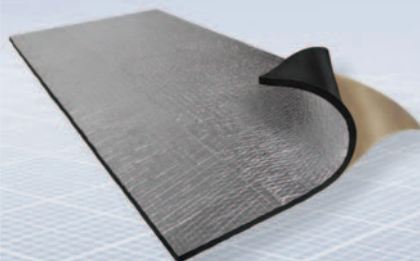
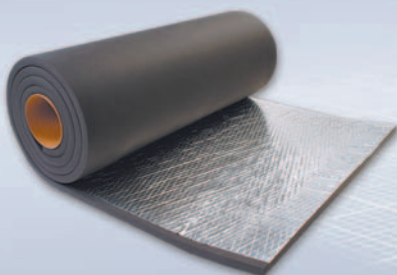


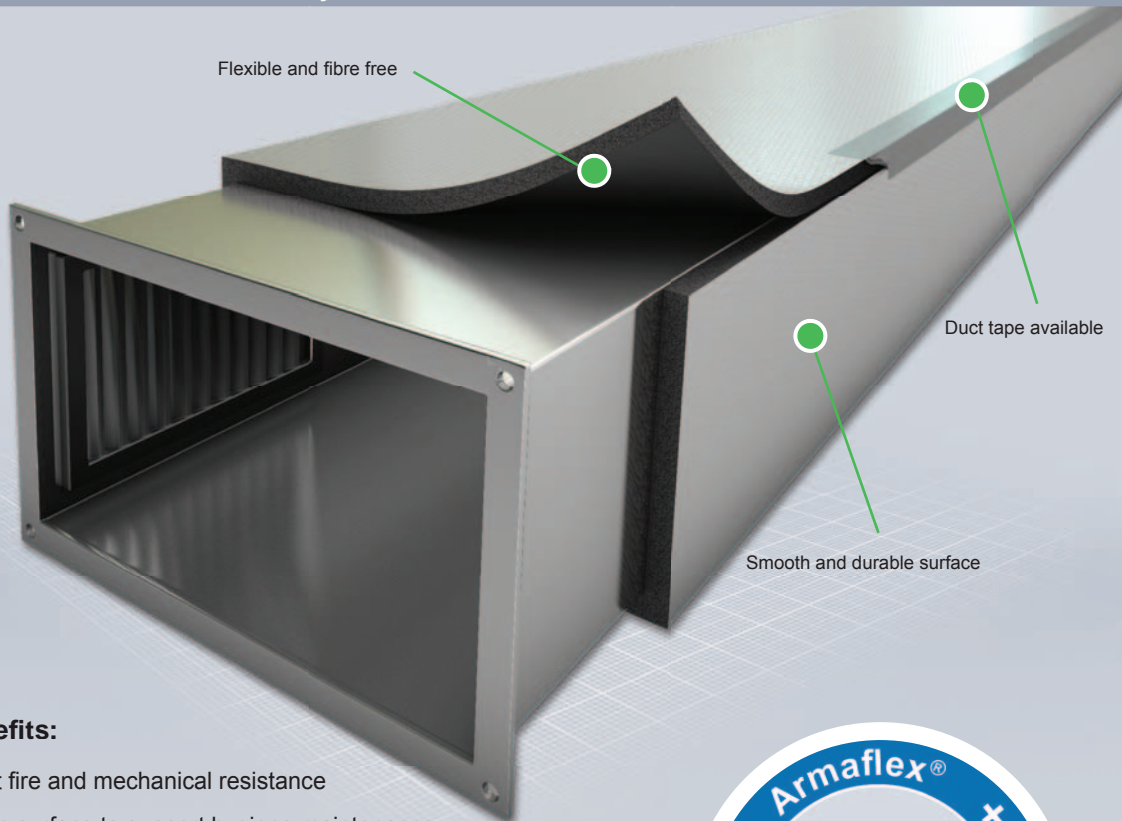


Armaflex® Duct

Fibre-free duct insulation with a durable silver finish



► Condensation control, durability and attractive silver finish



Your benefits:

- Excellent fire and mechanical resistance
- Washable surface to support hygiene maintenance
- Non-wicking to reduce water presence in system and insulation
- High flexibility for ease of fitting
- Fibre-free to prevent potential air-quality problems
- Closed-cell insulation to provide a continuous barrier to water vapour
- Low thermal conductivity for effective energy saving and CO₂ reduction
- Genuine Armaflex performance



Air Conditioning



Ventilation



Fire Performance

► Long-term thermal performance

Armaflex Duct is manufactured from closed-cell elastomeric foam to provide long-term thermal efficiency. The structure of this foam limits the entry of water vapour to prevent changes in thermal conductivity.

With applications of low-temperature insulation material, there is a danger that moisture will penetrate into the insulation. Moisture penetration is an important concern as it reduces the insulation performance significantly, since water conducts heat approximately 20-times better than static air ($\lambda_{\text{air}} \approx 0.025$ W/(m.K), $\lambda_{\text{water}} \approx 0.6$ W/(m.K)). A change in insulation

performance not only leads to energy loss, but may mean the insulation thickness determined in the dry state is no longer sufficient. This in turn may result in condensation forming on the insulation surface.

Armaflex closed-cell foam is resistant to the internal penetration of moisture. This is an important advantage compared to open cell material (for example, fibre-based products), and also to materials that rely on vapour barriers that are easily damaged or incompletely sealed. With Armaflex Duct, the system's long-term performance is protected by prevention of moisture penetration.

► Ductwork and building comfort

Many modern buildings are air tight and rely on re-circulating filtered but stale air. Almost all gases remain within the envelope and air ducts are an essential part of removing any contaminants and maintaining occupant comfort.

However, whilst air ductwork is an essential part of the solution to indoor air pollution, it can also provide an inconvenient means of spreading noise and air pollution throughout a building.

► Indoor air quality and mould growth

Our air is always contaminated with pollutants. These pollutants include not only naturally generated gases such as carbon dioxide but also harmful, man made, volatile organic chemicals, industrial fibres, highly acidic particles of dust and spores of mould and bacteria. Whilst breathing these may not result in any immediate signs of ill health, they may all contribute towards “building related symptoms”.

Carefully selecting the insulation on ductwork can minimise any potential contribution to indoor air pollution.

► Noise and discomfort

Noise impacts upon all building inhabitants, causing stress and discomfort resulting in a loss of productivity.

Mechanical systems often generate unwanted noise which can be carried by the distribution ductwork throughout a building. The nature of this noise can be complex but it cannot be ignored. Indeed there are often legal requirements to ensure noise levels within any working environment are brought within reasonable limits.

Reducing the noise level at its source is occasionally possible but acoustically treating the ductwork is usually possible. It is important to specify insulation products which are suitable for this purpose.

► Insulation requirements for duct systems

Insulation used on duct systems must prevent energy loss and condensation whilst also minimising any impact on indoor air quality. In addition to excellent thermal values, duct insulation should also be:

A closed cell structure not prone to wicking

Unless a material is of a closed cell structure with an in-built water vapour barrier, the possibility of “wicking” exists. The “wicking” process quickly saturates an insulation material with moisture increasing the microbial growth rate.

Mould resistant

Bacteria and mould will often look to grow within an insulation material underneath the surface covering. Armaflex is resistant to mould growth.

Dust and fibre free

Fibre-based materials present the possibility of fibre leakage which has a major impact on indoor air quality. Closed cell, dust free and fibre free materials will not pollute the air stream in this way.

Formaldehyde free

Many countries around the world set legal maximum formaldehyde levels within buildings. Insulation should be selected to avoid contributing towards the overall formaldehyde level.


Good acoustic properties

Any insulation used on ductwork must help to minimise nuisance noise levels within the occupied space.



Armaflex has a long history of providing condensation control and energy savings on duct systems. Whilst it is not necessary to have a foil-facing, this added feature can enhance the aesthetic finish and surface durability.

► Technical data

	Values	Remarks
Material	Aluminium foil covered sheets made of foamed nitrile rubber	
Maximum Surface Temperature Minimum Surface Temperature	+85°C -50°C	For temperatures above +85°C, please consult our Technical Department.
Thermal Conductivity at 0°C Thermal Conductivity at +20°C Thermal Conductivity at +40°C	0.034 W/(m·K) 0.036 W/(m·K) 0.038 W/(m·K)	Test acc. to ASTM CS 18
Water Vapour Permeability	<0.08 perm-inch	Test acc. to ASTM E96
Water Absorption	0.2% by volume	Test acc. to ASTM C 209
Surface Spread of Flames	Class 1	
Fire Propagation	Total Index Performance (I) ≤ 12 Sub Index (i ₁) ≤ 6	Surface Spread of Flame acc. BS 476 Part 7: 1997 Fire Propagation acc. BS 476 Part 6: 1989
Fire Performance acc. to Building Regulations	Class 0	
Reaction to Fire	Self-extinguishing, does not drip	
Fungi Resistance Bacterial Resistance	ASTM C1338 ASTM G22	Meets requirements Meets requirements
Environmental Aspects	ODP zero, GWP zero	
Health Aspects	Dust & Fibre Free	

For outdoor application please consult our Technical Service Department

► Product range

Armaflex Duct continuous sheet

Part Number	Thickness mm	Width m	Length m	Carton Content m ²
AD-09122CS-15	9	1.22	15	18.3
AD-13122CS-15	13	1.22	15	18.3
AD-19122CS-15	19	1.22	12	14.6
AD-25122CS-15	25	1.22	15	18.3
AD-32100CS	32	1.00	3	3.00
AD-40100CS	40	1.00	3	3.00
AD-50100CS	50	1.00	3	3.00

Armaflex Duct self-adhesive sheet

Part Number	Thickness mm	Size m	Sheets per carton	Carton Content m ²
AD-09122CS-91	9	1.22 x 0.91	26	28.86
AD-13122CS-91	13	1.22 x 0.91	20	22.20
AD-19122CS-91	19	1.22 x 0.91	13	14.43
AD-25122CS-91	25	1.22 x 0.91	10	11.10
AD-32122CS-91	32	1.22 x 1.0	8	8.88
AD-40122CS-91	40	1.22 x 1.0	6	6.66
AD-50122CS-91	50	1.22 x 1.0	5	5.55

Armaflex Duct foil tape - 40m

Part Number	Width mm (inches)	Rolls per carton
AD-05040-T	50 (2")	12
AD-10040-T	100 (4")	6

Flange insulation and contact adhesive also available.