

KNOW-HOW

# WHY INSULATE?

Correctly installed insulation, appropriately selected for the application is one of the simplest, fastest and most cost-effective means of improving energy efficiency. In this guide, we explain why this is so. At Armacell, we help you make better and informed choices about the right insulation solution for your projects. **Engineering foam technologies since 1954.**

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MAKING A DIFFERENCE AROUND THE WORLD

# Save energy and money with insulation

## 1 Insulation minimises energy losses.

Energy consumption is significantly driving global warming, and with the building sector alone consuming up to 40% of all energy, it is important to focus on conserving energy in this area. Research has shown that up to 80% of energy required in buildings can be saved by using existing, tried-and-tested technologies such as insulation. Hence, stricter energy efficiency regulations and green building codes will be implemented and enforced globally, driving the demand for high-performance insulation.

Wherever energy is produced, transported or stored, part of it is lost as heat if the system is not properly insulated. When the right insulation product is correctly installed on heating and cooling systems of buildings, thermal loss can be effectively reduced and this helps to ensure that the total amount of energy used to maintain the thermal comfort within the building is optimised.

At just 1% cost of technical equipment, insulation is the simplest and fastest way of reducing energy losses.

## 2 Insulation prevents condensation.



System engineers typically have two considerations - prevent condensation on the outer surface of the insulation and avoid water vapour intrusion. Surface condensation is undesirable because condensed water dripping from the ceiling not only affects building users, it can also damage surfaces and other assets within the building. A moist environment is also conducive for mould growth. Additionally, water vapour intrusion can have serious cost implications such as thermal performance loss, corrosion under insulation and structural degradation.

## 3 Professional installation avoids the hassle of replacements.

The quality of the installation workmanship can affect the reliability of an insulated system. For example, installers should ensure that seams are properly sealed. With guidance from Armacell's in-house application experts, ready access to easy-to-understand installation instructions and complementary tools and products, contractors can achieve the skills required to deliver a professionally installed system to offer long-term peace of mind.

### // Resource conservation

With 67% of the global population to be urbanised by 2040, even higher energy demand will be required year on year.



### // Condensation control

Moist environments encourage mould growth which would be a potential health concern for building users. The right insulation provides superior condensation control performance to avoid this.



### // Long-lasting insulation

Installed correctly, ArmaFlex provides long-lasting and reliable thermal insulation performance.



ARMAFLEX IS FAST AND EASY TO INSTALL. FIND OUT MORE HERE.



All data and technical information are based on results achieved under typical application conditions. It is the customer's responsibility to verify if the product is suitable for the intended application. The responsibility for professional and correct installation and compliance with relevant building regulations lies with the customer. By ordering/receiving product you accept the **Armacell General Terms and Conditions of Sale** applicable in the region. Please request a copy if you have not received these.

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## ABOUT ARMACELL

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As the inventors of flexible foam for equipment insulation and a leading provider of engineered foams, Armacell develops innovative and safe thermal, acoustic and mechanical solutions that create sustainable value for its customers. Armacell's products significantly contribute to global energy efficiency making a difference around the world every day. With 3,100 employees and 24 production plants in 16 countries, the company operates two main businesses, Advanced Insulation and Engineered Foams. Armacell focuses on insulation materials for technical equipment, high-performance foams for high-tech and lightweight applications and next generation aerogel blanket technology.

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