



April 2012

Section 1.1

Knauf Insulation Introduction



energy saving



warmth



quietness



fire protection



sustainability

The Knauf Group

As part of the family owned Knauf Group, Knauf Insulation represents one of the most respected and progressive names in insulation worldwide.

We are the fastest growing insulation company in the world with a network of manufacturing operations in the UK, Europe, Russia, and the USA. Employing around 5000 people in over 35 countries, in more than 30 manufacturing sites with an annual turnover in excess of 1 billion euros.

Knauf Insulation are committed to meeting the increasing demand for energy efficiency in new and existing homes, commercial buildings and industrial applications. Understanding the needs of our customers is central to our success and we have a culture of empowering our people to make decisions themselves and to do whatever they believe it takes to 'make it happen'. Our working environment is open with people encouraged to challenge decisions where necessary and support each other to get the job done. At the same time, we also believe in supporting local communities and the environment.



Cwmbran, South Wales
Glass mineral wool plant



Knauf Insulation UK

Knauf Insulation is the UK's leading insulation company. Formed in 1946 as Fibreglass Insulation it has been previously known as Pilkington Insulation, Owens Corning and KnaufAlcopor before finally becoming known as Knauf Insulation. Knauf Insulation currently operates from four sites across the UK.



Hartlepool, Cleveland

Extruded polystyrene (XPS) and polyethylene (XPE) plant



St Helens, Merseyside

Head office and glass mineral wool plant



Queensferry, North Wales

Rock mineral wool plant

Sustainability

Knauf Insulation is one of the largest insulation manufacturers in the world, with employees in more countries than ever before. We continue to grow and during this time of change we cannot escape the external influence of issues such as climate change and energy security.

As a family owned company producing energy efficiency products we understand that we have a responsibility to think and act sustainably.

We have a strategy for sustainability at Knauf Insulation that sets out a clear path to help us become the world leader in energy efficient systems for buildings.

Our Long Term Aims

Our engagement work and the new Sustainability Steering Committee have helped us review the most significant issues for Knauf Insulation. Through this process we have identified the key areas where we believe we should focus our efforts and set a number of long term aims that will help guide our decision making going forward:

Buildings

- A leading advocate for a low energy and sustainable built environment
- A zero carbon building stock (owned and operated)

Products and Systems

- Products and systems which are the best in class for sustainability

Company

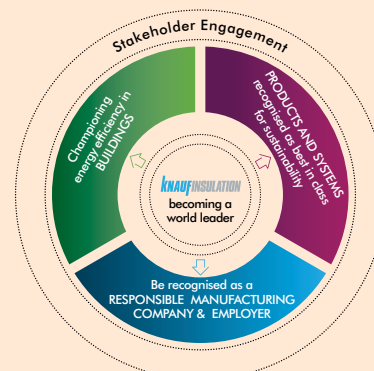
- Zero carbon production
- Zero negative impact on resource use
- Zero waste to landfill and zero waste water discharge
- Employer of first choice
- Zero harm

A new sustainability strategy

As a family-owned company producing energy efficiency products we understand that we have a responsibility to think and act sustainably. In fact since the early 2000s we have focused on a number of initiatives relating to product innovation, energy efficiency at major plants, human resources initiatives and high level policy advocacy.

Over the last couple of years however sustainability has taken an even stronger focus in the company as we worked towards fulfilling our commitments set in 2010, with the establishment of a Sustainability Steering Committee and internal 'sustainability champions' group.

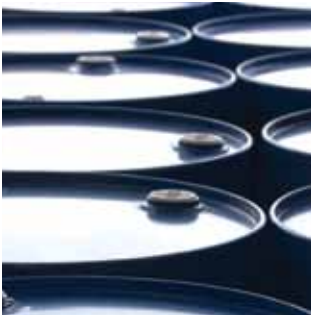
The outcome of this is a new strategy for sustainability at Knauf Insulation that sets out a clear path to help us become the world leader in energy efficient systems for buildings. The strategy has three parts, shown below.



We hope that this strategy will help cement the valuable momentum achieved over recent years by consolidating sustainability within our growing company. Specifically this new approach will help us to put our house in order, benchmark ourselves against recognised standards and set forward plans for action.

Committed to sustainable manufacture

We are committed to a sustainable manufacturing process through a policy of continuous improvements. Some examples of how we are achieving this in practice are shown below.



Deep renovation of the EU's building stock could create 2 million new jobs and save the equivalent of 4 billion barrels of oil per year



ECOSE® Technology reduces impact on the environment through lower embodied energy. Reduced by up to 70% compared to traditional binders



In 2009 as part of the WRAP Halving Waste initiative, we recovered and reused 126,000 pallets, 142,000 in 2010 and reached a staggering 188,000 in 2011!



Our Polyfoam ECO products have a Global Warming Potential (GWP) of less than 5



Our mineral wool products have zero GWP and Ozone Depletion Potential (ODP)



Our innovative compression packaging technology reduces transport emissions by up to 10 times and minimises packaging waste



We have up to 85% recycled content in our glass mineral wool products



The cost of rock mineral wool (100mm) in external walls pays for itself in savings in approximately 1,512 hours

Further information can be found in our latest sustainability report online knaufinsulation.co.uk

Technical Support Services



Technical Advice and Support Centre

Our Technical Advice and Support Centre (TASC) provides personal, high level technical support. This includes U-value calculations, condensation analysis and assistance with CAD drawings and NBS clauses from the most experienced team of advisors in the insulation industry. Also available through the TASC is the 3D finite element heat loss calculation service. For further information please call the TASC on 01744 766666.

SAP calculation service

Let Knauf Insulation help calculate your planned energy usage - we may even be able to help recommend ways to reduce your carbon emissions!

Knauf Insulation's accredited SAP assessors are able to help specifiers and developers to ensure compliance with new Building Regulations.

Where a specification does not meet regulatory requirements, our experts are able to provide assistance and recommendations to help reduce carbon emissions and achieve compliance.

Continuing Professional Development (CPD)

Knauf Insulation recognises that CPD courses provide an essential service to an architect by helping to ensure that they are able to keep up to date with innovations in a rapidly changing and evermore challenging environment. CPD also makes a significant contribution to the enhancement and development of the architects profession by enabling architects to:

- Keep abreast of statutory and regulatory changes
- Show visible proof of competence
- Acquire specialist knowledge or qualifications
- Target specific professional needs
- Benefit from the experience and knowledge of a wide range of industry experts
- Reinforce excellence in design

In order to assist architects and specifiers a range of "Continuing Professional Development" (CPD) courses have been developed, courses can be taken either online via our dedicated CPD Academy, or delivered in face to face seminars at the location of your choice.

Available CPD courses

- Introduction to Solid Wall Insulation - explaining the core issues regarding the insulation of solid walls, either by installing external wall insulation (EWI) or internal wall insulation (IWI)
- Introduction to Rainscreen Systems - explaining the core issues regarding rainscreen systems, and comparing the suitability and choice of insulation materials and how this affects the design of the system as well as thermal and fire performance
- Approved Document E - Resistance to the passage of sound
- Sustainability of Insulation - Sustainability related issues that are relevant to insulation including sustainable development



Website

Clear information and design support is also available on our website including:

- Approved Document L 2010 and Section 6 guides available for download
- Continuing Professional Development (CPD) courses available online
- CAD details and NBS Specification clauses for download
- Full suite of literature available for download including the Insulation Solutions for Buildings Book

Project and specification support

Knauf Insulation have a regional team of specification managers that can provide support throughout the duration of your project. Their role is to provide cost effective solutions for all your building insulation needs.

3D heat loss calculation service

Our Technical Advice and Support Centre have the ability to provide 3D finite element heat loss calculations to fully comply with Building Regulations Part L. By analysing the heat flows through external wall construction elements, TASC can provide robust supporting evidence for U-value calculations. For further information please call TASC on 01744 766 666

Calculating U-values and the BBA/TIMSA U-value Calculation Competency Scheme

You may have already come across U-value calculations when looking at building projects, but have you ever wondered what exactly they are and why they are so important?

The U-value is a measure of thermal transmittance and expresses the rate of heat transfer through the external element of a building, such as a roof, wall, floor or window.

U-values are the basic building blocks on which the thermal performance of a building and its associated energy usage is established when assessed using the SAP or SBEM methodologies, in fact a well insulated building fabric is the key factor in enabling new buildings to deliver their specified energy efficiency.

So anybody compiling SAP or SBEM calculations will need to be confident that the U-values they are relying on to establish building fabric performance, have been consistently and correctly calculated by technically competent people employing the correct methodology.

As the UK's leading manufacturer of insulation products we have amassed a great deal of technical and U-value calculation expertise over the years and our Technical Advice and Support Centre is manned by experienced staff who provide accurate and consistent U-value calculations via our free U-value calculation service.

The ever increasing importance of consistent and correctly compiled U-value calculations has been recognised by the British Board of Agrément and the Thermal Insulation Manufacturers and Suppliers Association (TIMSA) which has led to the creation of an industry leading U-value and Condensation Calculation Competency Scheme which was launched on the 1st April 2010.

The primary purpose of the scheme is to promote and assist accurate, objective and consistent calculation of U-values and condensation calculations within the UK construction industry. Membership of the U-value Calculation Competency Scheme provides customers with confidence that the calculations supplied to them are accurately and consistently modelled in line with all relevant industry standards.

In order to achieve competency status a company must have demonstrated appropriate technical competency and have in place a wide range of procedural controls to ensure that the U-value and condensation calculations they supply are accurate and consistent and there is a clear and comprehensive audit trail in place.

As members of the BBA/TIMSA U-value Calculation Competency Scheme customers can be assured that the calculations supplied to them by Knauf Insulation are accurately and consistently modelled in line with all relevant industry standards.

All U-value calculation tables which fall under the auspices of the BBA/TIMSA U-value Calculation and Competency Scheme within this book are clearly identified as such by the association of the logo below.



CERTIFICATE CS/1001-1

U Value Competency Scheme

This publication also contains U-value calculations which are not covered by the BBA/TIMSA U-value Calculation and Competency Scheme and they are clearly identified as such. However, you can be assured that the same level of diligence and competence has been applied to both the scheme and non-scheme U-value calculations contained within this book.

KNAUF INSULATION

it's time to save energy

Disclaimer

Knauf Insulation have a policy of continuous product development, therefore product information may change without notice.

Wherever possible, products are manufactured to the appropriate British Standard (BS), or harmonised European Standards, (BS EN) and are supplied subject to our Terms and Conditions of Sale, a copy of which is available on request.

Information within this book

The designs and detailing shown in this publication are illustrative only, although every effort has been made to ensure the accuracy of all textual and pictorial content.

Knauf Insulation, its employees and authorised agents can accept no liability whatsoever, either indirectly or directly arising from the use of its products in connection with any information or advice contained in this book. It is the responsibility of Designers, Clients and Installers to check that installations achieve the appropriate standard and comply with the relevant Building Regulations. The most up to date British or European standards should be referenced at all times.

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