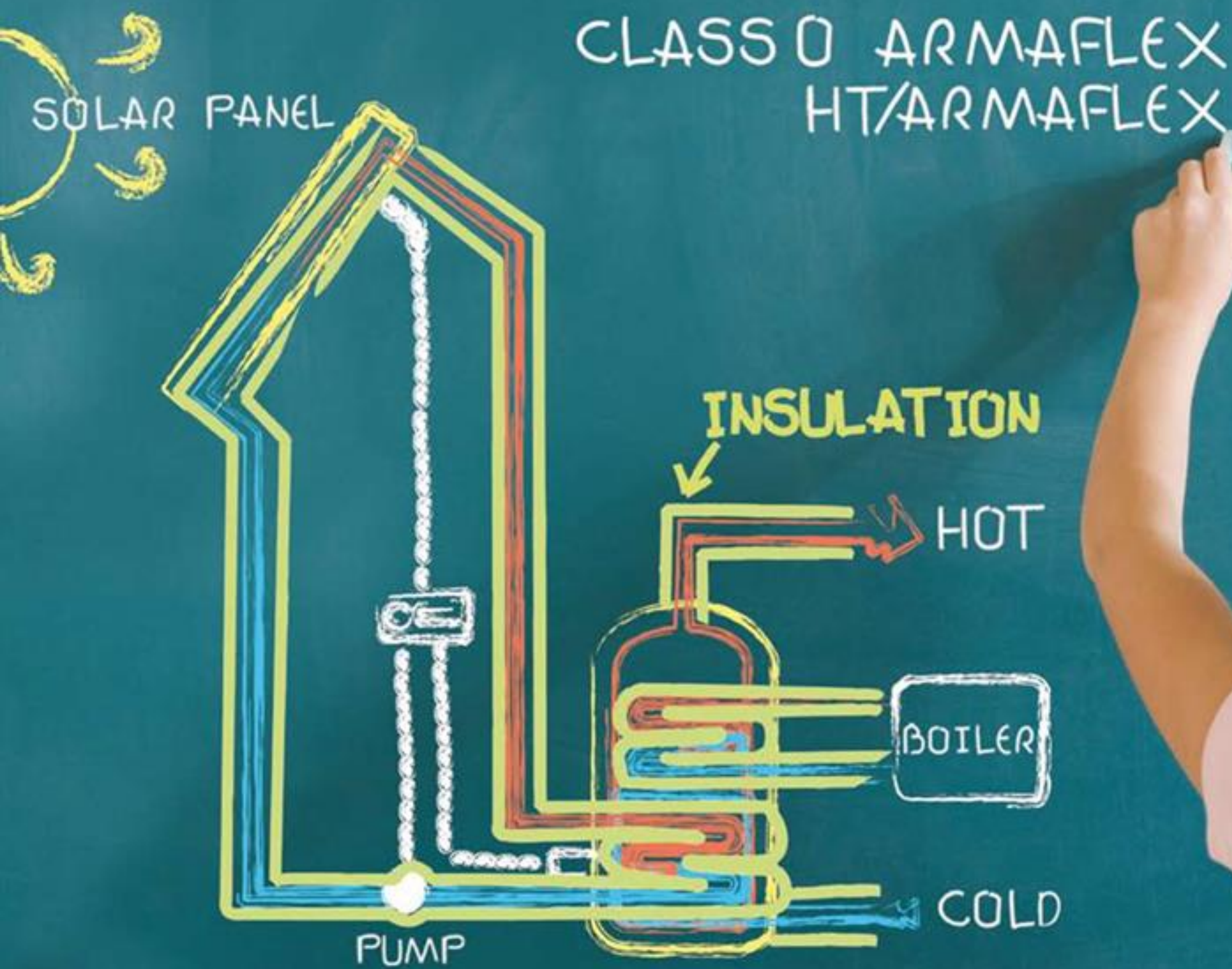


Armaflex[®]

Insulation Engineered For **SCHOOLS**



» The Energy Within Schools

Almost everyone will have spent much of their formative years in a classroom. Characterised as large open rooms enclosed by a wall of glass, classrooms have always provided a challenge to energy conscious school designers. Modern designers have looked to meet this challenge by installing renewable energy systems.

With more service pipework dissecting the schools of our children than ever before, it is essential the material selection is correct and safe.

» Comfortable Learning

We may not always be able to see pollutants in the air we breathe but microscopic dust and fibres, along with biological particles, such as mould spores, are always present in varying amounts. In even small quantities these can aggravate and cause discomfort.

Modern classrooms are highly engineered environments designed to maximise learning potential and this usually leads to air-tight rooms relying on filtered but stale air. Almost all gases remain within the envelope and this can threaten an otherwise comfortable learning environment.

» Indoor Air Quality

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".

Particular "building related symptoms" can include loss of concentration and increased drowsiness.

Carefully specifying pipe and duct insulation materials can minimise the contribution to indoor air pollution and so attention should always be taken when selecting your insulation.



» A Quality Environment

The potential for insulation on pipe and ductwork to contaminate the environment within a building should be considered at specification stage. Harmful man made chemicals, VOC's, industrial fibres and particles of highly acidic dust can all be emitted.

Whilst breathing these may not result in any immediate signs of distress they will all hinder health over longer time frames, contributing towards "building related symptoms" such as respiratory problems and migraines in the long term.

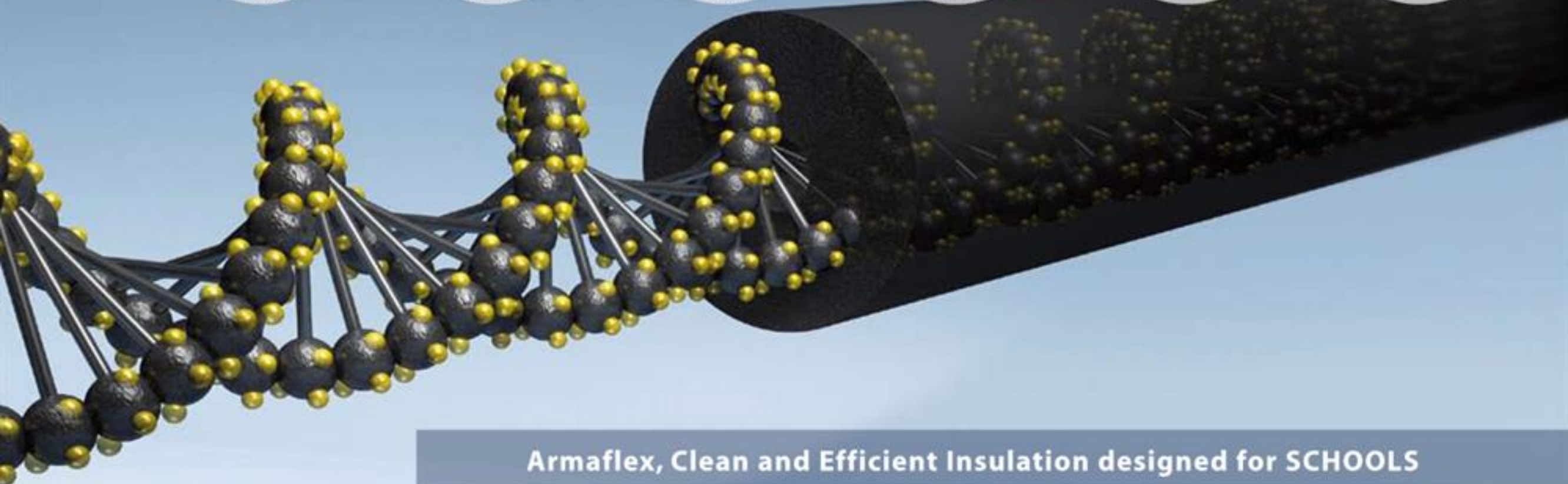
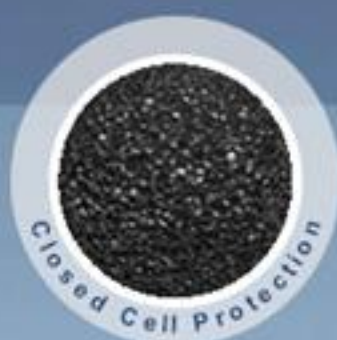
» A Quality Insulation

In order to minimise the impact of insulation on health an insulation material should be dust and fibre free, VOC free and Formaldehyde free.

Preventing the growth of mould and bacteria is also an integral part of any quality insulation material. Aside from health concerns, the presence of mould and bacteria increases the maintenance requirements of a system.

Armaflex, with its built in water vapour barrier and Microban anti-microbial protection, is easily applied and helps to create a safe schooling environment. Many schools in the US and other parts of the developed world use only Armaflex – rejecting all dusty and fibrous alternatives as potentially hazardous to the health of children.





Armaflex, Clean and Efficient Insulation designed for SCHOOLS

As a closed cell dust and fibre free product which inhibits the growth of mould and microbes, Armaflex is ideal for meeting all standard pipe and duct insulation requirements within schools. This includes insulation for condensation control, energy conservation and delaying the onset of pipe freezing.

By minimising any possible impact on indoor air quality, Armaflex can be used within a school building environment.

Additionally, no other insulation material is as versatile and suited for use on a complete range of renewable energy systems as Armaflex. With school designers increasingly looking towards renewable energy Armaflex will become ever more widely recognised as the clean and efficient insulation for the whole range of pipe and ductwork within schools.

Its the inherent attributes and properties of Armaflex with Microban® anti-microbial protection which make it the first choice for education environments around the globe:



Closed cell protection

Closed cell insulation materials possess a built-in resistance to the passage of water vapour. As a result closed cell materials do not rely on an easily pierced external water vapour barrier to prevent condensation and mould on refrigeration and air conditioning systems.



In-built water vapour barrier

Closed cell Armaflex material has such a high built in resistance to water vapour ingress that the insulation effectively acts as if it is itself the water vapour barrier. No easily compromised external foil barrier is required.



In-built anti-microbial protection

Armaflex contains Microban, an anti-microbial additive which actively inhibits mould and bacteria. Effective resistance against microbial growth is provided even if the surface is damaged or pierced.



Dust & fibre free

Dusty and fibrous materials create an additional health hazard, often combining with mould spores and bacteria to aggravate respiratory conditions. Armaflex is entirely dust and fibre free, making it particular suitable for use in schools, offices and hospitals.



Formaldehyde free

Formaldehyde is classified as a probable human carcinogen and maximum recommended exposure limits are set by the health and safety executive. Armaflex will not contain or outgas formaldehyde and will not contribute to overall formaldehyde levels.



Minimal VOC

Volatile organic compounds (VOC's) vaporise into the indoor environment contributing towards sick building syndrome. Being classified as minimal VOC means Armaflex does not contribute to this effect.



What is Microban® protection?

Microban® technology is built-in protection for solid products, coatings and fibers. Microban anti-microbial protection gives Class O Armaflex products added level of protection against harmful microbes such as bacteria, mould and mildew.

» Armaflex Products designed for schools

CLASS O ARMAFLEX TUBES

Closed cell, elastomeric, nitrile rubber pipe insulation material with a Class O fire rating and excellent thermal properties. Available in tubes and pre-slit tubes.

CLASS O ARMAFLEX SELFSEAL

Pre-slit Class O Armaflex tubes with a pair of self adhesive strips down the longitudinal seam. Specifically designed to reduce installation time on existing pipework.

CLASS O ARMAFLEX SHEETS

Closed cell, elastomeric, nitrile rubber insulation material with a Class O fire rating and excellent thermal properties. Ideal for use on ductwork, flanges and valve boxes. Also available in continuous and self adhesive formats.

CLASS O ARMAFLEX DUCT

Class O Armaflex Duct is Class O Armaflex sheet with a bright aluminium foil covering pre-applied. Class O Armaflex Duct is designed for rectangular and circular ductwork.

As a dust and fibre free, formaldehyde free product with an ODP of 0, Class O Armaflex Duct is suitable for use on ductwork in offices, schools and hospitals.

HT/ARMAFLEX

Naturally UV resistant closed cell EPDM rubber based Armaflex insulation material capable of operating at line temperatures up to 150°C.

ARMAFLEX DUOSOLAR

Armaflex DuoSolar is a system solution with pre-insulated feed and return pipes for solar hot water applications. Armaflex DuoSolar is used to connect the solar panel with the thermal storage water heater in an easy and professional way.

NH/ARMAFLEX

Halogen free, closed cell nitrile rubber based Armaflex insulation material with a low smoke toxicity rating. Achieves a number of maritime fire performance certificates.

ARMAFLEX TUFFCOAT

Class O Armaflex tubes with a tough white covering pre-applied. Covering provides protection against UV exposure, impact damage and weathering.

ARMAFIX PIPE SUPPORT

Armaflex sections with load bearing PUR/PIR inserts and an aluminium outer cladding to prevent excessive material compression.



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*MICROBAN is a registered trademark of Microban Products Company.

Armaflex[®]

Insulation Engineered For **HOSPITALS**



» Hidden Health Risks

We may not always be able to see pollutants in the air we breathe but microscopic dust and fibres, along with biological particles such as mould spores and pollen, are always present in varying amounts. In even small quantities these can aggravate respiratory problems and cause discomfort.

People understand the impacts of pollution on outdoor air but indoor air pollution out gassing from building materials is often overlooked. This is ironic since we spend up to 90% of our time indoors and the risk is related to our overall exposure.

» Indoor Air Quality

When patients strive for fresh air they are rallying against the poor indoor air quality yet often building designers fail to hear this call. Many modern buildings are air tight and rely on re-circulating filtered but stale air. Almost all gases remain within the envelope.

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 specifying pipe and duct insulation materials can minimise the contribution to indoor air pollution and so attention should always be taken when selecting your insulation.



» A National Problem

Hospital building within the UK has become increasingly sophisticated and patient focused. Innovative hospital designs now provide a superior environment for recovery.

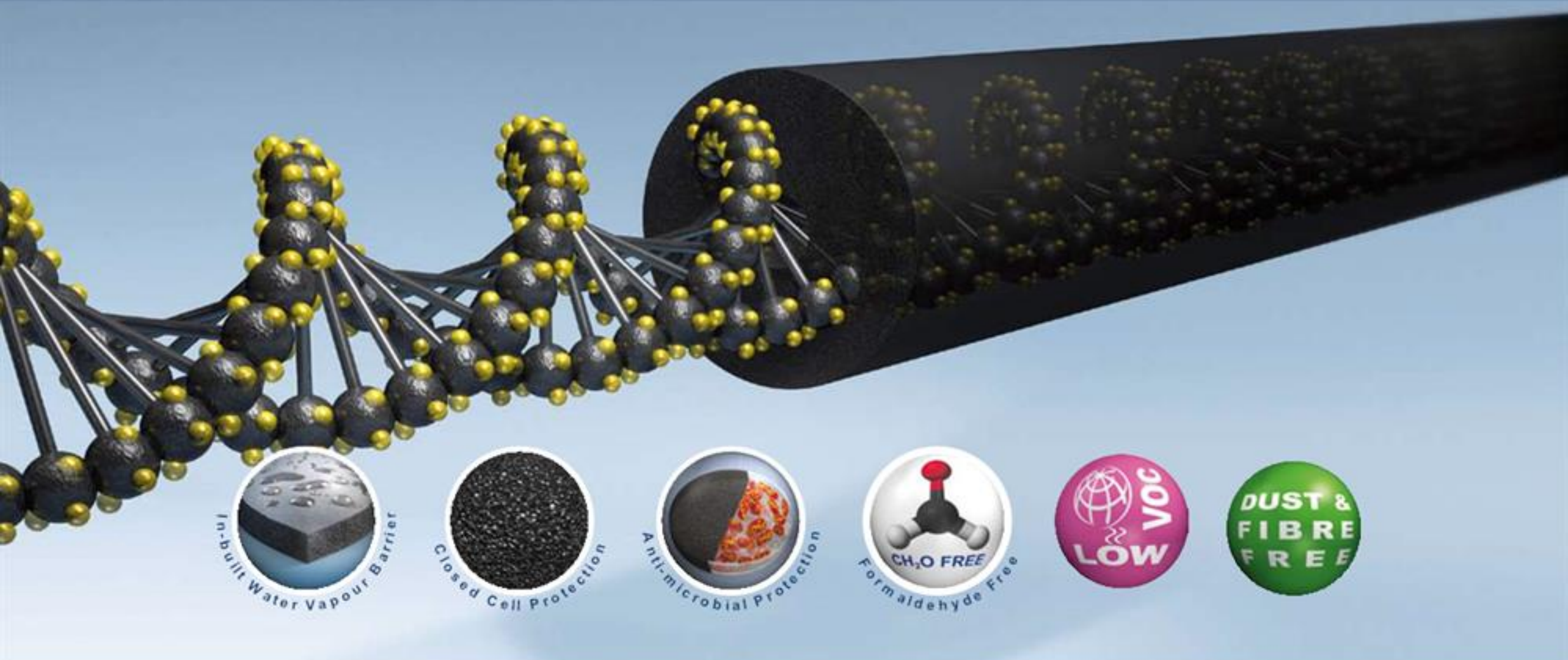
Despite this, many hospitals still suffer from poor indoor air quality. Often this can seem inexplicable because the contribution of hidden factors, including pipe and duct insulation, has been underestimated.

» A Global Solution

The impact of pipe and duct insulation on the indoor air quality within hospitals is recognised as an problem around the world.

This is especially true in the USA where the link between indoor air quality and patient health is more widely understood. Buildings in the US must also demonstrate low VOC levels and prove emissions of other dangerous gases, such as Formaldehyde, remain within safe levels.

Following this level of scrutiny it is no surprise that, being a non-fibrous, closed cell material and featuring built-in anti-microbial protection, Armaflex is acknowledged as the insulation material which can not only provide the safest possible hospital environment but also help your project come in on time and on budget.

Armaflex, Clean and Efficient Insulation designed for HOSPITALS

As a closed cell dust and fibre free product which inhibits the growth of mould and microbes, Armaflex is the ideal insulation for hospital environments where the indoor air quality is paramount.

Whereas other insulation materials may be designed specifically for warm or cold service pipe or ductwork, Armaflex is equally as suited for hot water pipes as it is for chilled water pipes. Effectively saving energy whilst also preventing condensation and mould growth.

Highly flexible Armaflex tubes are quickly and easily applied – even onto the tightest pipe runs - and the in-built water vapour barrier negates the requirement for any external barrier to be applied.

On ductwork Armaflex sheet can be cut onsite to match contours exactly, releasing no dust or fibres.

It's the inherent attributes of Armaflex with Microban® anti-microbial protection which make it first choice for healthcare environments around the globe:

Closed cell protection

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Formaldehyde free

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Low VOC

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ARMAFLEX AC COILS

Long lengths of continuous Armaflex coils for air conditioning and domestic heating pipes. Achieves a Class O fire rating. Supplied in easy to carry boxes.

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