Class 0 Armaflex®

Insulation engineered to prevent condensation and energy loss
**Class 0 Armaflex®**

**Triple security: effective condensation control, FM Approved and excellent fire performance**

Highly energy efficient to give long-term energy-saving $\lambda_{0\circ C} \leq 0.034$ W/(m·K)

Secure system solution with Armafix® to avoid thermal bridges

Highly flexible

Highly fire retarded with LOI > 39%

Your benefits:

Class 0 Armaflex is the professional flexible insulation for reliable and continuous condensation control. The optimal combination of low thermal conductivity and a high resistance to water-vapour prevents long-term energy losses and water vapour ingress. The microcell structure of Class 0 Armaflex provides a continuous barrier to water vapour, which is built up - cell by cell - throughout the entire thickness of the material. Through the combination of high-quality materials and experienced process technology, the Class 0 Armaflex delivers both excellent insulation performance and excellent fire performance. The performance and reliability of Class 0 Armaflex is assured, with Factory Mutual Approval for both pipe and sheet insulation.

**GREENGUARD certified products help create good indoor air quality**

Class 0 Armaflex has been certified according to the GREENGUARD Indoor Air Quality (IAQ) certification program for low emitting products. The GREENGUARD Certification mark helps architects, builders, designers and specifiers identify products and materials that undergo rigorous testing and meet stringent standards for chemical emissions.

The GREENGUARD Environmental Institute (GEI) is third-party organization that oversees the GREENGUARD Certification Program, the largest industry-independent certification program for low-emitting products. GEI's mission is to improve human health and quality of life through programs that improve indoor air quality. For more information, visit www.GREENGUARD.org.
Armaflex® is the first flexible insulation material equipped with MICROBAN® technology. When microbes come in contact with the insulation surface, MICROBAN® protection penetrates the cell wall of the micro-organism, 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 Armaflex® products an added level of protection against mould and mildew. The new antimicrobial Armaflex® is therefore the ideal long-term solution for insulating ventilation or air-conditioning equipment in public buildings such as schools, hospitals, elderly homes, offices and airports, as well as the mechanical systems in the pharmaceutical or food industries. It has an ideal ratio of insulation values and optimal installation properties due to its specific microcell structure. The MICROBAN® ingredient being used in Armaflex is registered with the United States Environmental Protection Agency. The US EPA Registration Number is 1258-840-42182. MICROBAN® antimicrobial protection is approved by the EPA for use in ductwork.

MICROBAN® is a registered trademark of Microban Products Company.
Clean and efficient insulation

Superior insulation for ducts and chilled water services in offices, hotels, health-care facilities and public buildings

Armaflex is a flexible insulation material that is free of dust, fibres and formaldehyde. It has zero Ozone Depleting Potential and zero Global Warming Potential. Its excellent thermal values, in combination with its closed-cell structure, make it the ideal solution for achieving energy efficiency targets without any risk to indoor air quality.

The in-built water vapour barrier eliminates moisture ingress and Microban protection provides an additional barrier to mould growth. These characteristics, in combination with the proven long-term efficiency and durability, make Armaflex the right choice for insulating ducts, pipes and vessels in all commercial buildings.

Highly flexible

Armaflex is a highly flexible foam, making it ideal for irregular shapes and for installations in tight spaces. In addition, Armaflex is easy to cut and shape, making it easy to use for any application.

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 a high built-in resistance to water vapour ingress, and the insulation itself effectively acts as a full-thickness vapour barrier. There is no need for an external foil barrier.

Highly-efficient insulation for cold surfaces

The outer surface of insulation can significantly affect the thickness needed to prevent condensation. This is because the material’s surface will affect the heat transfer achieved by absorption.

Dark coloured bodies absorb more thermal energy than light-coloured ones. An insulation material made of dark synthetic rubber will absorb more energy than, for example, a rigid foam covered with a reflective metal cladding.

Dark, non-reflective materials are advantageous for condensation control. This is because the higher the absorptive power the smaller the insulation thickness needed.

The technical value that describes this characteristic is the Heat-Transfer Coefficient.

This characteristic represents a significant advantage of Armaflex when compared with materials such as polyurethane or phenolic foam. On cold surfaces these materials must be covered with vapour barriers and they must often be installed with a metallic covering to reduce flammability. Reflective metal cladding will reduce the heat-transfer coefficient and require greater thickness of insulation.
Proven and reliable technology

Seamless joints
Armaflex is joined and fitted with fast drying Armaflex contact adhesive. This provides a continuous and seamless finish. There is no need for pins or joining tapes, and there are no gaps that allow entry of water vapour.

Dust & fibre free
Dusty and fibrous materials can create an additional health hazard, often combining with mould and bacteria to aggravate respiratory conditions. Armaflex is entirely dust and fibre free, making it particularly suitable for use in public buildings, hospitals and offices.

Formaldehyde free
Formaldehyde is classified as a probable human carcinogen and maximum recommended exposure limits are set by health and safety authorities in many countries. Armaflex does not contain or outgas formaldehyde and will not contribute to overall formaldehyde levels.

Excellent acoustic performance
Armaflex offers impressive airborne noise absorption at problem frequencies and excellent decoupling and isolation performance on pipes and ducts in contact with other structural service elements.

A complete range of installation accessories

<table>
<thead>
<tr>
<th>Insulation tape</th>
<th>Armafix pipe supports</th>
<th>520 adhesive</th>
<th>Armafinish 99 paint</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-adhesive Class 0 Armaflex tape for insulating difficult shapes and areas that are not easily accessible. May be applied in multiple layers to build required thickness.</td>
<td>Professional pipe supports to avoid thermal bridging on cold pipework. Constructed from Class 0 Armaflex to provide foam-to-foam bonding that creates a complete vapour seal.</td>
<td>High strength adhesives for joining Armaflex and creating a vapour-tight seal. They are low viscosity for ease of application and quick drying to speed installation. Armaflex 520 BLV adhesive is a low-VOC version.</td>
<td>Water-based coating based on an advanced terpolymer resin system. This easy to apply paint will protect Armaflex from UV and weather for insulation on outdoor locations.</td>
</tr>
</tbody>
</table>


Class 0 Armaflex®

Product range

Armaflex offers tailor-made solutions for large pipes and for pipes requiring a high thickness of insulation. These solutions make installation fast and easy. For pipes with diameters over 200mm, Armaflex can provide pre-cut sheets that match the pipe circumference. Multiple sizes can be supplied where multi-layering of sheets is required. For pipes requiring insulation of 60mm to 100mm thickness, Armaflex can provide pre-fabricated pipe sections (to fit pipes up to 168mm diameter). These consist of sheets pre-bonded onto Armaflex tubes. They can even be pre-painted with Armafinish CO paint if required.

Class 0 Armaflex® tubes, length 2m, black

<table>
<thead>
<tr>
<th>Copper Pipe Nom OD inch Act Nom OD mm inch</th>
<th>6mm (1/4”) Nominal Thickness</th>
<th>9mm (3/8”) Nominal Thickness</th>
<th>13mm (1/2”) Nominal Thickness</th>
<th>19mm (3/4”) Nominal Thickness</th>
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<tbody>
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<td>Reference Code m/box</td>
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*Recommend replacing by sheet. If any other size request please contact our sales.
### Product range

#### Class 0 Armaflex® tubes, length 2m, black

<table>
<thead>
<tr>
<th>Copper Pipe</th>
<th>Iron &amp; Steel Pipe</th>
<th>Armaflex ID</th>
<th>25mm (1&quot;) Nominal Thickness</th>
<th>32mm (1 1/4&quot;) Nominal Thickness</th>
<th>40mm (1 1/2&quot;) Nominal Thickness</th>
<th>50mm (2&quot;) Nominal Thickness</th>
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*Recommend replacing by sheet. If any other size request please contact our sales.

### Accessory products

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<th>Product</th>
<th>Size</th>
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<td>self adhesive tape</td>
<td>Width: 50mm Thickness: 3mm Length: 9.14m</td>
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<tr>
<td>520 adhesive</td>
<td>3.78-Litre</td>
<td>AS-ADS201G</td>
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<tr>
<td>Armafinish 99 paint</td>
<td>2.5-Litre</td>
<td>FINISH/W2.5</td>
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<tr>
<td>Knife Set</td>
<td>3 knives and sharpening tool</td>
<td>Cutting-set</td>
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</table>

### Class 0 Armaflex® continuous sheets

<table>
<thead>
<tr>
<th>Nominal Thickness (mm)</th>
<th>Reference Code</th>
<th>Length m</th>
<th>Width m</th>
<th>Carton content in m²</th>
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Technical data

<table>
<thead>
<tr>
<th>Material</th>
<th>Foamed nitrile rubber</th>
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<tr>
<td>Maximum Surface Temperature</td>
<td>+105 °C</td>
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<tr>
<td>Max. Temperature for Flat Surface</td>
<td>+65 °C</td>
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<tr>
<td>Minimum Surface Temperature</td>
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For applications between -50°C and -200°C please contact our Technical Department.

<table>
<thead>
<tr>
<th>Thermal Conductivity at -20°C</th>
<th>≤ 0.032 W/(m·K)</th>
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<tbody>
<tr>
<td>Thermal Conductivity at 0°C</td>
<td>≤ 0.034 W/(m·K)</td>
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<tr>
<td>Thermal Conductivity at 20°C</td>
<td>≤ 0.035 W/(m·K)</td>
</tr>
<tr>
<td>Thermal Conductivity at 40°C</td>
<td>≤ 0.039 W/(m·K)</td>
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Tested according to BS587 Part 2 ASTM C518, ASTM C177

<table>
<thead>
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<th></th>
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<tr>
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<td>μ &gt; 5,000</td>
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<td></td>
<td>0.13 μgm/(N.h)</td>
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| Water Absorption              | 0.9% by volume average (28 days)                                                   |
|                               | 1.5% by volume maximum (28 days)                                                   |

<table>
<thead>
<tr>
<th>Surface Spread of Flames</th>
<th>Class 1</th>
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<tr>
<td>Fire Propagation</td>
<td>Total Index Performance (I) Sub Index (I1) ≤ 12 ≤ 6</td>
</tr>
<tr>
<td>Fire Performance according to UK Building Regulations</td>
<td>Class 0</td>
</tr>
</tbody>
</table>

Assessed by the Fire Services Department of Hong Kong for use on ductwork and pipework. For entire range of thickness.

| Reaction to Fire              | LOI > 39% self-extinguishing, does not drip                                       |
|                               | ASTM D2863                                                                         |

| Sound Absorption Coefficient  | Up to 0.55 at 1000 Hz                                                             |
|                               | ISO 354:2003                                                                       |

Also suitable for use in the prevention of sound passage.

| Resistance to                 | Building materials Very good Consult product test list                               |
| Environmental Aspects        | Zero ODP, Zero GWP                                                                  |
| Health Aspects               | Dust Free & Fibre Free Free of Formaldehyde MICROBAN® anti-microbial protection     |

Outdoor applications: Class 0 Armaflex should be painted with Armafinish CO paint or covered with an Arma-Chek flexible cladding material.

Arma-Chek® Silver 350: protective covering for Class 0 Armaflex®

Arma-Chek® Silver 350 is a new generation of professional covering system that is designed to provide mechanical and weather protection for Armaflex. Arma-Chek® Silver 350 is a multi-layer laminate of aluminum, coated with special UV protection.

Arma-Chek® Silver 350 has high puncture and tear resistance, contains flame retardant, and can be used as an exterior facing on hot or cold insulation systems. This product also offers excellent vapour-barrier performance.

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 by the recipient.