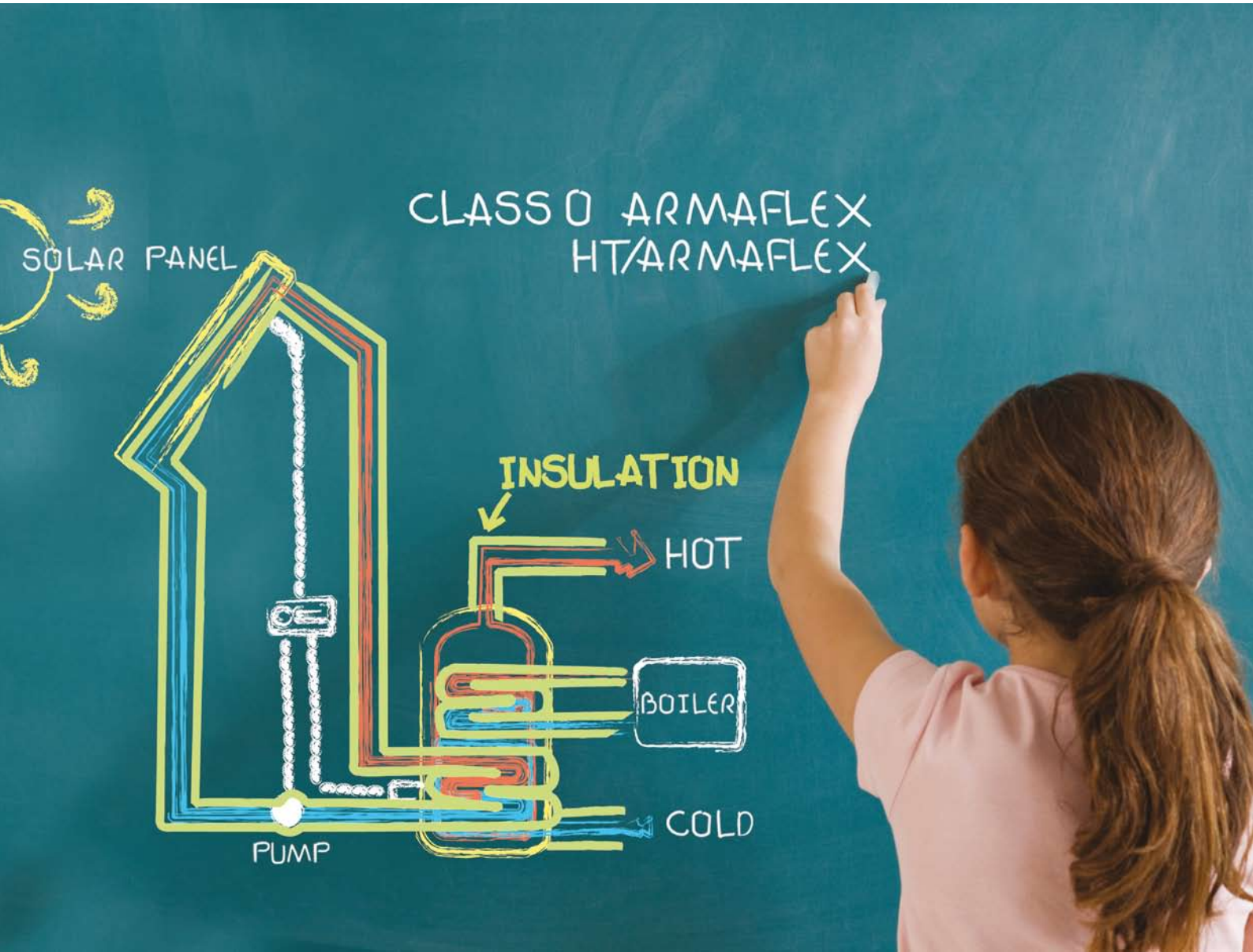


# Armaflex®

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.

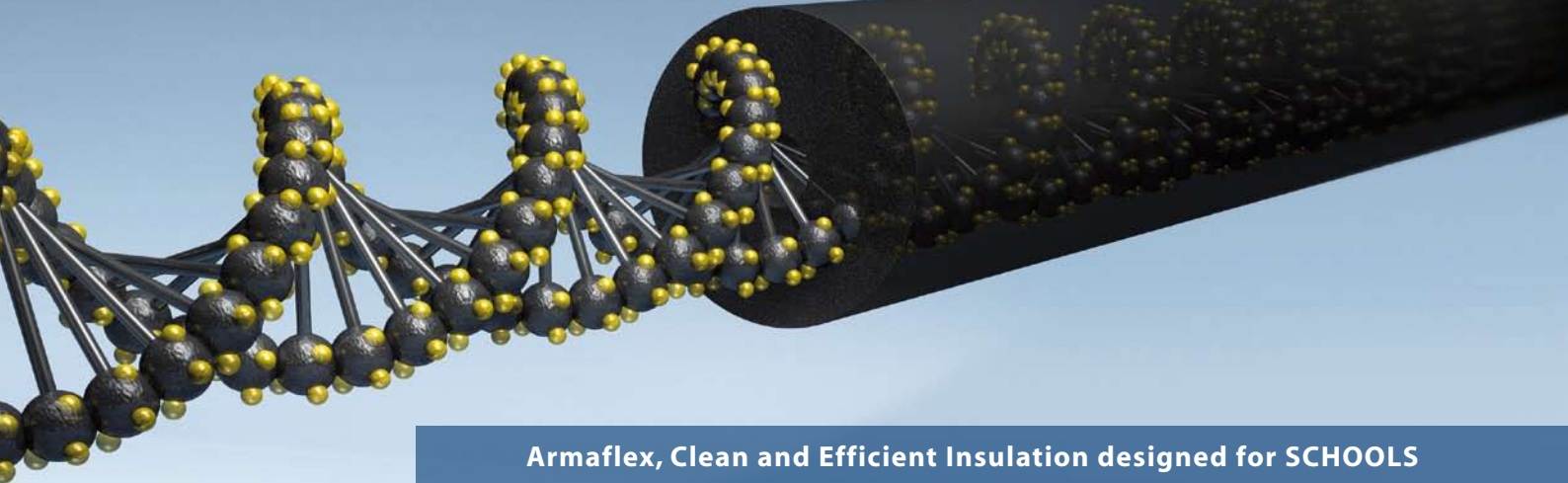
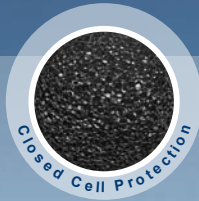
### » A Quality Insulation

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.

\*MICROBAN is a registered trademark of Microban Products Company.

» 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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