

INSULATION SOLUTIONS GUIDE

Choose sustainable, non-combustible, high performance insulation solutions.



Thermal



Fire



Acoustic



Sustainability



Moisture resistance

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APPLICATION AND PRODUCT FINDER

	PAGE NUMBER	Roofs				Walls								Floors			HVAC & Fire	
		Ceiling & Internal		External		Internal		External										
		Pitched		Built-up Metal	Flat	Partition Wall	Separating (Party) Wall	Built-up Metal	Framed (Metal / Timber)	Masonry Cavity	Ventilated Façade	External Wall Insulation						
		Ceiling Level	Rafter Level															
Ceiling Roll (Multi Pack)	42	✓																
Ceiling Roll (Combi-cut)	44	✓																
Ceiling Roll (Uncut)	48	✓																
Ceiling Roll (Loft Roll)	50	✓																
Rafter Roll	52		✓															
Acoustic Roll	54					✓						✓						
Ultracoustic-A Roll	56	✓	✓			✓			✓			✓						
Cavity Roll	58					✓			✓			✓						
Cavity Batt	60					✓			✓			✓						
Masonry Party Wall Slab	62						✓											
Masonry Cavity Slab (DriTherm 37)	64									✓								
RainScreen Slab	66										✓							
EWI (External Wall Insulation) Slab	68											✓						
FactoryClad Roll	70			✓				✓										
SteelTherm Roll	72								✓									
Krimpack Flat Roof Slab	74				✓													
Duct Roll (Thermo-teK RL Pro Alu)	76																✓	
Duct Slab (Thermo-teK BD 060 Alu)	78																✓	
Fire Duct Slab (Fire-teK BD 917)	80																✓	
Fire Barrier Wired Mattress (Fire-teK WM 910)	82															✓	✓	
Building Slab RS45	86		✓			✓			✓				✓		✓			
Acoustic Floor Slab Plus	88												✓	✓				

PROJECT RANGE



Rolls



Slabs



Loose



Rolls



Slabs



Loose

Products with this symbol are palletised. Whilst fully palletised, products are protected by an outer hood that provides weather and UV protection.

WE ARE PART OF THE KNAUF GROUP, A FAMILY-OWNED
MULTI-NATIONAL MANUFACTURER OF BUILDING
MATERIALS AND CONSTRUCTION SYSTEMS.



With 40 years of experience in the insulation industry, we are leading the change in smarter insulation solutions for a better world.

Our mission

"Our mission is to **challenge** conventional thinking and **create** innovative insulation solutions that shape the way we live and build in the future, with **care** for the people who make them, the people who use them and the world we all depend on."

challenge.

We challenge ourselves, regulators and our industry to develop new concepts and new ways of thinking about insulation and buildings;

create.

We create innovative solutions that change the way we work and set new standards of quality, performance and sustainability;

care.

We care about what really matters: our people, our customers, our communities and ultimately, our planet.

Our vision

"Our vision is to lead the change in smarter insulation solutions for a better world. Our aspiration is to be the world's most trusted insulation partner providing high performing and smart insulation solutions and services for a better world."



*2016 figures

Knauf Group



Knauf Insulation

*2017 figures

€6.5bn
turnover*



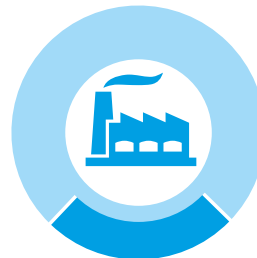
€1.7 bn
turnover*

+27,500
employees worldwide



+5,500
employees worldwide

150
plants & offices



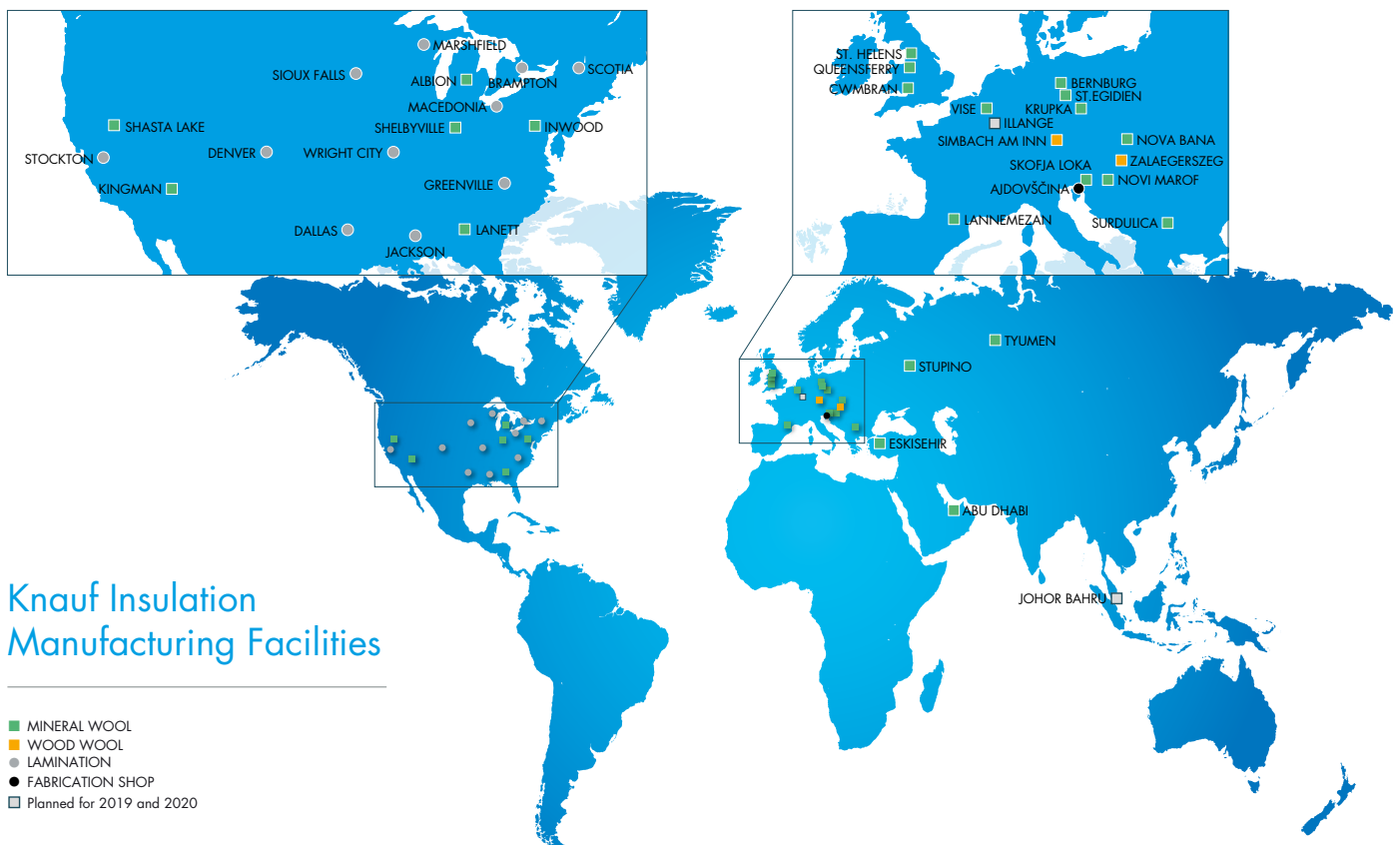
38
plants & offices

+86
countries



+35
countries

KNAUF INSULATION



**Knauf Insulation
Manufacturing Facilities**

- MINERAL WOOL
- WOOD WOOL
- LAMINATION
- FABRICATION SHOP
- Planned for 2019 and 2020

WE OFFER THE BEST INSULATION SOLUTION FOR EACH SECTOR.



At Knauf Insulation, we are committed to helping our customers meet the increasing demand for energy efficiency and sustainability in homes, non-residential buildings and industrial applications.

As the only manufacturer of both Glass and Rock Mineral Wool, we are uniquely placed to provide the best insulation solution for each application. We offer a wide range of insulation solutions for all applications in commercial and residential buildings, for both new build and refurbishment projects, in addition to solutions for HVAC, industrial applications and fire protection, green roofs and bespoke applications.

Insulation solutions for building applications

We offer a wide range of high performance, non-combustible insulation solutions for new build and refurbishment of both residential and non-residential buildings. Our extensive product range is designed to provide solutions for all types of roofs, walls and floors, in addition to specialist fire protection applications.



View our range of case studies on our website:

**[www.knauf-insulation.co.za/
media/case-studies](http://www.knauf-insulation.co.za/media/case-studies)**





Insulation solutions for green roof, landscaping and horticultural applications

We have a range of green roof, landscaping and horticultural solutions. Our Urbanscape® Green Roof System is an innovative, lightweight easy to install system and is the world's first green roof system with a Life Cycle Assessment (LCA) and Environmental Product Declaration (EPD).



Insulation solutions for technical applications

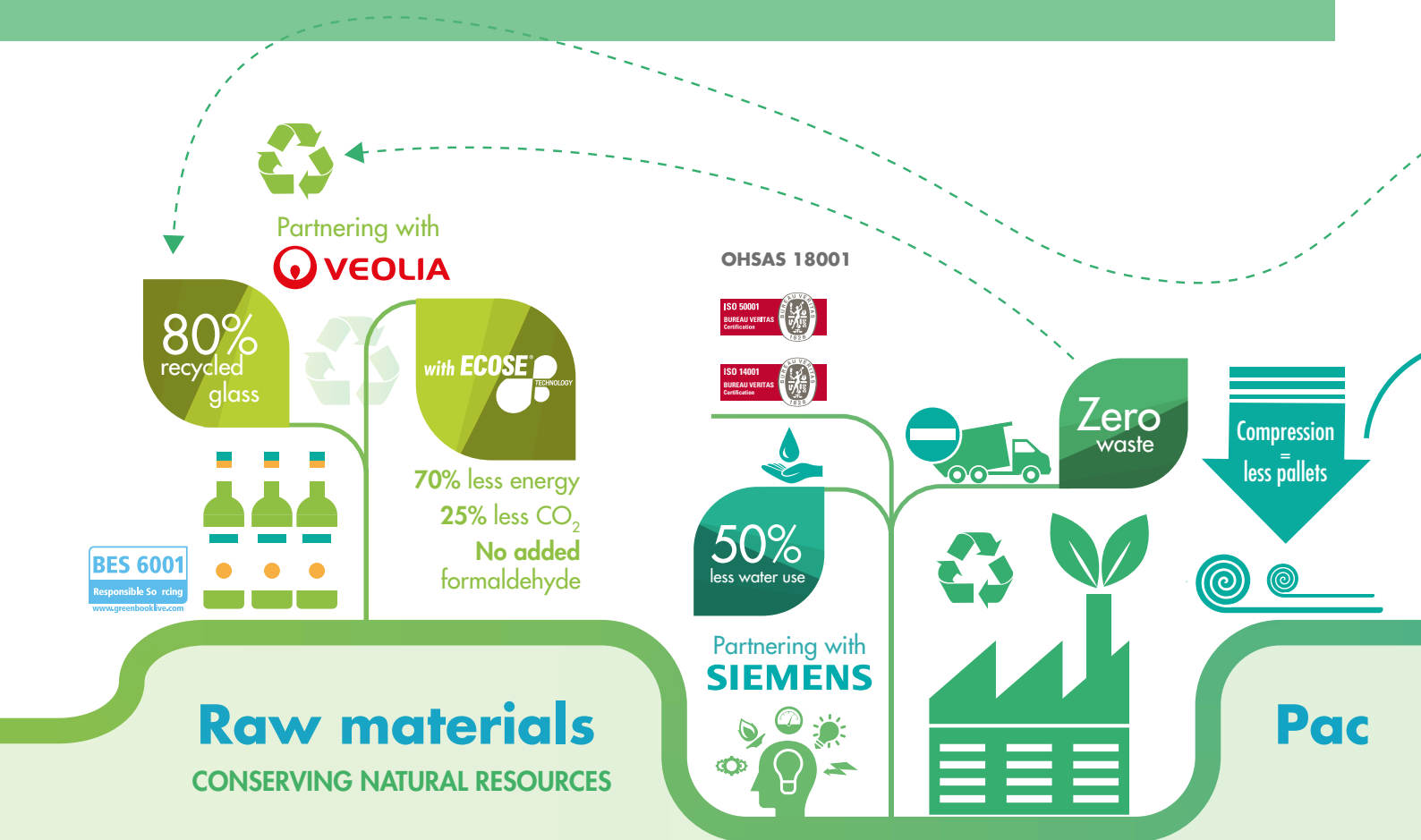
Our Technical Solutions comprise of a range of high performance insulation solutions developed specifically for the insulation requirements of HVAC systems and industrial plants. Our range covers solutions for insulating heating systems, piping and air conditioning ducts, insulating industrial plants, off-shore and power stations, and for passive fire protection.



Insulation solutions for bespoke applications

Knauf Insulation is recognised as one of the insulation leaders in the industry, owing to the fact that we offer unique insulation solutions that can be entirely tailor-made according to the needs of our customers and in line with their production processes.

WE CARE FOR THE PEOPLE WHO MAKE OUR PRODUCTS,
THE PEOPLE WHO USE THEM AND THE WORLD WE ALL
DEPEND ON.



Manufacturing

REDUCING THE ENVIRONMENTAL
IMPACT OF OUR OWN PROCESSES

Our Glass Mineral Wool insulation solutions contain up to 80% of recycled materials. By maximising the amount of recycled glass cullet in the manufacture of our products, we minimise our need for mineral raw materials.

Our revolutionary bio-based binder, ECOSE® Technology avoids the use of petrochemicals. It is 70% less energy intensive than traditional binders, reducing energy consumption and CO₂ emissions at our manufacturing facilities.

Our work to ensure safe and legal operations in our supply chain has enabled us to achieve certification to the Building Research Establishment's responsible sourcing standard BES 6001.

Partnering with Siemens, we are unlocking efficiency opportunities to reduce our carbon footprint, saving the equivalent annual energy usage of almost 800 homes.

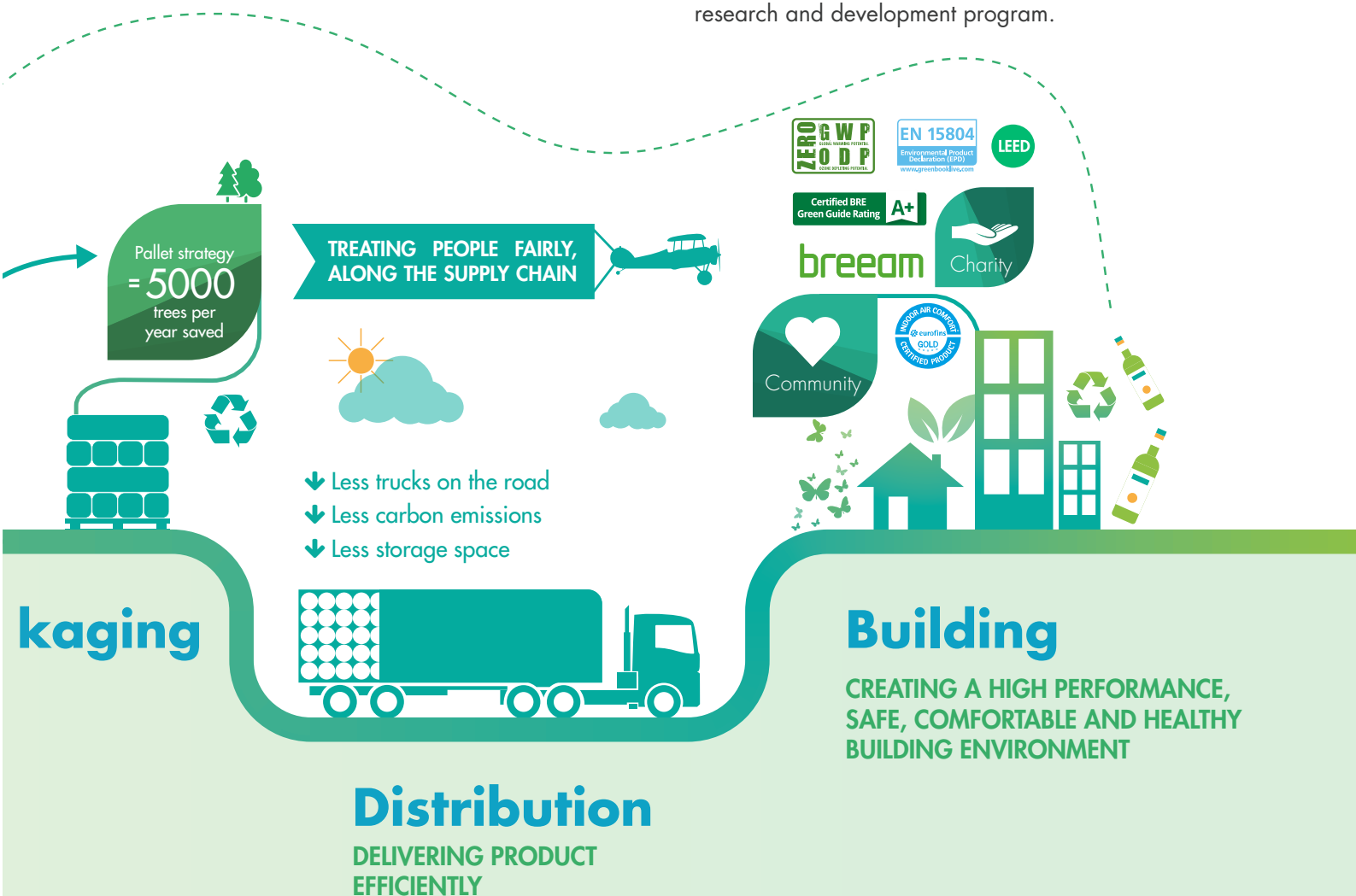
Our commitment to fair and safe working practices in our own facilities is embedded in our code of conduct, and reflected in the OHSAS 18001 certification covering all our production sites.

All our facilities are also certified to ISO 14001 and ISO 50001 standards.

We avoid waste and prevent pollution; we segregate factory waste to maximise recycling and to meet our expectation of sending zero waste to landfill from our UK plants.

As the market leader and a non-stop innovator, quality excellence and sustainability are at the heart of everything we do; whilst we have a strong focus on the thermal, fire and acoustic performance of our products, our pursuit of sustainability has much wider horizons.

Whilst we are dedicated to supplying sustainable high performance insulation solutions for enhanced energy efficiency in buildings, we also continually strive for improvements in our manufacturing and supply chain operations to improve quality and minimise our impact on the environment. All Knauf Insulation production locations have state-of-the-art manufacturing equipment and meet the highest quality standards, supported by an ongoing research and development program.



Our industry-leading compression-packaging technology allows us to load more product onto each truck that leaves our factories. This means less packaging, fewer vehicles on our roads, so less CO₂ emissions. It also means less storage space required for our customers.

We have recently been trimming the weight of the pallets we use in the UK, cutting around 2kg per pallet, equating to a total saving of around 5,000 trees/year.

Our products release very low levels of volatile substances which affect indoor air quality, attested by their certification to Eurofins Gold Certificate for Indoor Air Comfort.

The overall environmental performance of our products is reported in Environmental Product Declarations. They are available for all our products, verified by an independent third-party and comply with the European standard EN 15804. They are also registered with the Europe-wide ECO-Platform.

Our Glass Mineral Wool products are also registered in the BRE's UK-specific Certified Environmental Profiles scheme. The majority of our products, both Glass and Rock Mineral Wool, are rated A+ in the BRE Green Guide.

OUR HIGHLY SUSTAINABLE BIO-BASED BINDER TECHNOLOGY WITH PROVEN PERFORMANCE

ECOSE® Technology is our revolutionary sustainable bio-based binder* used in the manufacture of all of our Glass Mineral Wool products, and the majority of our Rock Mineral Wool products. Invented nearly 10 years ago, it is not only unique, but very much central to our sustainability strategy.

THE BEST CHOICE - 5 KEY BENEFITS

PLEASANT TO HANDLE AND VIRTUALLY NO DUST:

Softer texture to the touch and easier to handle compared to products made with chemical-based binder.

A NATURAL BINDER WITH NO ODOUR:

ECOSE® Technology contains no added phenol or formaldehyde. Natural raw materials replace the chemicals used in traditional binders.

LOWER EMBODIED ENERGY: Products manufactured using ECOSE® Technology are 70% less energy-intensive when compared to mineral wool products made using traditional formaldehyde-based binders, reducing the ecological footprint.

PROVEN DURABILITY: The exceptional strength of our bio-based binder makes products manufactured with ECOSE® Technology highly durable.

OPTIMUM INDOOR AIR COMFORT: Based on natural raw materials, products manufactured with ECOSE® Technology have the best possible Eurofins Gold Certificate for Indoor Air Comfort, contributing to a high level of indoor air quality.

*A binder is used in the manufacture of Glass and Rock Mineral Wool products to bind insulation strands together.

HOW DO YOU KNOW IT'S MANUFACTURED USING ECOSE TECHNOLOGY?

Products manufactured using ECOSE® Technology have a natural brown colour so you can see, as well as feel the difference.



ALL OUR CURED GLASS MINERAL WOOL AND MOST OF OUR ROCK MINERAL WOOL INSULATION SOLUTIONS ARE MADE USING ECOSE® TECHNOLOGY.



FOR MORE INFORMATION, WATCH OUR VIDEO
"TAKING THE NEXT STEP IN OUR SUSTAINABILITY JOURNEY"
AT WWW.KNAUF-INSULATION.CO.ZA



70% less
Energy Intensive

No added phenol
or formaldehyde



TAKING THE NEXT STEP IN OUR SUSTAINABILITY JOURNEY IN PARTNERSHIP WITH VEOLIA



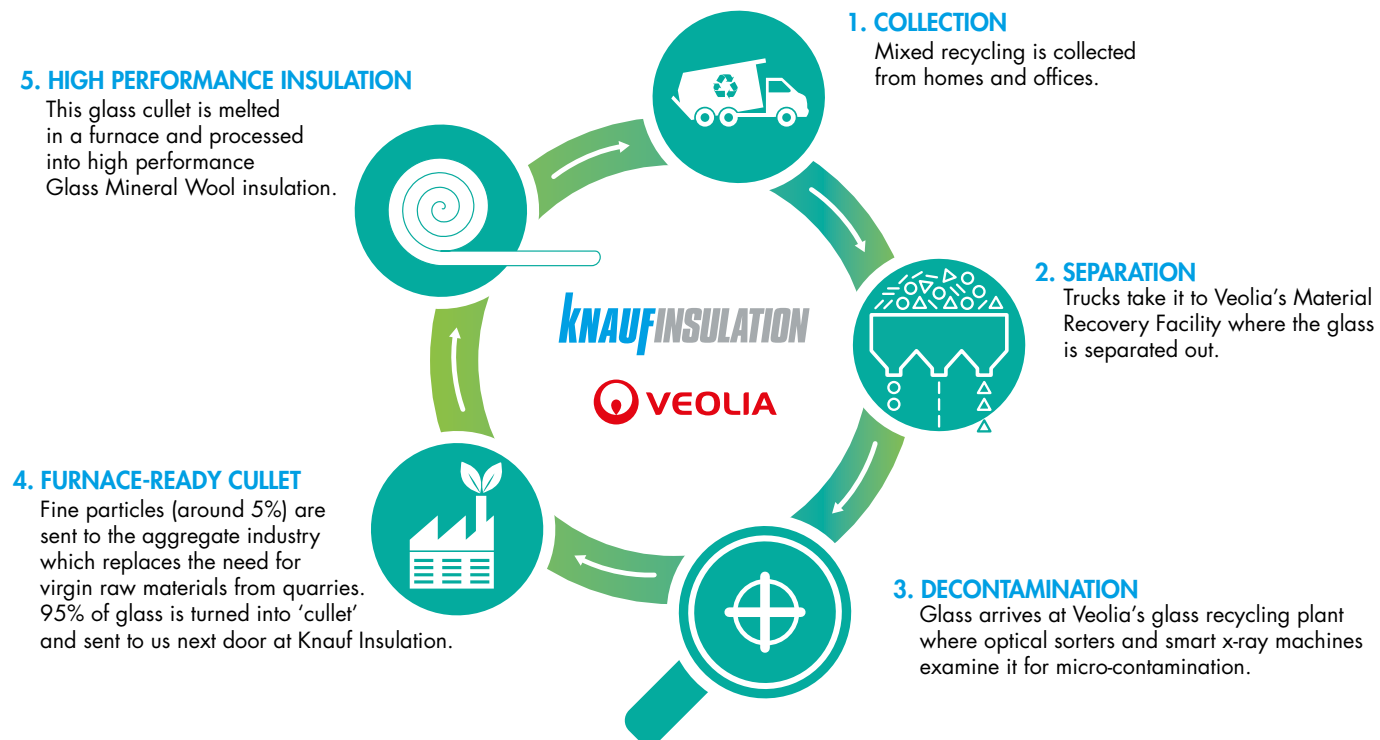
Recycled glass cullet from
Veolia's glass recycling facility

FOR MORE INFORMATION, WATCH OUR VIDEO AT
WWW.KNAUF-INSULATION.CO.ZA

Our high performance Glass Mineral Wool insulation solutions contain up to 80% recycled content, most of which is glass cullet from Veolia's glass recycling facility next to our manufacturing plant in St. Helens, Merseyside, UK.

In 2017, we entered into a long term contract with leading resource management company, Veolia, to create a state-of-the-art facility. Now operating to its full capacity, the facility gives yearly a new lease of life to over 60,000 tonnes of used glass bottles and jars collected from households, as it cleans, separates and refines them into high purity raw materials to be used in the manufacturing of our high performance, energy-saving insulation solutions.

Veolia's world-first facility uses the latest technology to sort and separate glass at a micro-level with exceptional accuracy, delivering an ultra-pure glass cullet to ensure the highest possible quality of insulation. The machinery includes vibrating screens for size sorting, magnets to extract ferrous materials and eddy current separators for non-ferrous materials.



THE PARTNERSHIP WITH VEOLIA BRINGS MANY BENEFITS

It has **reduced waste** going to landfill and over

60,000

tonnes of used glass bottles and jars will be given a new lease of life each year



We have secured our glass supply and are able to maintain the **recycled materials content** in the manufacture of our **Glass Mineral Wool** insulation solutions **up to**

80%

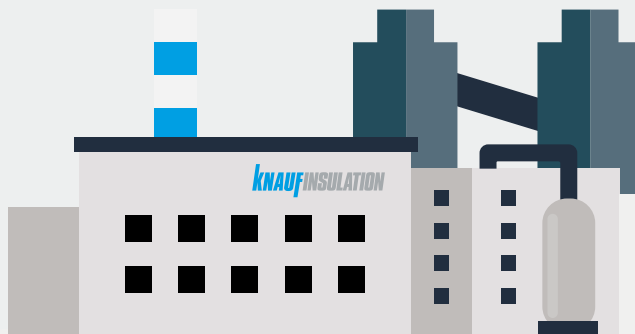
The **partnership** has provided a

closed loop solution

and a significant investment in the mainstream **circular economy**

We have substantially **reduced carbon emissions** from homes and the proximity of the **new facility will save** approximately

375,000 miles of road journeys



OUR MINERAL WOOL INSULATION SOLUTIONS PLAY A MAJOR ROLE IN PROVIDING THERMAL, FIRE SAFETY, ACOUSTIC PERFORMANCE AND COMFORT WITHIN THE BUILT ENVIRONMENT.



THERMAL

The energy saving properties and thermal performance of insulation keep buildings warm in winter and cool in summer.

The bigger the temperature difference between the inside and outside of a building, the faster the building will lose heat in winter and gain heat in summer.

Our mineral wool insulation solutions help maintain a stable inside temperature by slowing heat transfer by convection, conduction and radiation.

By insulating a property properly, energy and therefore costs can be saved either from the heating system when heating a cold building, or from the air conditioning system when cooling a warm building.

The cost of including insulation as a new build element or retrofit material should be assessed against the significant reduction in lifetime running costs of the building, and particularly the likely effects when EPCs (Energy Performance Certificates) are introduced.



FIRE SAFETY

The fire performance of our insulation gives it its ability to provide passive fire protection.

Buildings must be designed and constructed to minimise the risk of fire and its spread should it occur, as well as to maximise the structure's stability and the ability of occupants to escape unharmed.

As well as acting as a barrier to the fire, should it occur, our non-combustible mineral wool insulation solutions will not add to its development stages, minimising its overall effect and consequences.



It is widely known that buildings account for 40% of worldwide carbon emissions, and increasing their energy efficiency is still a priority for governments as they try to combat climate change. Whilst the primary role of insulation is to provide thermal performance, choosing the right insulation will also determine a building's acoustic and fire safety properties as well as the level of comfort it provides for its users. Our mineral wool insulation solutions provide a **unique combination of performance**.



ACOUSTIC

The acoustic performance of insulation can help create an improved internal environment for building occupants.

Protection from noise contributes towards the 'quality of life' afforded by dwellings, and a healthy, productive and attractive environment in offices, hospitals, schools and other non-domestic buildings.

Our mineral wool insulation solutions provide high levels of sound absorption and noise reduction, in new build or within existing buildings through retrofit, to provide improved sound insulation and acoustic comfort.



COMFORT

Insulation can help create dry, comfortable indoor environments and buildings and have a major impact on the health and wellbeing of their users.

By preventing air leaks, uncontrolled condensation and possible mould spores, mildew or microbial organic compounds, a well-insulated, airtight building envelope also contributes to the health of a building — particularly if combined with efficient installation of the solutions and a controlled ventilation system.

Our mineral wool insulation solutions provide all of the above benefits, but more importantly, thanks to our ECOSE® Technology, they contribute to high levels of indoor air quality and were the world's first products to be awarded the Eurofins Gold Certificate for Indoor Air Comfort.



WE PROVIDE NON-COMBUSTIBLE INSULATION SOLUTIONS FOR SAFER BUILDINGS



Reaction to Fire and Fire Resistance are two different, but very important considerations when it comes to designing a building.

Our non-combustible mineral wool insulation solutions offer the best performance when it comes to both Reaction to Fire and Fire Resistance, enabling building designers and specifiers to develop effective and robust fire safety strategies when they design new buildings.

REACTION TO FIRE - How quickly will the fire develop?

The measurement of how a material or system will contribute to the fire development and spread, particularly in the very early stages of a fire when evacuation is crucial.

All insulation materials are given a Euroclass Reaction to Fire Classification in accordance with BS EN 13501: Fire Classification of construction products and building elements.

Testing is carried out to determine the performance of materials in terms of fire behaviour, smoke production and flaming droplets, giving a range of classification possibilities as shown over the page.

The vast majority of our products are non-combustible and achieve the highest possible Euroclass A1 Reaction to Fire Classification rating.

By choosing non-combustible insulation materials, building designers and specifiers can design out the risk of fire within the building fabric from the start. Using non-combustible materials minimises the risk that the building fabric will contribute to the development of the fire or contribute to fire spread.

Knauf Insulation's Ceiling Rolls have additional certification in accordance with SANS 10177 part 5 & 10 A / A1.

FIRE RESISTANCE - How long can the construction withstand the fire?

The measurement of the ability of a material or system to resist, and ideally prevent, the passage of fire from one distinct area to another.

Building regulations require certain elements such as partitions, separating walls, ceilings and beam and column constructions to provide specified amounts of fire resistance.

Fire protection classifications are normally reported in terms of a period of fire resistance, for example 30, 60 or 90 minutes. These classifications relate to what is known as the integrity (E), thermal insulation (I) and load-bearing capacity (R) of building elements. Simply, this means how elements — either in combination or individually — stop a fire spreading, how they restrict temperature rise and how the elements' load-bearing capacity is maintained.

A range of our solutions have been tested for use in a variety of fire-resistant applications, providing fire resistance periods ranging from 30 to 240 minutes to assist the design of safe buildings.

Our non-combustible fire-resistant solutions help inhibit fire spread, maintain structural integrity and limit the spread of fire and smoke from one area to another, providing safe buildings for occupants, and added peace of mind for specifiers.

“Euroclass A1 products will not contribute in any stage of the fire including the fully developed fire.”

British Standard BS EN 13501: Fire classification of construction products and building elements

“ The drive for improved energy efficiency has introduced large quantities of combustible materials into the built environment by way of structure, cladding and insulation. The protection of this material very often demands encapsulation by better performing materials (such as plasterboard), to a precision that may be difficult to achieve on-site or whose capability may reduce during the life-span of the building.

Non-combustible materials are known to be very forgiving of other key fire relevant challenges such as poor-quality workmanship, structural abuse and wear and tear over time. ”

Fire Protection Association

(Cladding Approvals: A review and investigation of potential shortcomings of the BS 8414 standard for the approval of cladding systems such as those commonly used on tall buildings)



**Enquire about our
Reaction to Fire CPD!**



Our non-combustible insulation solutions minimise the risk of fire and its spread should it occur, as well as maximise the structure’s stability and the ability of occupants to escape unharmed.

TYPICAL INSULATION PRODUCT EUROCLASS REACTION TO FIRE CLASSIFICATIONS

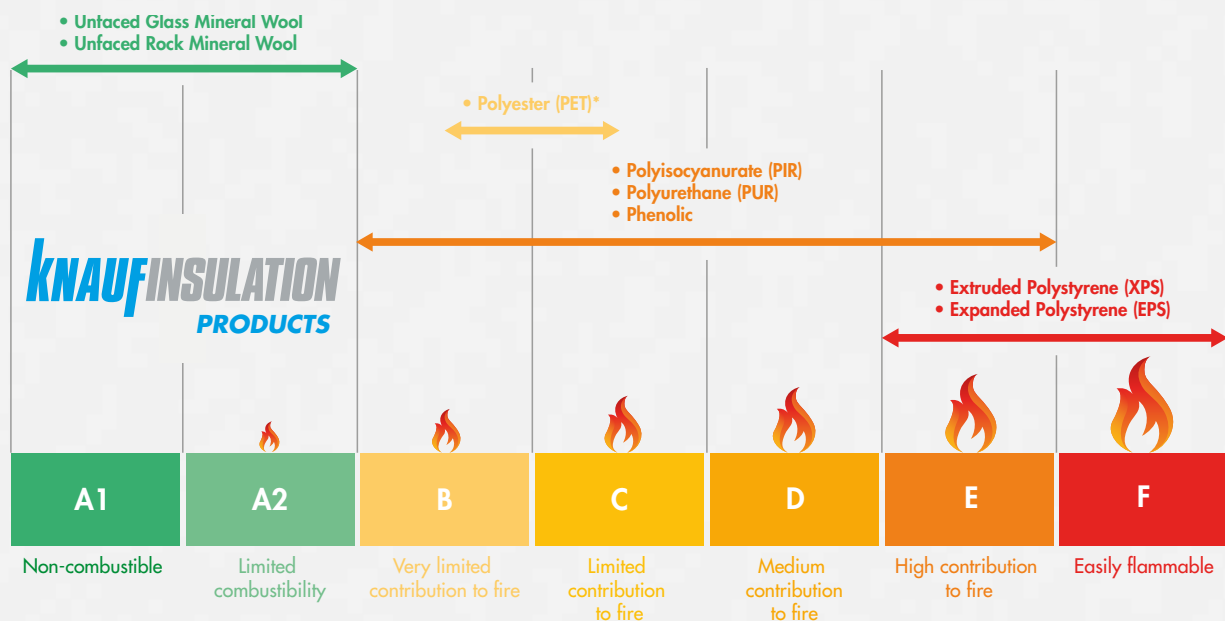


Illustration for guidance only. It is crucial to check the actual Euroclass Reaction to Fire Classification of a product before use.

*based on South African 428 standard

WE ARE THE BEST CHOICE WHEN IT COMES TO PERFORMANCE

GLASS MINERAL WOOL

There is a broad spectrum of insulation materials available on the market, with an equally broad variance in form, performance, sustainability, cost-effectiveness and availability.

All our mineral wool products meet the highest specifications and have demonstrated excellent rounded performance in the most demanding projects, including those built to the Passivhaus standard.

Glass Mineral Wool

Our high performance Glass Mineral Wool insulation solutions contain up to 80% high quality recycled materials, to which is added sand, limestone and soda ash before being melted in a furnace. The molten glass is spun to form millions of fine strands of wool. We use our proprietary and revolutionary bio-based binder, ECOSE® Technology, to bind the mineral wool together to form a mat of material which is then cured in order to form the final product. The density of the product determines whether the insulation is a lightweight quilt supplied in rolls, a flexible slab or a rigid slab, and its thermal insulation value. See our process at www.knauf-insulation.co.za/videos

Rock Mineral Wool

Our Rock Mineral Wool insulation solutions are mainly made from volcanic rock, typically basalt and/or dolomite. An increasing proportion is now recycled material from slag, a waste product from blast furnaces. The raw materials are melted and then spun into fine strands of wool. A binder is used to bind the wool together to form a mat of insulation, which is then cut into slabs or wired mattresses. Most of our Rock Mineral Wool products use our ECOSE® Technology. See our process at www.knauf-insulation.co.za/videos

Industry-leading Compression Packaging

Our industry-leading compression packaging technology (9:1) allows for more product per pack, therefore less packaging used, fewer lorries on the roads and reduced transport carbon emissions. All of which contributes to a low lifecycle impact. It also means our customers require less storage space, and less carrying and handling when compared to other products.





ROCK MINERAL WOOL

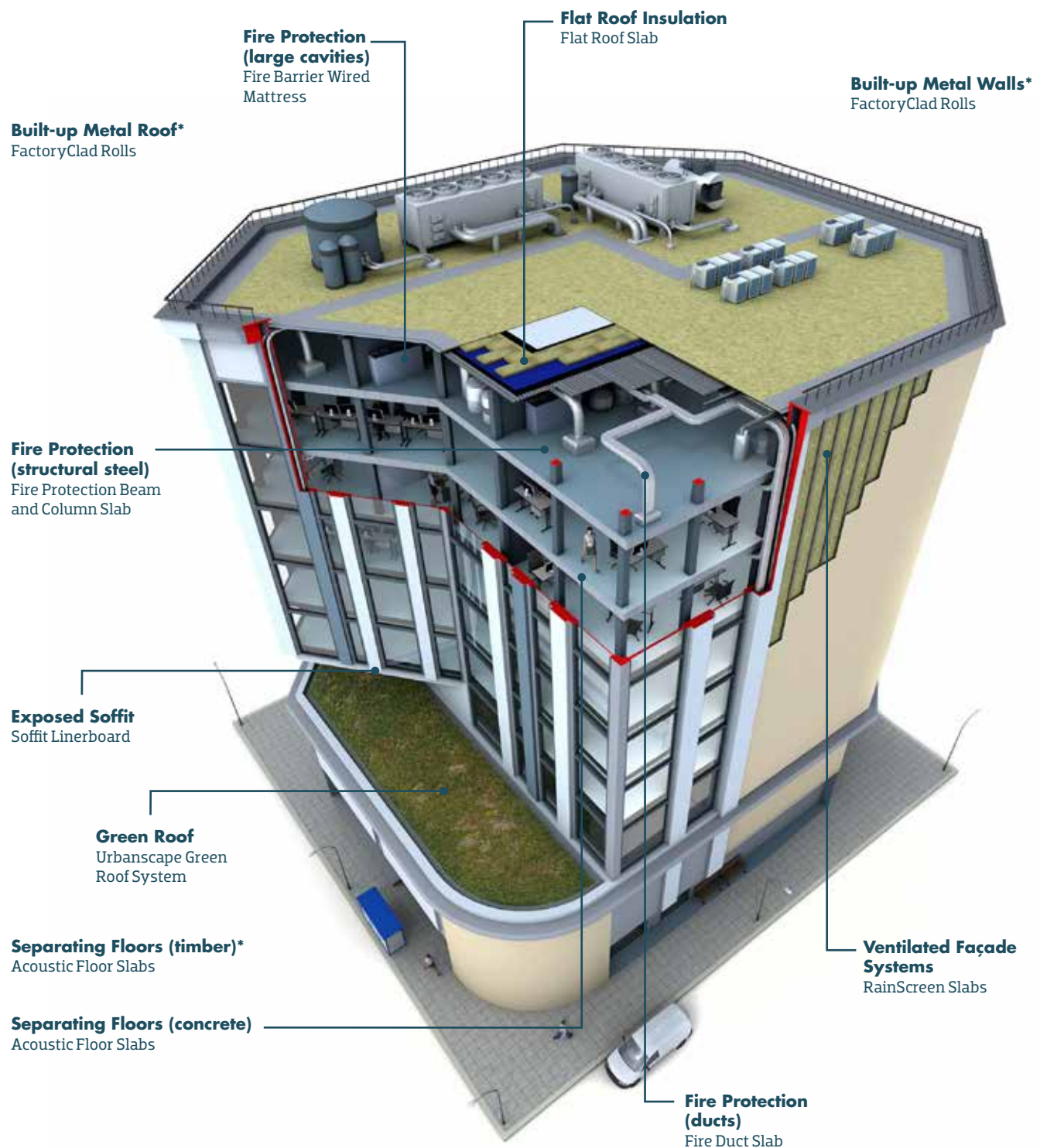
		Glass Mineral Wool	Rock Mineral Wool
Features	Naturally non-combustible	✓	✓
	Compression packed to limit transport & warehouse requirements	✓	✓
	Strand type	Long strands giving high levels of tear strength	Short strands giving high levels of compressive strength
	Available in slabs	✓	✓
	Available in rolls	✓	
	Available in wired mattresses		✓
	Available with a variety of facings	✓	✓
Applications	Residential buildings	✓	✓
	Commercial buildings	✓	✓
	New build	✓	✓
	Refurbishment	✓	✓
	Fire Protection		✓



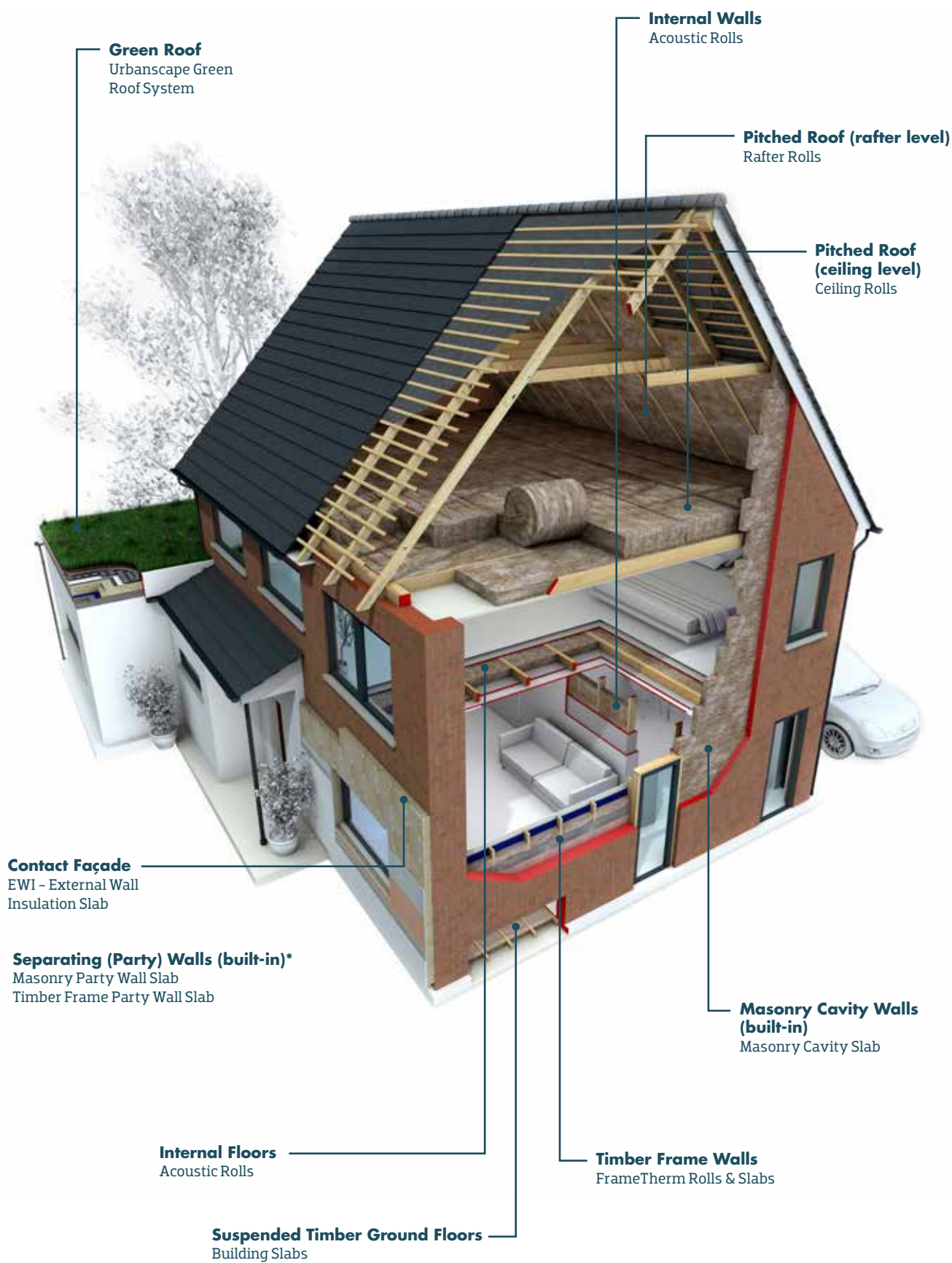
Krimpact™ Technology

A number of our Rock Mineral Wool products are manufactured using Krimpact™ Technology which gives our products consistent density throughout, combined with superior impact and compression resistance. Krimpact Technology aligns fibres in the mineral wool in such a way as to dramatically increase compressive strength and its ability to resist heavy loads.

A RANGE OF HIGH PERFORMANCE PRODUCTS FOR EVERY APPLICATION



*Not pictured



*Not pictured

ENERGY EFFICIENCY: INSULATION IS KEY

THE ENERGY SAVING PROPERTIES OF INSULATION KEEPS BUILDINGS WARM IN WINTER AND COOL IN SUMMER

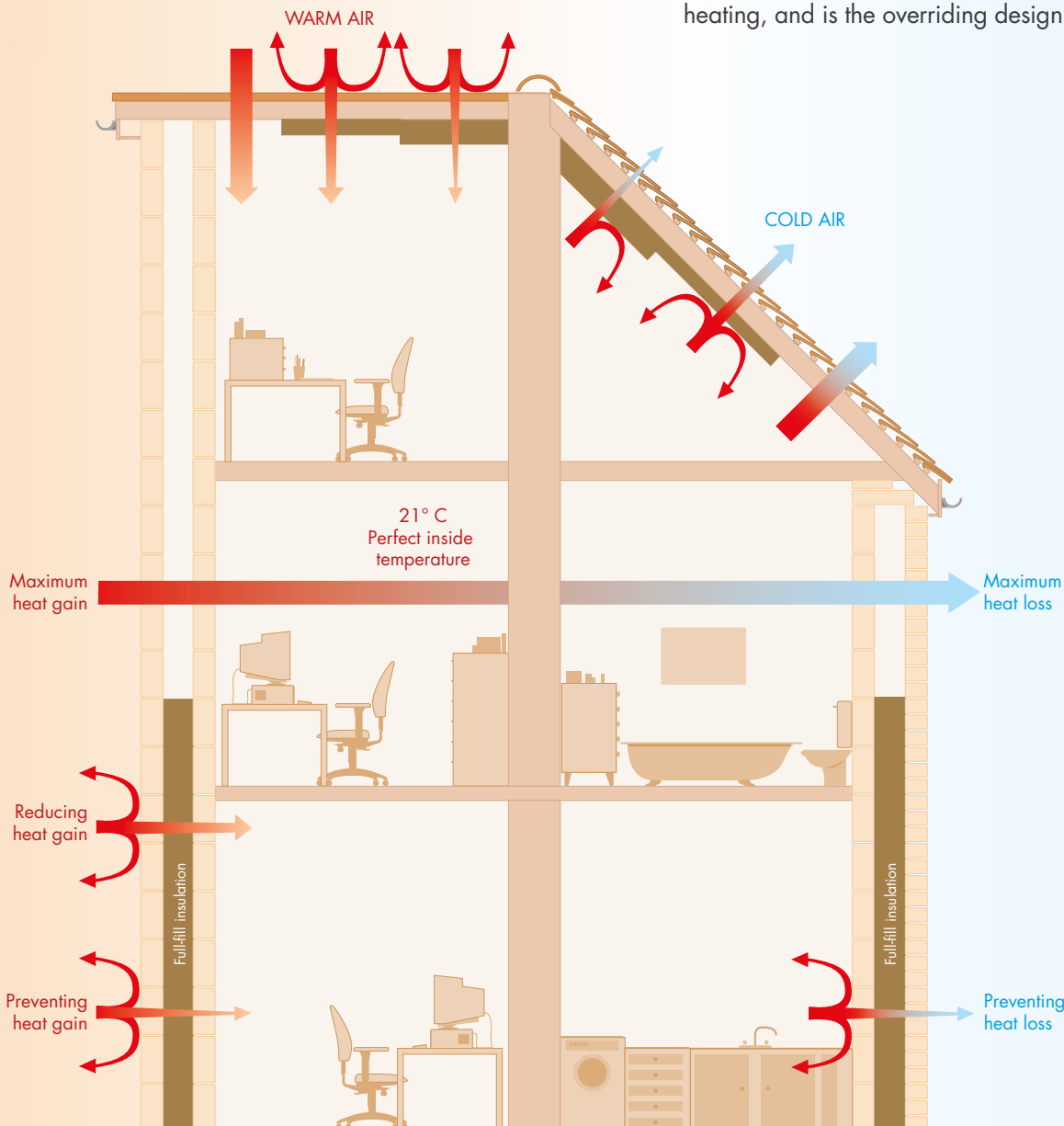
The bigger the temperature difference between the inside and outside of a building, the faster the building will lose heat in winter and gain heat in summer. Insulation helps maintain a stable inside temperature by slowing heat transfer by convection, conduction and radiation.

Generally speaking, the larger the temperature difference between the inside and the outside of a building, the thicker the layer of insulation needs to be to reduce heat flow.

INSULATION IS CRITICAL ACROSS ALL SECTORS

A vast amount of energy is lost through the fabric of a building. Insulation incorporated into fabric can make a profound contribution to the building's long term energy saving.

Increasingly, designers have the responsibility to improve a building's energy efficiency by designing an envelope to best achieve maximum thermal performance according to the buildings function and activity. Different sectors have different requirements - for example, balancing heat retention and cooling in public and commercial buildings is often a key consideration, whereas for residential buildings, higher insulation and heat retention alone have a direct impact on the carbon emissions (and bills) associated with heating, and is the overriding design parameter.



INSULATION R-VALUES.....R YOU DOING IT RIGHT?

In construction, R-value is the measurement of a material's capacity to resist heat flow from one side to the other. In simple terms, R-value measures the effectiveness of insulation and a higher number represents more effective insulation.

In order to determine the R-value, the thermal conductivity of the material must be measured in a laboratory – the “k-value” is then determined. The k-value or thermal conductivity is the time rate of steady state heat flow through a unit area of homogeneous material induced by a unit temperature gradient in a direction perpendicular to that area, W/m.K. As the mean temperature increases, the thermal conductivity will increase.

Therefore the R-value of thermal insulation depends on the type of material, its thickness and its operating temperature.

MISCONCEPTIONS – “ONE SIZE FITS ALL”

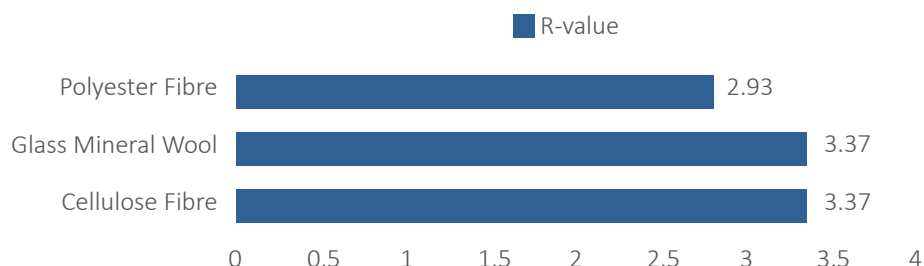
The highest total thermal resistance for a roof assembly in order to comply with SANS 10400-XA Energy usage in buildings is 3.7 m²K/W. The minimum added R-value for thermal insulation in this roof assembly is 3.37 m²K/W.

The following table and chart represent typical values and are provided for general comparison.

Typical R-value & Thicknesses

Generic Insulation Type	Density (Kg/m ³)	Typical Thermal Conductivity k-value (W/K.m)	Typical Thermal Resistance R-Value (m ² K/W)						
			40mm	50mm	75mm	100mm	135mm	150mm	200mm
Polyester Fibre	11.5	0.046	0.86	1.08	1.63	2.17	2.93	3.26	4.34
Glass Mineral Wool	11	0.040	1.00	1.25	1.87	2.50	3.37	3.37	5.00
Cellulose Fibre	27.5	0.040	1.00	1.25	1.87	2.50	3.37	3.37	5.00

R-VALUE vs 135MM THICKNESS



The heat flow through a building construction depends on the temperature difference across it, the conductivity of the materials used and the thickness of the materials. The temperature difference is an external factor. The thickness and the conductivity are properties of the material. A greater thickness means less heat flow and so does a lower conductivity. Together these parameters form the thermal resistance of the construction.

The thermal resistance is proportional to the thickness of a layer of the construction and inversely proportional to its conductivity. However, when a fibre blanket is compressed its values are compromised irrespective of what type of fibre it is.

Ensure compliance - don't be misled.

Mineral wool insulation
between and above ceiling joists



Ceiling joist

APPLICATION OVERVIEW

Our loft insulation solutions provide the most cost effective insulation solution with regards to the ratio of cost to energy saved as insulation thickness is largely unrestricted, allowing very high levels of thermal performance.

Whilst regulations in South Africa require one layer of the appropriate thickness, better performance (eg. energy saving) is achieved with 2 layers. To achieve this, a base layer of 100mm is installed between the joists, and the second layer is cross-laid on top of the base layer to prevent thermal bridging.

RECOMMENDED PRODUCTS

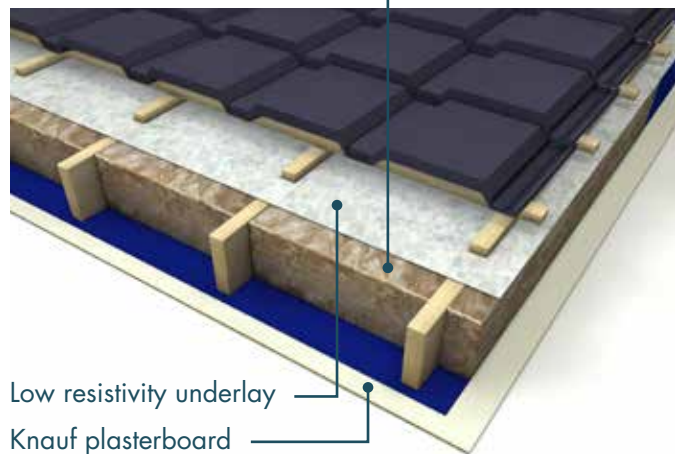
- **Ceiling Roll (Multi Pack)** (see page 42)
- **Ceiling Roll (Combi-cut)** (see page 44)
- **Ceiling Roll (Uncut)** (see page 48)
- **Ceiling Roll (Loft Roll)** (see page 50)
- **Ultracoustic-A Roll** (see page 56)

WHY MINERAL WOOL?

- Insulating at ceiling level with mineral wool provides the most cost effective solution to save energy and improve acoustic performance.
- Mineral wool reduces heat gain during the day and residual heat loss at night.



Mineral wool insulation



Low resistivity underlay

Knauf plasterboard

APPLICATION OVERVIEW

Our insulation solution for room in roof maximises both space and thermal efficiency, whilst also contributing to acoustic performance.

Insulation is friction-fitted between rafters, with the option to underline the rafters with a layer of plasterboard to create a drylined living or working space.

RECOMMENDED PRODUCTS

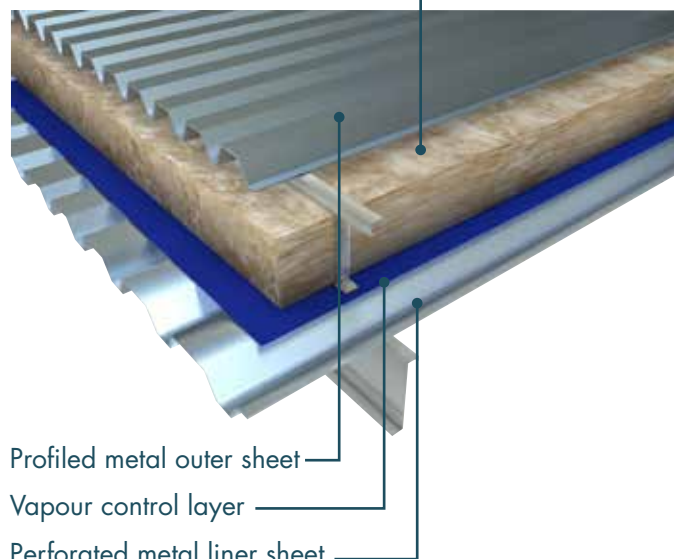
- **Rafter Roll** (see page 52)
- **Ultracoustic-A Roll** (see page 56)
- **Building Slab RS45** (see page 86)

WHY MINERAL WOOL?

- Mineral wool offers the best all-round thermal, fire and acoustic performance when compared to polyester rolls or rigid foam boards used to insulate.
- Mineral wool friction fits between rafters, providing an optimum seal and preventing gaps associated with rigid foam boards, which can otherwise lead to unwanted heat loss and acoustic bridging.



Mineral wool insulation



Profiled metal outer sheet

Vapour control layer

Perforated metal liner sheet

APPLICATION OVERVIEW

Our mineral wool insulation solutions for built-up metal roofs provide excellent levels of sound absorption, reducing the drumming effect of rainwater and improving the overall acoustic performance of the roof.

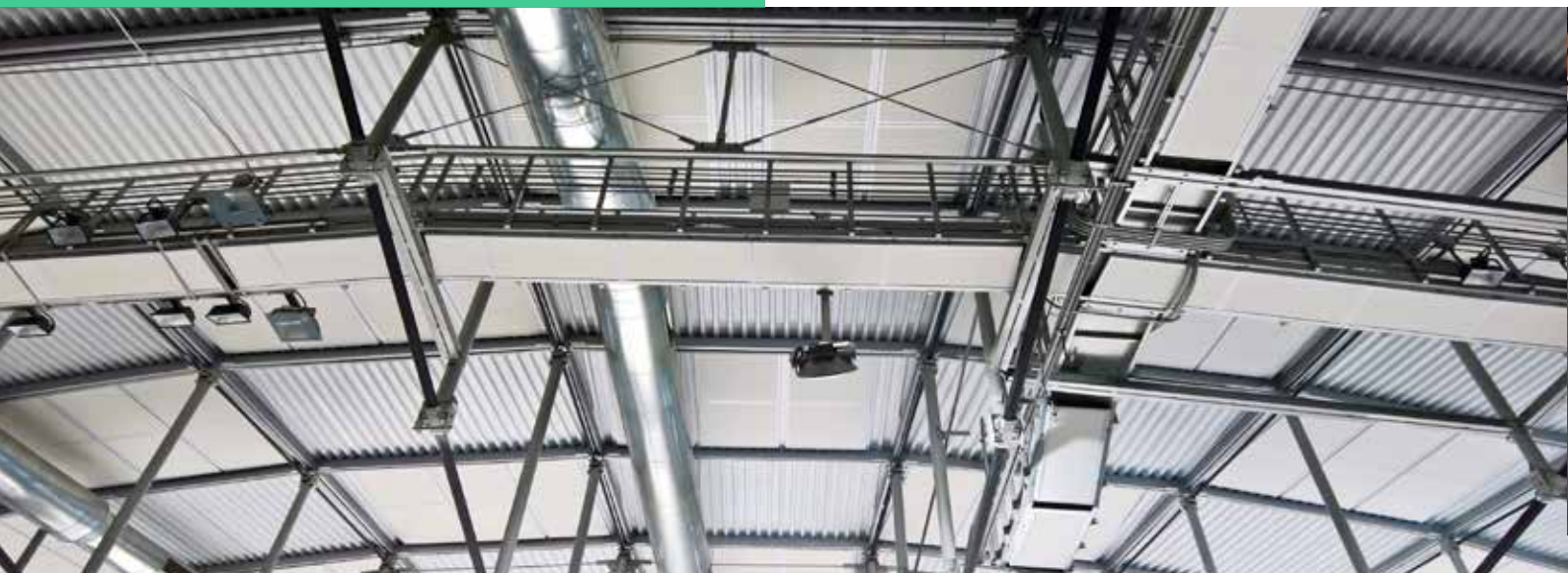
Systems typically consist of a low profile metal inner liner sheet, separated from an outer, higher profile metal weather sheet and are typically assembled on site. The cavity between them is maintained by installing a spacer support system (such as Ash & Lacy), and is filled with a layer of insulation to provide the specified level of thermal performance.

RECOMMENDED PRODUCTS

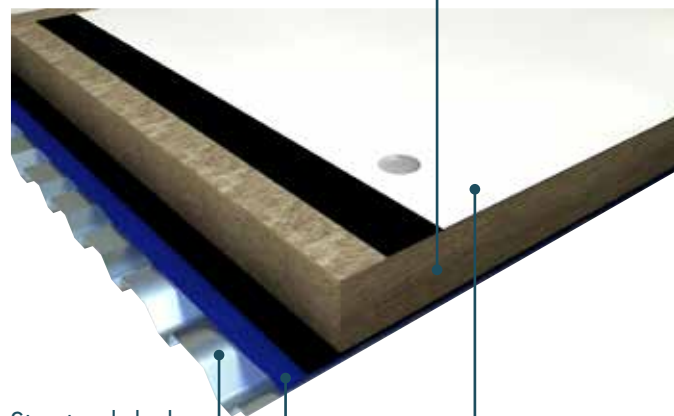
- **FactoryClad Roll** (see page 70)

WHY MINERAL WOOL?

- The fibrous nature of mineral wool composition provides an excellent barrier to unwanted noise.
- Mineral wool rolls knit together at joints, reducing the potential for loss of thermal and acoustic performance.



Mineral wool insulation



Structural deck

Vapour control layer

Single ply waterproofing system mechanically fixed to the deck



APPLICATION OVERVIEW

Our insulation solutions for flat roof applications (concrete, metal or timber decks) provide both excellent fire and acoustic performance in addition to high levels of thermal performance.

Loading and impact resistance is also required, with compressive strength being an important consideration when selecting flat roof insulation solutions.

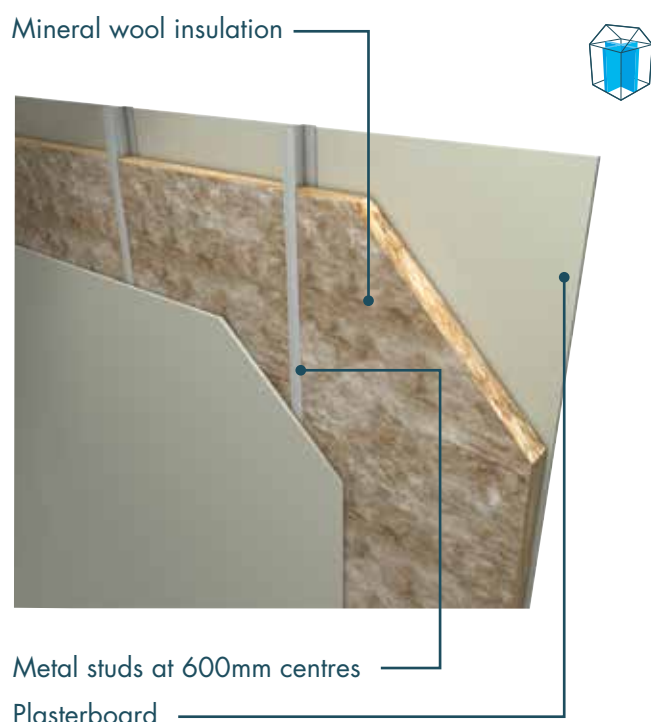
RECOMMENDED PRODUCTS

- **Krimpack Flat Roof Slab** (see page 74)

WHY MINERAL WOOL?

- Using a non-combustible mineral wool insulant contributes to an effective fire safety strategy.
- The use of a high density mineral wool slab enables loading and foot traffic for maintenance purposes.





APPLICATION OVERVIEW

Acoustic performance is the principle requirement for internal walls, with both sound insulation and sound absorption being important considerations. The sound absorption characteristics of our mineral wool insulation solutions make them ideal for use in internal wall build-ups. Thermal performance in internal partitions is not usually relevant.

In certain buildings there may also be specific fire performance requirements for partitions separating specific room types making our non-combustible solutions an ideal choice for this application.

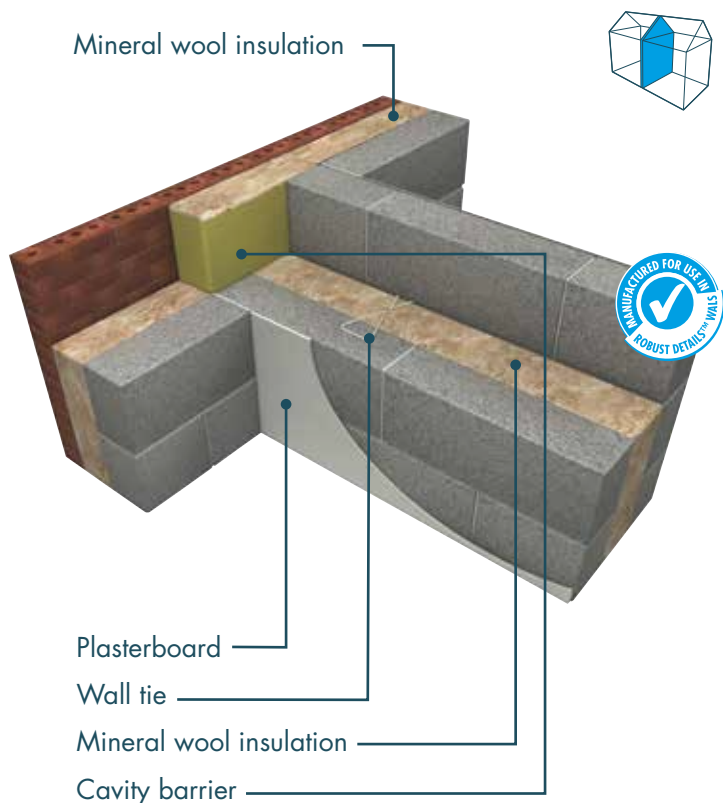
RECOMMENDED PRODUCTS

- **Acoustic Roll** (see page 54)
- **Ultracoustic-A Roll** (see page 56)
- **Cavity Roll** (see page 58)
- **Cavity Batt** (see page 60)
- **Building Slab RS45** (see page 86)

WHY MINERAL WOOL?

- Friction fitting mineral wool between metal or timber studs closes joints, eliminating gaps to prevent acoustic bridging and ensure high levels of sound insulation.
- The non-combustible nature of mineral wool means it will not contribute to the spread of a fire should it occur.





APPLICATION OVERVIEW

Separating walls are walls between adjoining buildings eg. houses, and are also called “party” walls.

The thermal performance of a party wall can be maximised by completely filling the cavity in order to prevent the chimney effect that occurs in an uninsulated cavity.

The building designer should also consider the use of cavity barriers at the edge of the party wall cavity.

Insulated party walls using mineral wool significantly enhance acoustic performance, acting as a barrier to unwanted noise from neighbouring buildings.

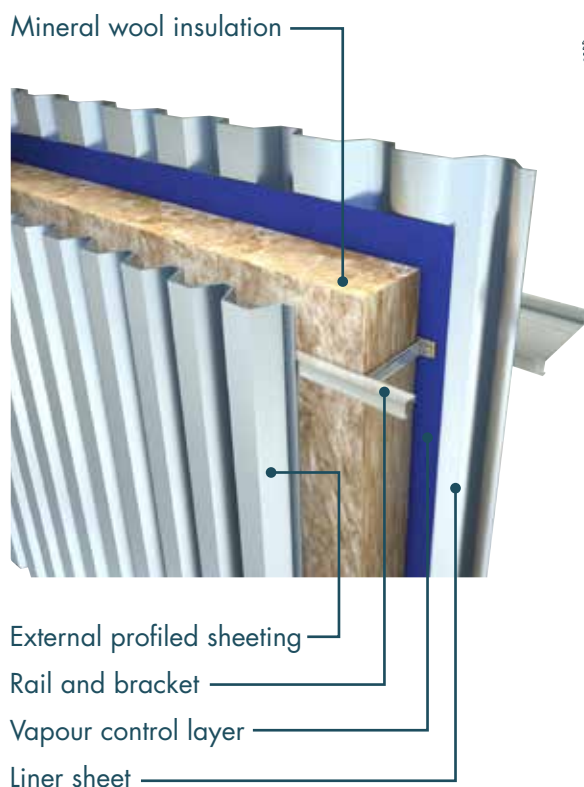
RECOMMENDED PRODUCTS

- **Masonry Party Wall Slab** (see page 62)

WHY MINERAL WOOL?

- Using mineral between adjoining buildings to fill the cavity is the only solution that combines thermal, acoustic and fire performance, reducing energy costs, providing fire safety and maximising comfort.





APPLICATION OVERVIEW

Our mineral wool insulation solutions for built-up metal walls provide very high levels of sound absorption, and can achieve outstanding levels of sound insulation when combined with the separation between internal and external metal sheets.

Built-up metal walls are most commonly installed on non-residential buildings such as offices, shops and warehouses providing very high levels of thermal insulation.

RECOMMENDED PRODUCTS

- **FactoryClad Roll** (see page 70)

WHY MINERAL WOOL?

- Mineral wool rolls knit together at joints, reducing the potential for loss of thermal and acoustic performance.
- Mineral wool can be used as a sound absorbing lining in conjunction with perforated metal liner sheets to control reverberation of internal sound.
- The non-combustible nature of mineral wool means it will not contribute to the spread of a fire should it occur.



Mineral wool insulation
between timber studs



Knauf plasterboard

Vapour control layer

Sheathing board

Reflective membrane

Brick outer leaf

APPLICATION OVERVIEW

Metal or timber frame walls generally provide better levels of thermal insulation performance than masonry walls of comparable thickness. However, the reduced mass of the wall means that insulation materials need to provide a higher level of acoustic performance to compensate.

Mineral wool insulation is friction-fitted between metal or timber structural studs, with the option to install additional insulation to the internal face of the wall, and / or into the cavity to further enhance thermal performance.

RECOMMENDED PRODUCTS

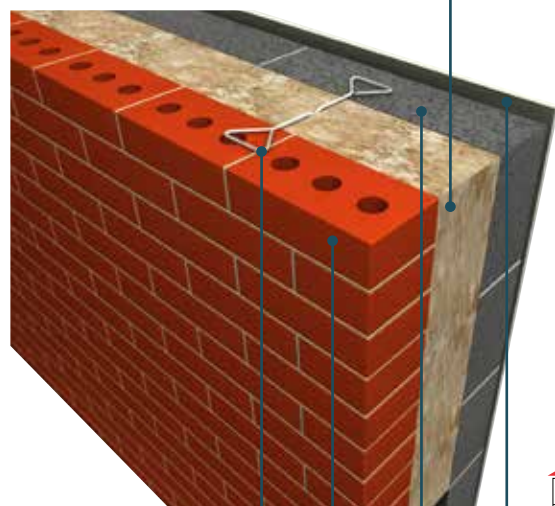
- **Ultracoustic-A Roll** (see page 56)
- **Cavity Roll** (see page 58)
- **Cavity Batt** (see page 60)
- **SteelTherm Roll** (see page 72)
- **Building Slab RS45** (see page 86)

WHY MINERAL WOOL?

- Mineral wool friction-fits between metal or timber studs, closing joints and preventing air movement and infiltration through or around the insulation, minimising heat loss and maximising acoustic performance.
- Mineral wool solutions are much quicker and easier to install, saving time compared to foam insulants that require time-consuming accurate cutting to achieve the required performance. The flexible nature of mineral wool enables it to follow any movement of a timber frame ensuring performance continuity.



Mineral wool insulation
(with water repellent additive)



Suitable wall tie

Brick or block outer leaf

Brick or blockwork inner leaf

Plasterboard

APPLICATION OVERVIEW

Full-filling masonry cavity walls with mineral wool enables the best possible R-value to save energy costs and reduce thermal gain.

This application will become increasingly important in South Africa with the new SANS 10400-XA standard and the impact of EPCs (Energy Performance Certificates).

Our full-fill built-in solution is installed as the walls are built and is suitable for all types of buildings as detailed in the British Board of Agrément (BBA) Certificates.



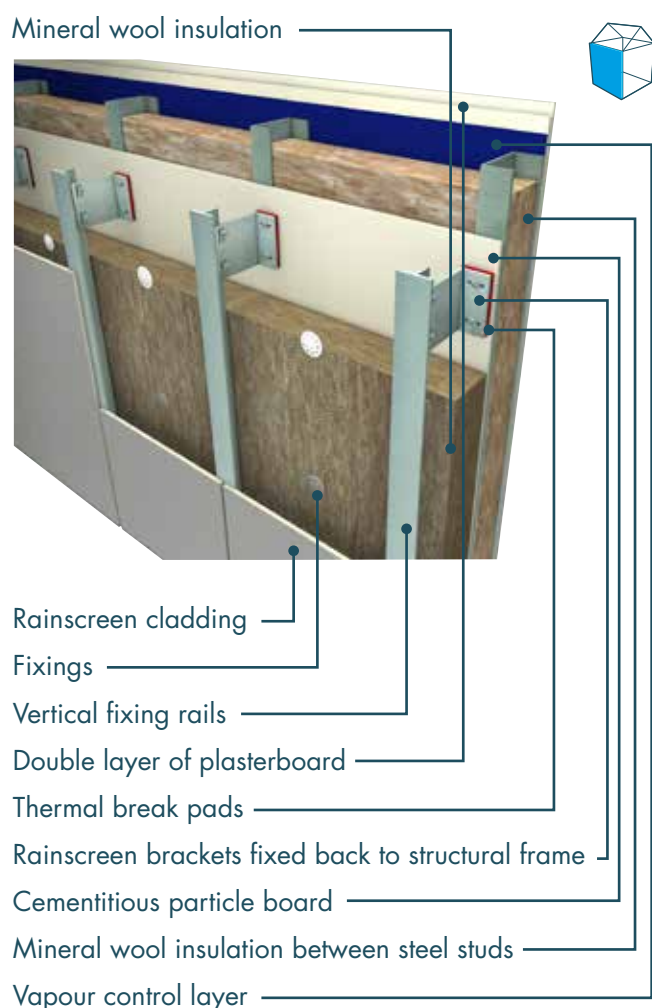
RECOMMENDED PRODUCTS

- **Masonry Cavity Slab (DriTherm 37)** (see page 64)

WHY MINERAL WOOL?

- Mineral wool slabs are sized to fit between wall ties without the need for cutting or fixings, reducing costs and increasing the building's thermal efficiency.
- Fully filling the cavity prevents mortar snots and other debris falling into the cavity, preventing bridges that can serve as a path for water to track from the outer to inner leaf.





APPLICATION OVERVIEW

Ventilated façade systems are lightweight when compared to brick and masonry solutions and can provide the designer with a wide range of aesthetic options.

In addition to thermal performance, fire performance of insulation materials is a crucial consideration, particularly when designing high-rise buildings or when the buildings will have high occupancy levels or vulnerable occupants.

Rainscreen ventilated facade systems are suitable for a range of backgrounds and substrates including concrete and masonry walls in addition to steel frame constructions.

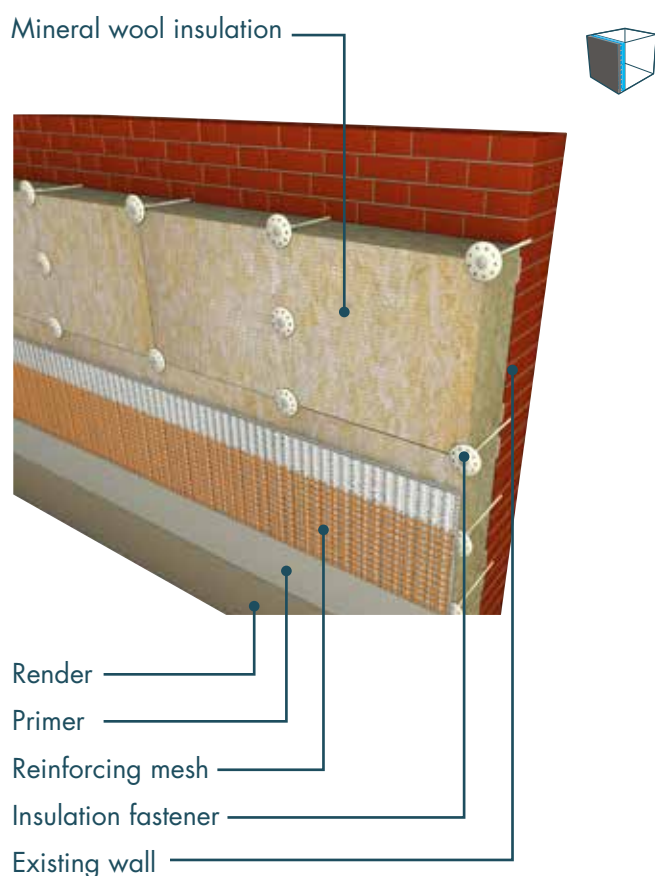
RECOMMENDED PRODUCTS

- **RainScreen Slab** (see page 66)

WHY MINERAL WOOL?

- Being non-combustible, mineral wool is suitable for use on all buildings including high-rise, providing compliance with fire related building regulations seen in all parts of the world.
- Using mineral wool in ventilated façades improves thermal efficiency to reduce energy costs and is most suited to a range of commercial buildings. This is important when considering the future impact of EPCs (Energy Performance Certificates).





APPLICATION OVERVIEW

Important issues when specifying an external wall insulation solution include the level of thermal performance to be achieved, which finish is the most suitable and the Reaction to Fire classification of the insulation.

EWI (External Wall Insulation) is used on an existing building where there is no cavity to insulate, significantly improving thermal performance and reducing energy bills.

EWI involves the installation of an insulating layer to the external fabric of an existing, or new building, and is usually finished with a render coat, brick slips or clad with timber boards or tiles.

RECOMMENDED PRODUCTS

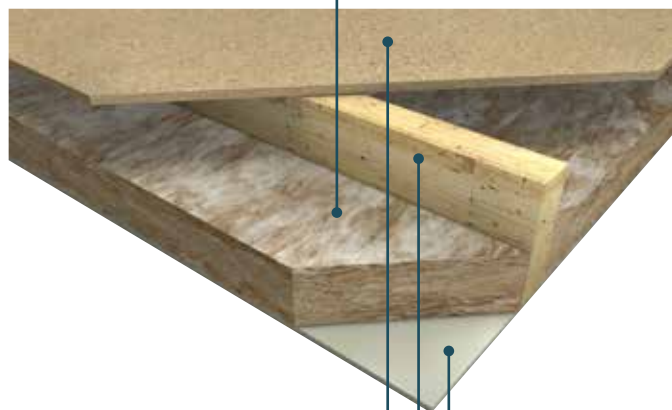
- **EWI (External Wall Insulation) Slab** (see page 68)

WHY MINERAL WOOL?

- Using a breathable mineral wool solution allows moisture vapour to pass through the construction to outside, removing the risk of condensation.
- Mineral wool solutions are non-combustible and have the best possible A1 Euroclass Reaction to Fire classification.



Mineral wool insulation



Timber deck or particle board

Timber or steel joists

Plasterboard

APPLICATION OVERVIEW

Internal floors are floors within the same residential or commercial space where there is no thermal gradient between the two rooms. Therefore thermal insulation is not necessary.

Acoustic performance is the principle requirement, with both sound insulation and sound absorption being important considerations.

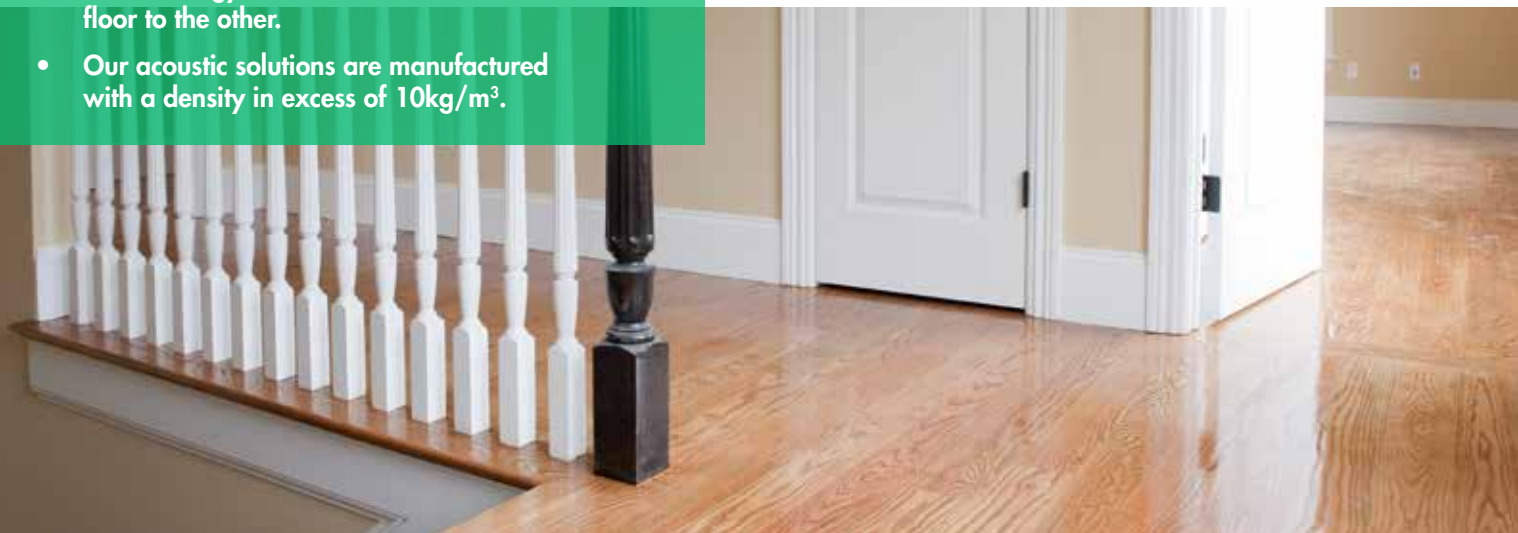
The sound absorption characteristics of our mineral wool insulation solutions make them ideal for use in internal floor build-ups.

RECOMMENDED PRODUCTS

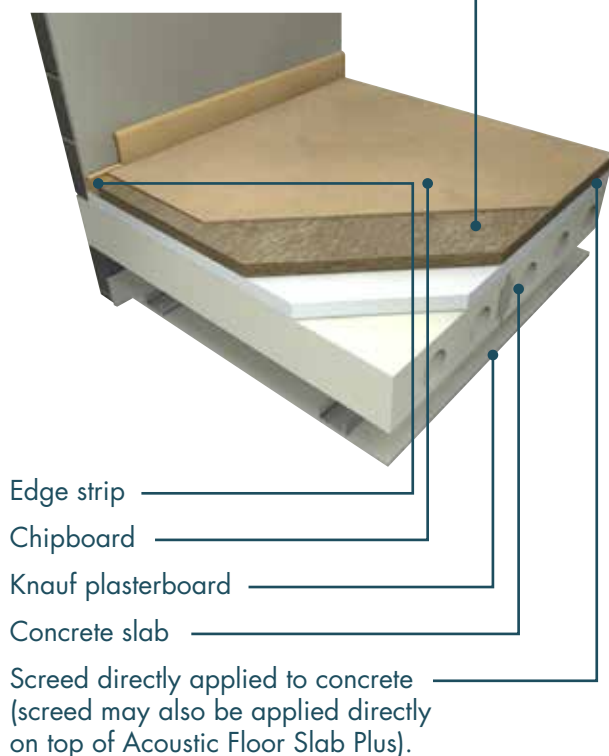
- **Acoustic Roll** (see page 54)
- **Ultracoustic-A Roll** (see page 56)
- **Cavity Roll** (see page 58)
- **Cavity Batt** (see page 60)
- **Building Slab RS45** (see page 86)
- **Acoustic Floor Slab Plus** (see page 88)

WHY MINERAL WOOL?

- Absorbent mineral wool significantly improves sound insulation, reducing the amount of sound energy transferred from one side of the floor to the other.
- Our acoustic solutions are manufactured with a density in excess of 10kg/m³.



Mineral wool insulation



APPLICATION OVERVIEW

Acoustic performance is the principle requirement, with both sound insulation and sound absorption being important considerations.

The sound absorption characteristics of our mineral wool insulation solutions make them ideal for use in separating floor build-ups.

We have a wide range of solutions which comply with constructions registered in the Robust Details Handbook, providing compliance with sound related building regulations.

RECOMMENDED PRODUCTS

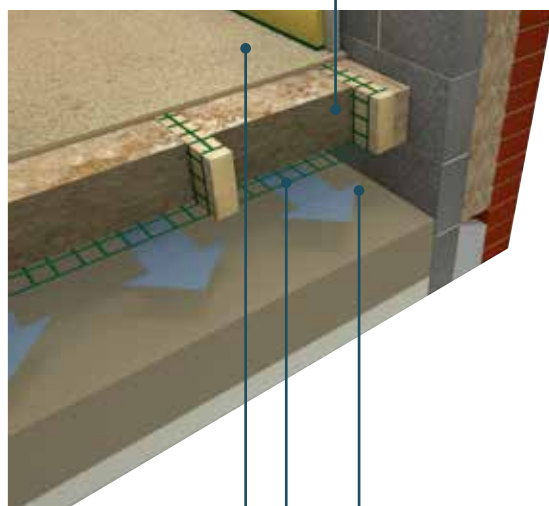
- **Acoustic Floor Slab Plus** (see page 88)

WHY MINERAL WOOL?

- Mineral wool provides a unique combination of compressive strength, acoustic performance and is Euroclass A1 non-combustible.
- Suitable for use with a range of construction techniques where the reduction of impact sound is necessary (e.g. hotels, offices, shopping malls, etc).



Mineral wool insulation



Chipboard deck

Support netting

Ventilated floor void

APPLICATION OVERVIEW

Insulation is placed between the joists and supported on netting (e.g. polypropylene) or timber battens.

An important consideration is to ensure that the insulation product used fills all gaps between joists to prevent air movement which can lead to unwanted heat loss.

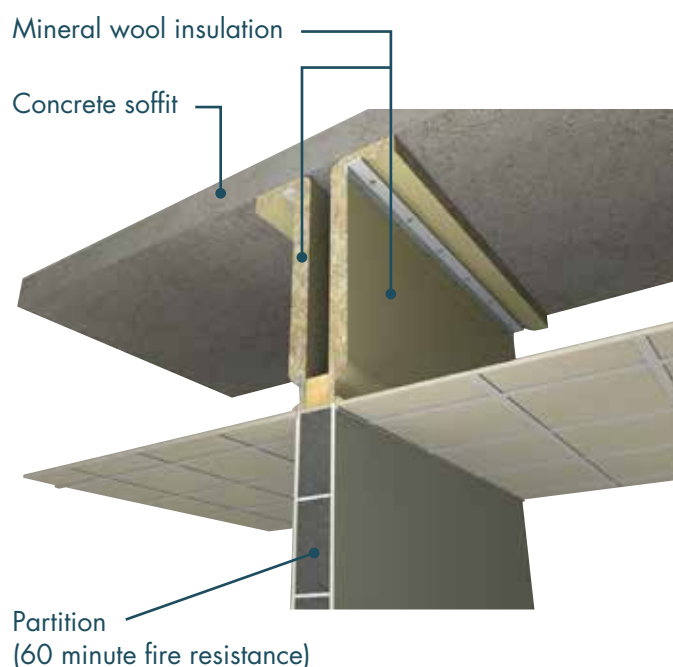
RECOMMENDED PRODUCTS

- **Building Slab RS45** (see page 86)

WHY MINERAL WOOL?

- Friction fitting mineral wool between timber joists closes joints, reducing the potential for gaps and unwanted loss of thermal performance.
- The flexible nature of mineral wool accommodates movements in floor ensuring all joints remain closed.





WHY MINERAL WOOL?

- Our wired mattress solutions are non-combustible with a melting point in excess of 1000°C, providing up to 1 hour fire protection.
- Fire barrier mattresses are flexible, allowing fixing to the soffit using a single bracket.

APPLICATION OVERVIEW

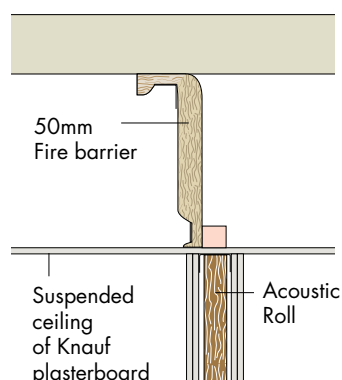
Every building must be designed and constructed in such a way that in the event of fire, the spread of smoke and flame within concealed cavities is inhibited.

Our Rock Mineral Wool fire barriers are used to sub divide cavities to prevent smoke and flame from bypassing fire-resisting walls and partitions, and are required to be placed above fire resisting partitions.

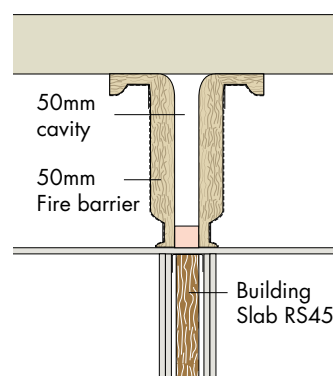
RECOMMENDED PRODUCTS

- Fire Barrier Wired Mattress (Fire-teK WM 910) (see page 82)

30 minute fire resistance



60 minute fire resistance



FOR HALF AN HOUR FIRE RESISTANCE

A single layer of 50mm Fire barrier, applied as a hanging curtain, supported continuously from above and both sides.

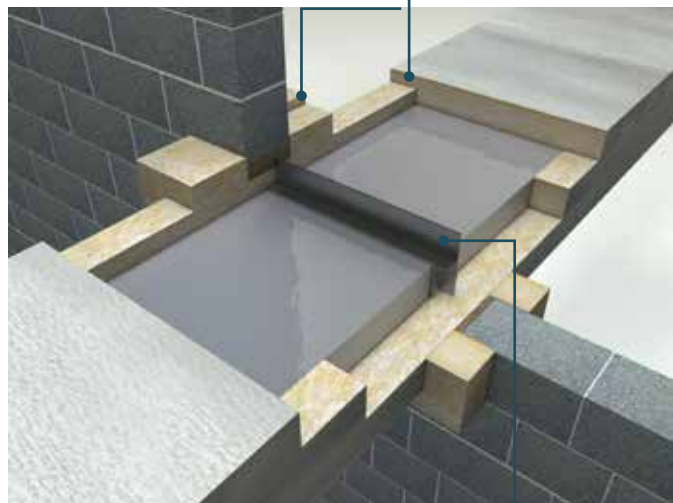
At the base Fire barrier is either lapped freely on to the back of a suspended ceiling or fixed to a partition head. Suitable for drops up to 7 metres.

FOR ONE HOUR FIRE RESISTANCE

Two layers of 50mm Fire barrier, separated by a 50mm air space, applied as a hanging curtain with wire mesh to the outside, supported continuously from above and both sides. At the base it is either lapped freely on to the back of a suspended ceiling, or fixed to a partition head.

Use foil faced Fire barrier when the ceiling void is used as an air plenum.

Mineral wool insulation fixed to duct and glued to wall and insulation



Steel angle riveted at 150mm centres

APPLICATION OVERVIEW

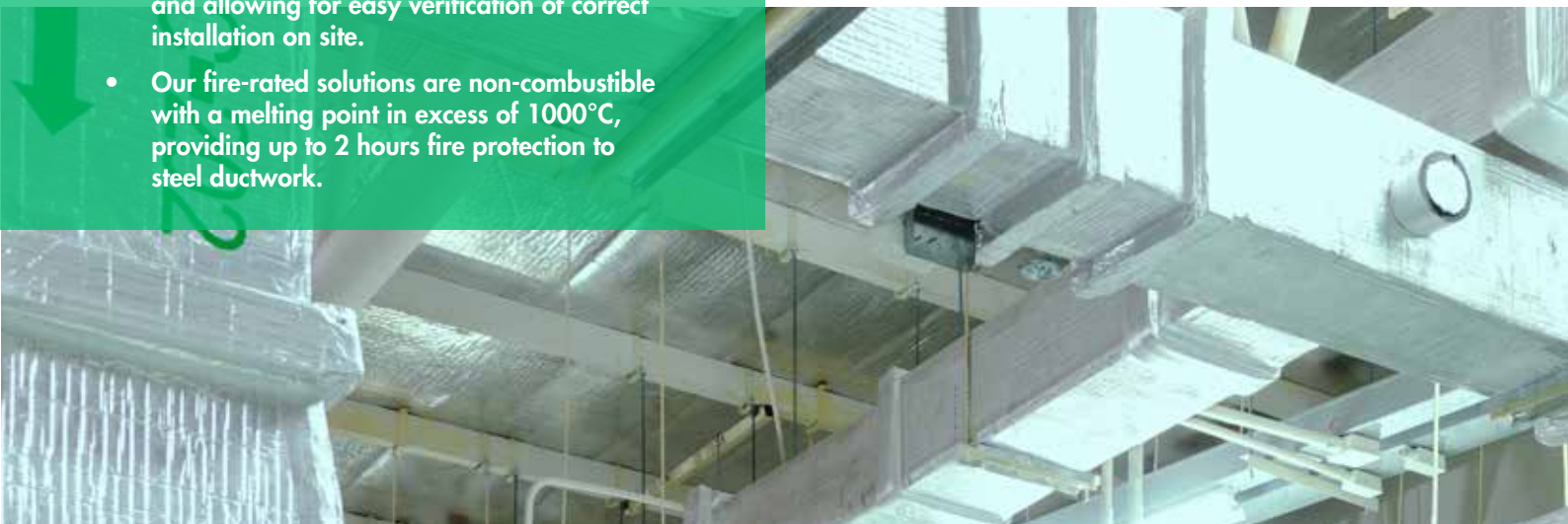
The main reasons for insulating ductwork are acoustics, thermal and where necessary, fire protection. Product selection is dependent on duct shapes, levels of fire protection needed and whether the duct penetrates separating building elements.

RECOMMENDED PRODUCTS

- Duct Roll (Thermo-teK RL Pro Alu) (see page 76)
- Duct Slab (Thermo-teK BD 060 Alu) (see page 78)
- Fire Duct Slab (Fire-teK BD 917) (see page 80)
- Fire Barrier Wired Mattress (Fire-teK WM 910) (see page 82)

WHY MINERAL WOOL?

- Our solutions are applied in a single thickness, removing the need for multi-layer applications, providing assurance of a uniform thickness and allowing for easy verification of correct installation on site.
- Our fire-rated solutions are non-combustible with a melting point in excess of 1000°C, providing up to 2 hours fire protection to steel ductwork.



PRODUCT FORMATS



with **ECOSE**[®]
TECHNOLOGY

COMBI-CUT

A factory applied perforation along the full length of a roll which creates pre-sized widths without the need for measuring or cutting.

BENEFIT:

Without the use of tools, the user has the option to either quickly create roll widths to suit standard ceiling joist centres, whilst still in the packaging, or for installation as a full width roll.

READY-CUT

Pre-cut rolls of equal width, ready to install without the need for measuring or cutting.

BENEFIT:

Pre-made narrower rolls that can be separated whilst still in the packaging to suit applications such as partitions.

UN-CUT

No cut has been applied to these products.

BENEFIT:

Rolls – allows the user to cut to specific widths as required at the job site or use as a full roll width.

Slabs – are usually designed to be used as a full piece of material in standard applications.



PROJECT RANGE

Products with this symbol are available by special request.

Please contact your local Knauf Insulation representative for more information.



PRODUCT SECTION

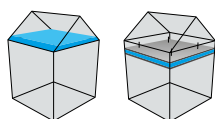


GLASS MINERAL WOOL



ROCK MINERAL WOOL

	Page Number
Ceiling Roll (Multi Pack)	- 42 -
Ceiling Roll (Combi-cut)	- 44 -
Ceiling Roll (Uncut)	- 48 -
Ceiling Roll (Loft Roll)	- 50 -
Rafter Roll	- 52 -
Acoustic Roll	- 54 -
Ultracoustic-A Roll	- 56 -
Cavity Roll	- 58 -
Cavity Batt	- 60 -
Masonry Party Wall Slab	- 62 -
Masonry Cavity Slab (DriTherm 37)	- 64 -
RainScreen Slab	- 66 -
EWI (External Wall Insulation) Slab	- 68 -
FactoryClad Roll	- 70 -
SteelTherm Roll	- 72 -
Krimpack Flat Roof Slab	- 74 -
Duct Roll (Thermo-teK RL Pro Alu)	- 76 -
Duct Slab (Thermo-teK BD 060 Alu)	- 78 -
Fire Duct Slab (Fire-teK BD 917)	- 80 -
Fire Barrier Wired Mattress (Fire-teK WM 910)	- 82 -
Building Slab RS45	- 86 -
Acoustic Floor Slab Plus	- 88 -



APPLICATION

- Pitched Roofs – Ceiling Level
- Suspended Ceiling

PRODUCT DESCRIPTION

Ceiling Roll (Multi Pack) provides the flexibility and convenience of 2 rolls in 1 by providing the option to install at either a 100mm depth or a 50mm depth. Rolls can easily be cut to suit joist centres. Installing Ceiling Roll (Multi Pack) will contribute to reduced energy consumption, saving money and reducing heat gain during the day, providing a more comfortable living and working environment, and heat loss during the evening.

Our advanced compression packaging technology ensures more insulation per pack, saving on transportation, storage space and reducing the amount of handling.

BENEFITS



- ✓ Multi pack can be used as:
 - 100mm depth or,
 - 50mm depth
- ✓ Non-combustible A1 Euroclass Reaction to Fire classification
- ✓ Contributes to saving energy and reducing energy bills
- ✓ More per pack than PET, for less storage and handling
- ✓ Manufactured with ECOSE® Technology for improved handling and installation
- ✓ Lightweight quilt for ease of installation

CERTIFICATION



SPECIFICATIONS

CEILING ROLL (MULTI PACK)

Thickness (mm)	 R-value (m²K/W)	 R-value (m²K/W)	Length (m)	Width (mm)	Product Format	Area per pack (m²)	Packs per pallet	Area per pallet (m²)	Article code	NRC
50	1.05	1.10	27.00	1200	Un-cut	32.40	24	777.60	633623	0.81
100	2.10	2.25	13.50	1200	Un-cut	16.20	24	388.80		1.04



South African R-values calculated assuming 23°C mean temperature.

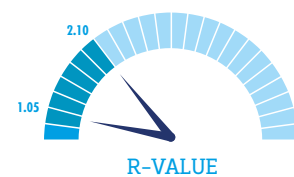
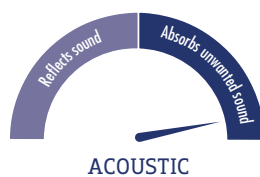
SANS 10177-5 A - Non combustible, SANS 10177-10 A1 - No flame spread, Euroclass A1 - reaction to fire classification to BS EN 13501 Fire classification, in accordance with SANS 428:2012, for thicknesses up to 135mm is A / A1 / 1.



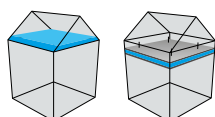
Euro R-values based on 10°C mean temperature, calculated according to requirements of X90-90 for declaring thermal performance and following the European norm standard including audited factory production control.

TYPICAL APPLICATIONS

Pitched Roofs – Ceiling Level



Fire: Euroclass Reaction to Fire classification | Sustainability: BRE Green Guide rating



APPLICATION

- Pitched Roofs – Ceiling Level
- Suspended Ceiling

PRODUCT DESCRIPTION

Ceiling Rolls (Combi-cut) have partially cut perforations allowing ease of separation into roll widths to suit joist centres at either 750mm or 600mm without having to measure or use tools. 750mm joist centres are installed using 1 x 800mm or 2 x 400mm widths. Combi-cut rolls can also be used unsplit as full 1200mm widths. Installing Ceiling Roll (Combi-cut) will contribute to reduced energy consumption, saving money and reducing heat gain during the day, and heat loss during the evening, providing a more comfortable living and working environment.

Our advanced compression packaging technology ensures more insulation per pack, saving on transportation, storage space and reducing the amount of handling.

BENEFITS



- ✓ Partially cut rolls for use with
 - joists at 750mm centres or,
 - joists at 600mm centres or,
 - unsplit as a full width roll
- ✓ Non-combustible A1 Euroclass Reaction to Fire classification
- ✓ Contributes to saving energy and reducing energy bills
- ✓ Lightweight flexible quilt for ease of installation
- ✓ Manufactured with ECOSE® Technology for improved handling and installation

CERTIFICATION



SPECIFICATIONS

CEILING ROLL (COMBI-CUT)

Thickness (mm)	 R-value (m²K/W)	 R-value (m²K/W)	Length (m)	Width (mm)	Product Format	Area per pack (m²)	Packs per pallet	Area per pallet (m²)	Article code	NRC
50	1.25	1.25	19.00	1200 (800+400 or 2x600)	Combi-cut	22.80	24	547.20	632897	0.81
100	2.50	2.50	10.10	1200 (800+400 or 2x600)	Combi-cut	12.12	24	290.88	632858	1.04
135	3.38	3.35	7.50	1200 (800+400 or 2x600)	Combi-cut	9.00	24	216.00	632899	1.13



South African R-values calculated assuming 23°C mean temperature.

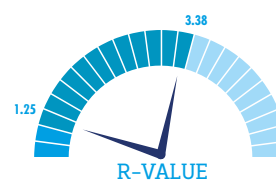
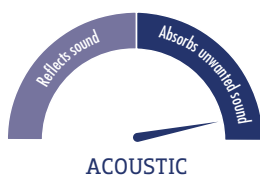
SANS 10177-5 A - Non combustible, SANS 10177-10 A1 - No flame spread, Euroclass A1 - reaction to fire classification to BS EN 13501. Fire classification, in accordance with SANS 428:2012, for thicknesses up to 135mm is A / A1 / 1.



Euro R-values based on 10°C mean temperature, calculated according to requirements of X90:90 for declaring thermal performance and following the European norm standard including audited factory production control.

TYPICAL APPLICATIONS

Pitched Roofs – Ceiling Level



Fire: Euroclass Reaction to Fire classification | Sustainability: BRE Green Guide rating

DON'T GET CA

Our market leading technology allows



19.00m Knauf Insulat



27.00m Knauf Insulation Multi Pack = 32.40m² per roll



CEILING ROLL BENEFITS BOTH

More m² per roll

- = More m² per pallet
- = More m² per volume of stocking space
- = More m² per vehicle delivery
- = **BETTER WAREHOUSE UTILISATION**

Virtually **half** the number of rolls to insulate a loft

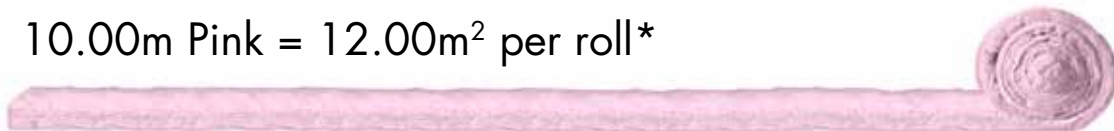
- = Less packaging
- = **ENVIRONMENTAL BENEFIT**

50mm thickness used for illustrative purposes * South African reference

LIGHT SHORT

us to produce a much longer roll

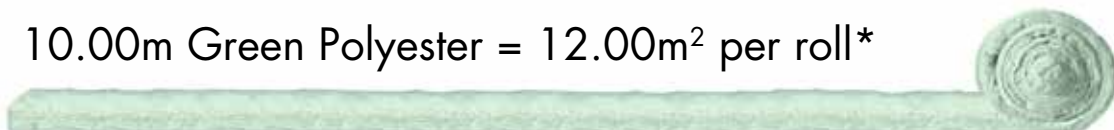
10.00m Pink = 12.00m² per roll*



ion Ceiling Roll = 22.80m² per roll



10.00m Green Polyester = 12.00m² per roll*



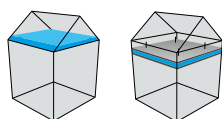
THE STOCKIST AND END-USER

More m² per vehicle delivery

- = Fewer journeys to site
- = Less fuel used
- = Less carbon emitted
- = **ENVIRONMENTAL BENEFIT**

50% fewer trips up the loft for the end-user

- = Saves time and increases profit
- = **ADDED VALUE**



APPLICATION

- Pitched Roofs – Ceiling Level
- Suspended Ceiling

PRODUCT DESCRIPTION

Ceiling Rolls (Un-cut) are 1200mm wide offering the installer the flexibility to cut to the desired width. Installing Ceiling Rolls (Un-cut) will contribute to reduced energy consumption, saving money and reducing heat gain during the day, and heat loss during the evening, providing a more comfortable living and working environment.

Our advanced compression packaging technology ensures more insulation per pack, saving on transportation, storage space and reducing the amount of handling.

BENEFITS



- ✓ 1200mm wide rolls can be cut to desired widths
- ✓ Non-combustible A1 Euroclass Reaction to Fire classification
- ✓ Contributes to saving energy and reducing energy bills
- ✓ Lightweight quilt for ease of installation
- ✓ Manufactured with ECOSE® Technology for improved handling and installation

CERTIFICATION



SPECIFICATIONS

CEILING ROLL (UN-CUT)

Thickness (mm)	 R-value (m²K/W)	 R-value (m²K/W)	Length (m)	Width (mm)	Product Format	Area per pack (m²)	Packs per pallet	Area per pallet (m²)	Article code	NRC
50	1.25	1.25	19.00	1200	Un-cut	22.80	24	547.20	617261	0.81
75	1.88	1.85	12.80	1200	Un-cut	15.36	24	368.64	617263	0.93
100	2.50	2.50	10.10	1200	Un-cut	12.12	24	290.88	617265	1.04
135	3.38	3.35	7.50	1200	Un-cut	9.00	24	216.00	617267	1.13

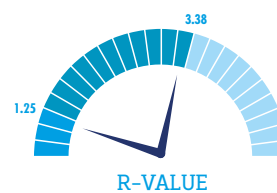
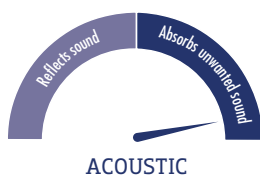
 South African R-values calculated assuming 23°C mean temperature.

SANS 10177-5 A - Non combustible, SANS 10177-10 A1 - No flame spread, Euroclass A1 - reaction to fire classification to BS EN 13501. Fire classification, in accordance with SANS 428:2012, for thicknesses up to 135mm is A / A1 / 1.

 Euro R-values based on 10°C mean temperature, calculated according to requirements of X90:90 for declaring thermal performance and following the European norm standard including audited factory production control.

TYPICAL APPLICATIONS

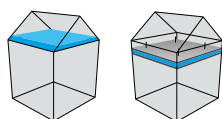
Pitched Roofs – Ceiling Level



Fire: Euroclass Reaction to Fire classification | Sustainability: BRE Green Guide rating



with **ECOSE[®]** TECHNOLOGY



APPLICATION

- Pitched Roofs – Ceiling Level
- Suspended Ceiling

PRODUCT DESCRIPTION

Ceiling Rolls (Loft Roll) are available as 1140mm wide Combi-cut variants. Combi-cut rolls have perforation cuts, allowing ease of separation so that each roll can be used in joists at 750mm centres, or 400mm centres, or split in half to be used in 600mm joist centres. They can also be used unsplit as full 1140mm widths. Installing Ceiling Roll (Loft Roll) will contribute to reduced energy consumption, saving money and reducing heat gain during the day, and heat loss during the evening, providing a more comfortable living and working environment.

This range offers a wide selection of thicknesses and R-values.

Our advanced compression packaging technology ensures more insulation per pack, saving on transportation, storage space and reducing the amount of handling.

BENEFITS



- ✓ Partially cut rolls for use with
 - joists at 400mm centres (1 x 380mm width) or
 - joists at 600mm centres (1 x 570mm width) or
 - joists at 750mm centres (2 x 380mm widths)
 - unsplit as a full width roll
- ✓ Non-combustible A1 Euroclass Reaction to Fire classification
- ✓ Contributes to saving energy and reducing energy bills
- ✓ Lightweight flexible quilt for ease of installation
- ✓ Manufactured with ECOSE[®] Technology for improved handling and installation.

CERTIFICATION



SPECIFICATIONS

CEILING ROLL (LOFT ROLL)

Thickness (mm)	 R-value (m²K/W)	 R-value (m²K/W)	Length (m)	Width (mm)	Product Format	Area per pack (m²)	Packs per pallet	Area per pallet (m²)	Article code	NRC
100	2.19	2.25	12.18	1140 (2x570/3x380)	Combi-cut	13.89	24	333.36	2404154	1.04
100	2.40	2.50	11.25	1140 (2x570/3x380)	Combi-cut	12.83	24	307.92	2404167	1.04
150	3.29	3.40	8.05	1140 (2x570/3x380)	Combi-cut	9.18	24	220.32	2404155	1.13
150	3.89	3.75	7.53	1140 (2x570/3x380)	Combi-cut	8.53	24	204.72	2404166	1.13
200	4.38	4.50	5.20	1140 (2x570/3x380)	Combi-cut	5.93	24	142.32	2404157	1.16
200	4.65	5.00	4.85	1140 (2x570/3x380)	Combi-cut	5.53	24	132.72	2404169	1.16



South African R-values calculated assuming 23°C mean temperature.

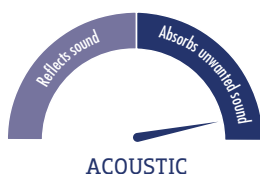
SANS 10177-5 A - Non combustible, SANS 10177-10 A1 - No flame spread, Euroclass A1 - reaction to fire classification to BS EN 13501. Fire classification, in accordance with SANS 428:2012, for thicknesses up to 135mm is A / A1 / 1.



Euro R-values based on 10°C mean temperature, calculated according to requirements of X90:90 for declaring thermal performance and following the European norm standard including audited factory production control.

TYPICAL APPLICATIONS

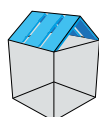
Pitched Roofs – Ceiling Level



Fire: Euroclass Reaction to Fire classification | Sustainability: BRE Green Guide rating



with **ECOSE[®]** TECHNOLOGY



APPLICATION

- Pitched Roofs – Rafter Level

PRODUCT DESCRIPTION

Rafter Rolls are designed for use in 'pitched roofs' for installation between rafters and are ideal for converting the roof area into additional living space. In addition, Rafter Roll also provides acoustic performance, reducing the impact of external sounds.

BENEFITS



- ✓ Rigid quilt for ease of friction fitting between rafters
- ✓ Excellent sound absorption characteristics
- ✓ 1200mm wide rolls can be cut to desired widths
- ✓ Non-combustible A1 Euroclass Reaction to Fire classification
- ✓ Advanced compression technology provides more per pack for less storage, handling and transportation
- ✓ Manufactured with ECOSE[®] Technology for improved handling and installation

CERTIFICATION



SPECIFICATIONS

RAFTER ROLL

Thickness (mm)	 R-value (m²K/W)	 R-value (m²K/W)	Length (m)	Width (mm)	Product Format	Area per pack (m²)	Packs per pallet	Area per pallet (m²)	Article code	NRC
75	2.24	2.30	5.25	1200	Un-cut	6.30	24	151.20	2402018	0.90
100	2.97	3.10	4.00	1200	Un-cut	4.80	24	115.20	2402020	1.00
200	5.34	5.55	3.30	1200	Un-cut	3.96	24	95.04	2441269	1.00



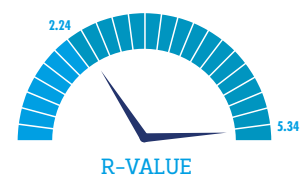
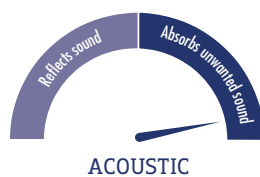
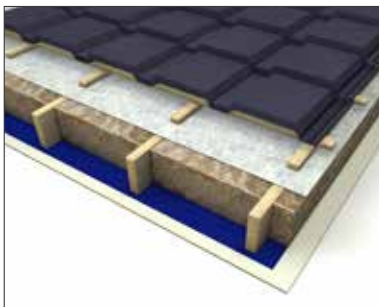
South African R-values calculated assuming 23°C mean temperature.



Euro R-values based on 10°C mean temperature, calculated according to requirements of X90:90 for declaring thermal performance and following the European norm standard including audited factory production control.

TYPICAL APPLICATIONS

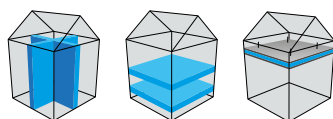
Pitched Roofs – Rafter Level



Fire: Euroclass Reaction to Fire classification | Sustainability: BRE Green Guide rating



with **ECOSE[®]** TECHNOLOGY



APPLICATION

- Partition Walls
- Intermediate Timber Floors
- Suspended Ceiling

PRODUCT DESCRIPTION

Acoustic Rolls are specialist sound insulating products for use in partitions. When cut to the full length of the partition height, Acoustic Rolls remove joints associated with slab installations, reducing the likelihood of acoustic bridging for a more consistent quality of installation. They may also be installed in timber intermediate floor applications.

Acoustic rolls are designed specifically for acoustic performance, and therefore do not have a declared R-value. They are pre-cut into 2 x 600mm rolls, removing the need for measuring and cutting on site, providing convenience and speed of installation.



BENEFITS

- ✓ Excellent sound absorption characteristics improve the acoustic performance of internal walls and floors
- ✓ Friction fitting between studs ensures high levels of sound insulation
- ✓ Suitable for use in either metal or timber studs
- ✓ Non-combustible A1 Euroclass Reaction to Fire classification
- ✓ Ready cut rolls allow for faster installation and avoid joints
- ✓ Advanced compression technology provides more per pack for less storage, handling and transportation
- ✓ Manufactured with ECOSE[®] Technology for improved handling and installation

CERTIFICATION



SPECIFICATIONS

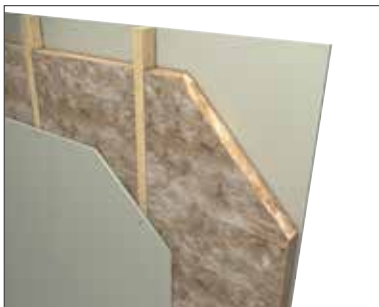
ACOUSTIC ROLL

Thickness (mm)	Length (m)	Width (mm)	Product Format	Area per pack (m ²)	Packs per pallet	Area per pallet (m ²)	Article code	NRC
50	13.00	1200 (2x600)	Ready-cut	15.60	24	374.40	2400365	0.83
63	15.00	1200 (2x600)	Ready-cut	18.00	24	432.00	603550	0.89e
75	12.50	1200 (2x600)	Ready-cut	15.00	24	360.00	2438513	0.93
100	9.17	1200 (2x600)	Ready-cut	11.00	24	264.00	2438517	1.04

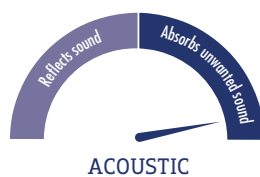
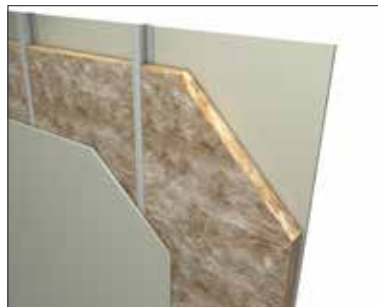
e = estimate

TYPICAL APPLICATIONS

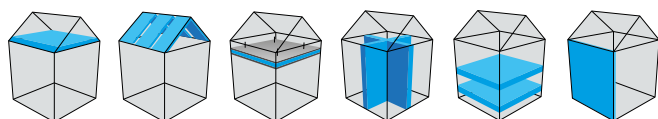
Partition Walls - Timber Frame



Partition Walls - Steel Frame



Fire: Euroclass Reaction to Fire classification | Sustainability: BRE Green Guide rating



APPLICATION

- Pitched Roofs – Ceiling Level
- Pitched Roofs – Rafter Level
- Suspended Ceilings
- Partition Walls
- Intermediate Timber Floors
- Timber Frame External Walls

PRODUCT DESCRIPTION

Ultracoustic-A Rolls offer superior acoustic performance for internal partition walls, suspended ceilings, intermediate floors and some external wall applications. Suitable for both acoustic and thermal applications, they are ideal for use in areas where heightened privacy or sound insulation is of importance, e.g. cinemas, boardrooms, or consultation chambers. Rolls are pre-cut into 2 x 600mm widths, removing the need for measuring and cutting on site for convenience and speed of installation. Installing rolls in partitions removes joints associated with slab installations, reducing the likelihood of acoustic bridging.

BENEFITS

- ✓ Superior sound absorption characteristics improve the acoustic performance
- ✓ Friction fitting between studs
- ✓ Ready-cut rolls to suit 600mm stud centres for convenience, faster installation and no butt joints
- ✓ Suitable for use in metal or timber studs
- ✓ Non-combustible A1 Euroclass Reaction to Fire classification
- ✓ Advanced compression technology provides more per pack for less storage, handling and transportation
- ✓ Manufactured with ECOSE® Technology for improved handling and installation

CERTIFICATION



SPECIFICATIONS

ULTRACOUSTIC-A ROLL

Thickness (mm)	 R-value (m²K/W)	 R-value (m²K/W)	Length (m)	Width (mm)	Product Format	Area per pack (m²)	Packs per pallet	Area per pallet (m²)	Article code	NRC
50	1.51	1.60	5.00	1200 (2x600)	Combi-cut	6.00	24	144.00	596043	0.88



South African R-values calculated assuming 23°C mean temperature.



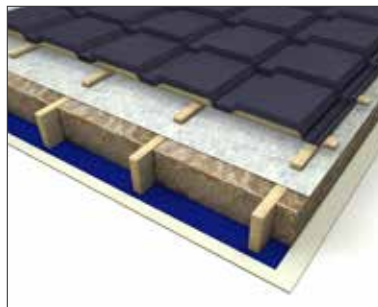
Euro R-values based on 10°C mean temperature, calculated according to requirements of A90:90 for declaring thermal performance and following the European norm standard including audited factory production control.

TYPICAL APPLICATIONS

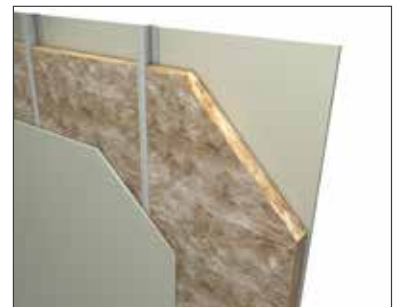
Pitched Roofs – Ceiling Level



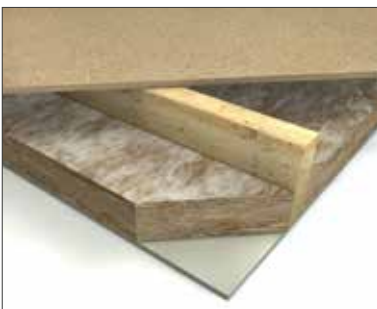
Pitched Roofs – Rafter Level



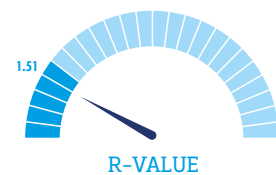
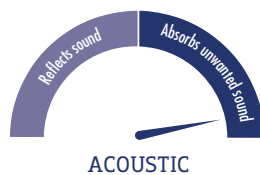
Partition Walls



Intermediate Timber Floors



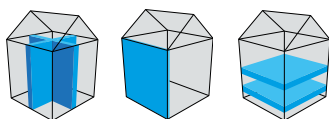
Timber Frame External Walls



Fire: Euroclass Reaction to Fire classification | Sustainability: BRE Green Guide rating



with **ECOSE[®]** TECHNOLOGY



APPLICATION

- Partition Walls
- Framed External Walls
- Intermediate Timber Floors

PRODUCT DESCRIPTION

Cavity Rolls are designed for friction-fitting in timber and metal studs for drywall partitioning and may also be used in some external wall applications, dependent on the construction.

Cavity Rolls are ready cut into 2 x 600mm widths, to suit standard stud centres, allowing faster installation by removing the need to measure or cut on site. Installing a continuous piece of insulation within the studs avoids butt joints and potential acoustic bridging associated with batts.

BENEFITS



- ✓ Rolls are ready-cut into 600mm widths for fast installation
- ✓ Friction-fitting between studs for ease of installation
- ✓ Suitable for use in metal or timber studs
- ✓ Provide excellent acoustic performance and helps prevent acoustic bridging
- ✓ Advanced compression technology provides more per pack for less storage, handling and transportation
- ✓ Non-combustible A1 Euroclass Reaction to Fire classification
- ✓ Manufactured with ECOSE[®] Technology for improved handling and installation

CERTIFICATION



SPECIFICATIONS

CAVITY ROLL

Thickness (mm)	 R-value (m²K/W)	 R-value (m²K/W)	Length (m)	Width (mm)	Product Format	Area per pack (m²)	Packs per pallet	Area per pallet (m²)	Article code	NRC
51	1.34	1.35	14.00	1200 (2x600)	Ready-cut	16.80	24	403.20	592787	0.77
63	1.65	1.70	12.00	1200 (2x600)	Ready-cut	14.40	24	345.60	592813	0.85e
100	2.63	2.70	7.50	1200 (2x600)	Ready-cut	9.00	24	216.00	595698	1.00



South African R-values calculated assuming 23°C mean temperature.

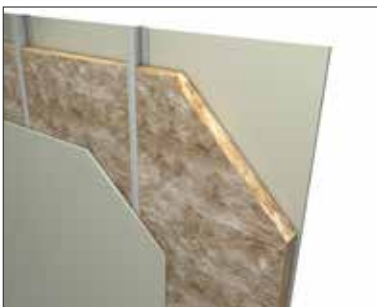


Euro R-values based on 10°C mean temperature, calculated according to requirements of X90:90 for declaring thermal performance and following the European norm standard including audited factory production control.

e = estimate

TYPICAL APPLICATIONS

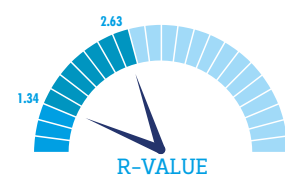
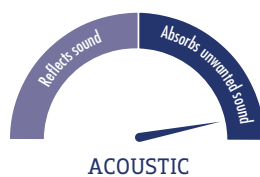
Partition Walls



Framed External Walls



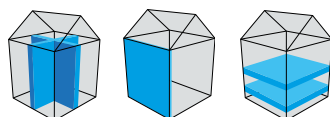
Intermediate Timber Floors



Fire: Euroclass Reaction to Fire classification | Sustainability: BRE Green Guide rating



with **ECOSE[®]** TECHNOLOGY



APPLICATION

- Partition Walls
- Framed External Walls
- Intermediate Timber Floors

PRODUCT DESCRIPTION

Cavity Batts are designed for friction-fitting in timber and metal studs, including drywall partitioning and, are suitable for framed external wall construction.

Cavity Batts are 600mm wide, to suit standard stud centres. Packs are lightweight and compact, making them easy to carry, helping to prevent damage associated with dragging larger, heavier packs.

BENEFITS



- ✓ Batts are manufactured to 600mm widths to friction-fit between standard stud centres
- ✓ Advanced compression technology provides packs that are compact and easy to carry
- ✓ Provide excellent acoustic performance
- ✓ Non-combustible A1 Euroclass Reaction to Fire classification
- ✓ Manufactured with ECOSE[®] Technology for improved handling and installation

CERTIFICATION



SPECIFICATIONS

CAVITY BATT

Thickness (mm)	 R-value (m²K/W)	 R-value (m²K/W)	Length (mm)	Width (mm)	Product Format	Slabs per pack	Area per pack (m²)	Packs per pallet	Area per pallet (m²)	Article code	NRC
51	1.34	1.35	1200	600	Un-cut	14	10.08	28	282.24	592969	0.77
63	1.66	1.70	1200	600	Un-cut	10	7.20	32	230.40	592844	0.85e
100	2.68	2.70	1200	600	Un-cut	7	5.04	32	161.28	597512	1.00

e = estimate



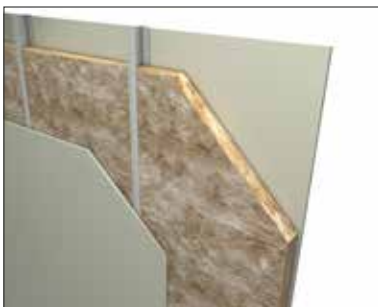
South African R-values calculated assuming 23°C mean temperature.



Euro R-values based on 10°C mean temperature, calculated according to requirements of X90:90 for declaring thermal performance and following the European norm standard including audited factory production control.

TYPICAL APPLICATIONS

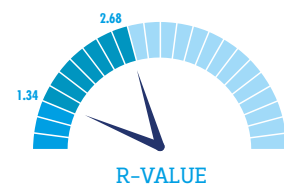
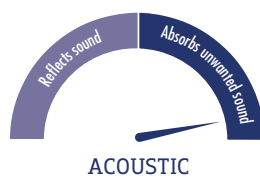
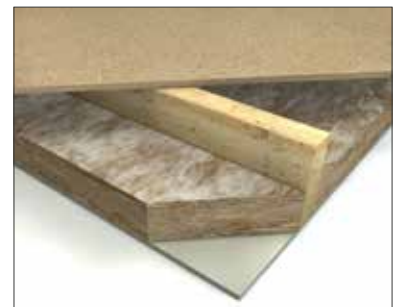
Partition Walls



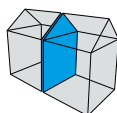
Framed External Walls



Intermediate Timber Floors



Fire: Euroclass Reaction to Fire classification | Sustainability: BRE Green Guide rating



PRODUCT DESCRIPTION

Masonry Party Wall Slabs are designed for use in masonry separating (party) walls providing a full-fill insulation solution which is installed as walls are being built.

Manufactured to 455mm widths, to suit standard wall tie spacing, Masonry Party Wall Slabs improve the thermal performance of adjoining properties, helping to reduce energy bills. In addition, the excellent sound absorption characteristics ensure improved acoustic performance.

BENEFITS

- ✓ Excellent thermal performance, preventing party wall thermal bypass
- ✓ Reduces energy costs
- ✓ Excellent sound absorption characteristics improve the acoustic performance between adjacent properties
- ✓ Non-combustible A1 Euroclass Reaction to Fire classification
- ✓ Manufactured with ECOSE® Technology for improved handling and installation

APPLICATION

- Masonry Separating (Party) Walls



CERTIFICATION



SPECIFICATIONS

PROJECT RANGE

MASONRY PARTY WALL SLAB

Thickness (mm)	 R-value (m²K/W)	 R-value (m²K/W)	Length (mm)	Width (mm)	Product Format	Slabs per pack	Area per pack (m²)	Packs per pallet	Area per pallet (m²)	Article code
75	2.04	2.05	1200	455	Un-cut	16	8.74	20	174.72	2441351
100	3.10	2.75	1200	455	Un-cut	12	6.55	20	131.04	2441353



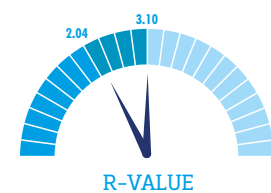
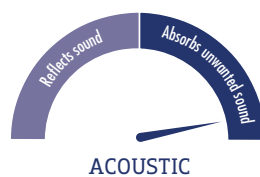
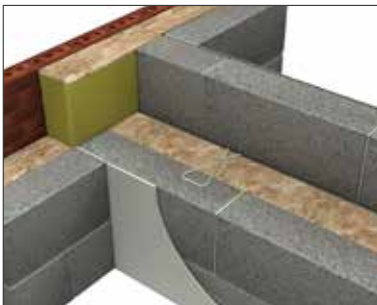
South African R-values calculated assuming 23°C mean temperature.



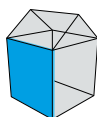
Euro R-values based on 10°C mean temperature, calculated according to requirements of A90-90 for declaring thermal performance and following the European norm standard including audited factory production control.

TYPICAL APPLICATIONS

Masonry Separating (Party) Walls



Fire: Euroclass Reaction to Fire classification | Sustainability: BRE Green Guide rating



APPLICATION

- Masonry Cavity Walls



PRODUCT DESCRIPTION

Masonry Cavity Slabs (DriTherm 37) have a water repellent additive, and are designed for use in external masonry cavity walls up to 25m to provide a full-fill insulation solution which is installed as walls are being built.

Masonry Cavity Slabs are manufactured to 455mm widths, to suit standard wall tie spacing, reducing the need to cut slabs to size on site. In addition to helping reduce energy bills, Masonry Cavity Slabs (DriTherm 37).

BENEFITS

- ✓ Made with a water repellent additive to maintain dry cavities
- ✓ Provides excellent thermal performance reducing energy bills
- ✓ Reduces heat gain during the day, and heat loss at night, for a more comfortable environment
- ✓ Non-combustible A1 Euroclass Reaction to Fire classification
- ✓ Suitable for use with standard bricks, blocks and mortar mixes
- ✓ Slabs sized to fit between wall ties spaced at 455mm
- ✓ Manufactured with ECOSE® Technology for improved handling and installation



CERTIFICATION



SPECIFICATIONS

PROJECT RANGE

MASONRY CAVITY SLABS

Thickness (mm)	 R-value (m²K/W)	 R-value (m²K/W)	Length (mm)	Width (mm)	Product Format	Slabs Per pack	Area per pack (m²)	Packs per pallet	Area per pallet (m²)	Article code
50	1.42	1.40	1200	455	Un-cut	12	6.55	30	196.56	316650
65	1.75	1.80	1200	455	Un-cut	10	5.46	40	218.40	316652
75	1.93	2.00	1200	455	Un-cut	8	4.37	50	218.40	316654

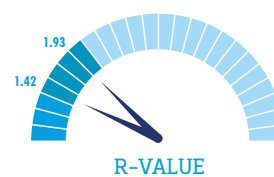
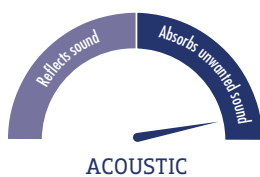
*other thicknesses are available on request up to 150mm

 South African R-values calculated assuming 23°C mean temperature.

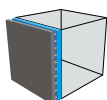
 Euro R-values based on 10°C mean temperature, calculated according to requirements of A90:90 for declaring thermal performance and following the European norm standard including audited factory production control.

TYPICAL APPLICATIONS

Masonry Cavity Walls



Fire: Euroclass Reaction to Fire classification | Sustainability: BRE Green Guide rating



APPLICATION

- RainScreen Ventilated Façade Systems

PRODUCT DESCRIPTION

RainScreen Slabs are treated with a water repellent additive, and are designed for use in ventilated façade systems where fire safety is a critical consideration.

Traditionally specified for commercial buildings (malls, hospitals, offices and hotels) as well as high rise accommodations for fire safety. Ventilated façade systems can be installed on new buildings or as a non-invasive refurbishment method to improve the aesthetic appearance of older, tired or previously uninsulated façades whilst simultaneously reducing energy consumption and the building's lifetime running cost. They also enhance a building's acoustic performance for a better living, working or, in the case of a hotel, relaxing experience.

BENEFITS



- ✓ Non-combustible A1 Euroclass Reaction to Fire classification
- ✓ Excellent thermal performance, saves energy costs
- ✓ Excellent sound absorption characteristics provide high levels of sound reduction
- ✓ Suitable for use on both masonry substrates and metal frame structures
- ✓ Semi-rigid slabs ensure dimensional stability preventing encroachment into the cavity space
- ✓ Suitable for use on all buildings where fire safety is critical
- ✓ Suitable for use with outer leaf manufactured with glass, ceramic, aluminium or cement boards such as Knauf Aquapanel®
- ✓ Manufactured with ECOSE® Technology for improved handling and installation

CERTIFICATION



SPECIFICATIONS

RAINSCREEN SLABS

Thickness (mm)	 R-value (m²K/W)	 R-value (m²K/W)	Length (mm)	Width (mm)	Product Format	Slabs Per pack	Area per pack (m²)	Packs per pallet	Area per pallet (m²)	Article code
50	1.39	1.45	1200	600	Un-cut	8	5.76	12	69.12	640909
75	2.09	2.0	1200	600	Un-cut	6	4.32	12	51.84	640911
100	2.79	2.0	1200	600	Un-cut	4	2.88	12	34.56	640914

*Other thicknesses available on request up to 210mm

 South African R-values calculated assuming 23°C mean temperature.

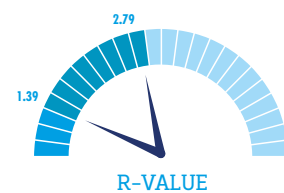
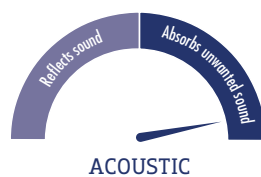
 Euro R-values based on 10°C mean temperature, calculated according to requirements of A90:90 for declaring thermal performance and following the European norm standard including audited factory production control.

TYPICAL APPLICATIONS

Ventilated Façade System
- Masonry Substrate



Ventilated Façade System
- Metal Frame Structure



Fire: Euroclass Reaction to Fire classification | Sustainability: BRE Green Guide rating



PRODUCT DESCRIPTION

EWI (External Wall Insulation) Slabs are manufactured with a water repellent additive. External wall insulation systems (contact façades) are designed for use as a non-invasive method to thermally and acoustically upgrade external façades primarily in residential or low-rise buildings.

Additionally, external wall insulation systems (contact façades) offer a practical solution to upgrade the appearance of older buildings. They are particularly useful on hard to treat external walls and to improve fire safety.



APPLICATION

- External Wall Insulation Systems

BENEFITS

- ✓ Non-combustible A1 Euroclass Reaction to Fire classification
- ✓ Excellent thermal performance
- ✓ Excellent sound absorption characteristics provide high levels of sound reduction
- ✓ Breathable, allowing moisture vapour to pass through the construction
- ✓ Easy to cut with a large bladed knife or serrated saw
- ✓ Manufactured with Krimpact® Technology, which provides high levels of compressive strength
- ✓ Reveal slab is designed for use around window, door and other wall apertures



CERTIFICATION



SPECIFICATIONS


PROJECT RANGE

EWI (EXTERNAL WALL INSULATION) SLABS

Thickness (mm)	 R-value (m²K/W)	 R-value (m²K/W)	Length (mm)	Width (mm)	Product Format	Slabs Per pack	Area per pack (m²)	Slabs per pallet	Area per pallet (m²)	Article code	NRC
EWI Reveal Slab											
30		0.75	1200	600	Un-cut	-	-	120	86.40	2439675	-
EWI Slabs											
90	2.35e	2.50	1200	600	Un-cut	-	-	24	17.28	264382	1.00
100	2.61e	2.75	1200	600	Un-cut	-	-	24	17.28	264383	1.00
110	2.87e	3.05	1200	600	Un-cut	-	-	20	14.40	271267	1.00
120	3.13e	3.30	1200	600	Un-cut	-	-	20	14.40	271217	1.00

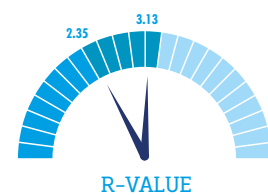
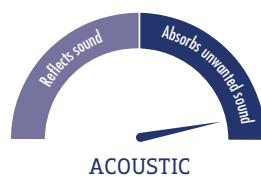
e = estimate

 South African R-values calculated assuming 23°C mean temperature.

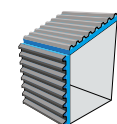
 Euro R-values based on 10°C mean temperature, calculated according to requirements of A90:90 for declaring thermal performance and following the European norm standard including audited factory production control.

TYPICAL APPLICATIONS

Contact Façade Systems



Fire: Euroclass Reaction to Fire classification | Sustainability: BRE Green Guide rating



APPLICATION

- Built-Up Metal Roofs
 - standing seam systems
 - on-site construction with spacers
- Built-Up Metal Walls
 - rail & bracket system
 - tray system

PRODUCT DESCRIPTION

FactoryClad Rolls are designed for use in built-up metal roofs and walls to provide a unique combination of thermal, fire and acoustic performance. They are particularly suitable for use in twin skin profiled metal cladding systems and standing seam roofs.

FactoryClad Rolls are flexible, lightweight and resilient with a high tear strength.

BENEFITS

- ✓ Rolls are manufactured to 1200mm widths to suit commonly used rail and bracket systems
- ✓ Advanced compression technology provides more per pack for less storage, handling and transportation
- ✓ Excellent thermal performance
- ✓ Non-combustible A1 Euroclass Reaction to Fire classification
- ✓ Excellent sound absorption characteristics
- ✓ Manufactured with ECOSE® Technology for improved handling and installation



CERTIFICATION



SPECIFICATIONS

PROJECT RANGE

FACTORYCLAD ROLLS

Thickness (mm)	 R-value (m²K/W)	 R-value (m²K/W)	Length (m)	Width (mm)	Product Format	Area per pack (m²)	Packs per pallet	Area per pallet (m²)	Article code
80	1.87	2.00	14.10	1200	Un-cut	16.92	24	406.08	2401997
100	2.39	2.50	11.25	1200	Un-cut	13.50	24	324.00	2401998
120	2.85	3.00	9.40	1200	Un-cut	11.28	24	270.72	2401999



South African R-values calculated assuming 23°C mean temperature.



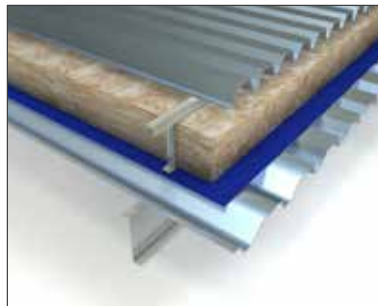
Euro R-values based on 10°C mean temperature, calculated according to requirements of A90:90 for declaring thermal performance and following the European norm standard including audited factory production control.

TYPICAL APPLICATIONS

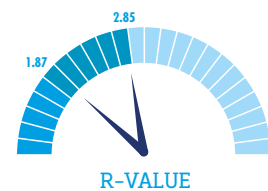
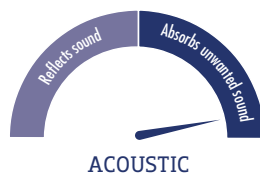
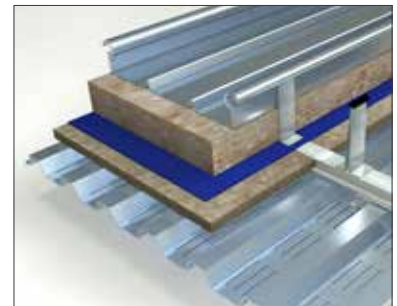
Built-Up Metal Wall



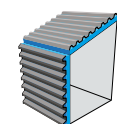
Built-Up Metal Roof



Built-Up Metal Standing Seam Roof



Fire: Euroclass Reaction to Fire classification | Sustainability: BRE Green Guide rating



APPLICATION

- Light Steel Frame Walls

PRODUCT DESCRIPTION

SteelTherm Rolls are designed for use in light steel frame walls between steel C-section studwork. Rolls are ready cut to 2 x 600mm widths to suit standard stud centres, saving the need for measuring and cutting on site.

BENEFITS

- ✓ Friction-fitting between studs prevents heat loss
- ✓ Rolls are ready-cut in to 600mm widths for fast installation and reduced wastage
- ✓ Excellent thermal performance
- ✓ Non-combustible A1 Euroclass Reaction to Fire classification
- ✓ Excellent sound absorption characteristics
- ✓ Manufactured with ECOSE® Technology for improved handling and installation



CERTIFICATION



SPECIFICATIONS

PROJECT RANGE

STEELTHERM ROLLS

Thickness (mm)	 R-value (m ² K/W)	 R-value (m ² K/W)	Length (m)	Width (mm)	Product Format	Area per pack (m ²)	Packs per pallet	Area per pallet (m ²)	Article code
100	2.38	2.50	8.65	2x600	Ready-cut	10.38	24	249.12	461447



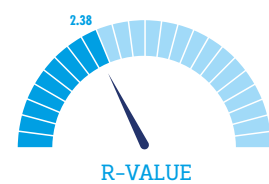
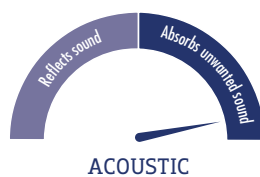
South African R-values calculated assuming 23°C mean temperature.



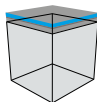
Euro R-values based on 10°C mean temperature, calculated according to requirements of A90:90 for declaring thermal performance and following the European norm standard including audited factory production control.

TYPICAL APPLICATIONS

Light Steel Frame Walls



Fire: Euroclass Reaction to Fire classification | Sustainability: BRE Green Guide rating



APPLICATION

- Flat Roofs
 - Concrete
 - Metal decking
 - Timber decking

PRODUCT DESCRIPTION

Krimpact® Flat Roof Slabs are manufactured with high compressive strength, suitable for use on all types of roof deck, and can be overlaid with a single ply membrane, which is mechanically fixed, or with a waterproof membrane consisting of either a fully bonded built-up bitumen roofing system, or mastic asphalt. In addition to improving fire safety, Krimpact Flat Roof slab reduces energy consumption and therefore costs.

BENEFITS

- ✓ Krimpact® Technology provides high levels of compressive strength
- ✓ Non-combustible A1 Euroclass Reaction to Fire classification
- ✓ For use on roofs of up to 10° pitch
- ✓ Excellent thermal performance
- ✓ Excellent sound absorption characteristics provide high levels of sound reduction
- ✓ Compatible with a wide range of single ply membranes



CERTIFICATION



SPECIFICATIONS

PROJECT RANGE

KRIMPACT FLAT ROOF SLABS

Thickness (mm)	 R-value (m²K/W)	 R-value (m²K/W)	Length (mm)	Width (mm)	Product Format	Slabs Per pack	Area per pack (m²)	Slabs per pallet	Area per pallet (m²)	Article code	NRC
100	2.45e	2.60	1200	1000	Un-cut	–	–	24	26.40	606052	1.00
145	3.56e	3.80	1200	1000	Un-cut	–	–	16	18.00	606057	1.00
180	4.42e	4.70	1200	1000	Un-cut	–	–	14	14.40	606059	1.00

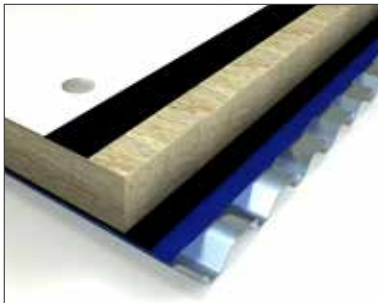
e = estimate

 South African R-values calculated assuming 23°C mean temperature.

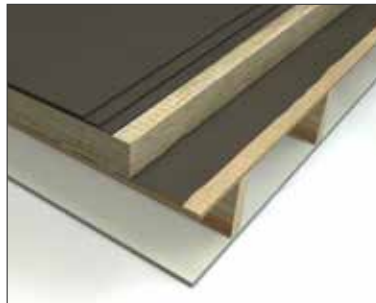
 Euro R-values based on 10°C mean temperature, calculated according to requirements of A90:90 for declaring thermal performance and following the European norm standard including audited factory production control.

TYPICAL APPLICATIONS

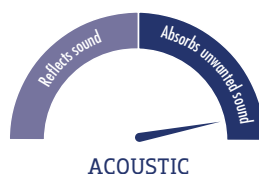
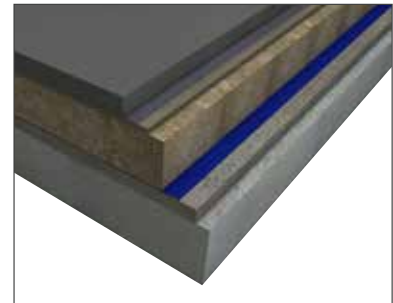
Flat Roofs - Metal



Flat Roofs - Timber



Flat Roofs - Concrete



Fire: Euroclass Reaction to Fire classification | Sustainability: BRE Green Guide rating



APPLICATION

- Thermal Protection – Ductwork
- Acoustic Protection – Ductwork

PRODUCT DESCRIPTION

Duct Rolls (Thermo-teK RL Pro Alu) are strong, flexible rolls with a reinforced aluminium foil facing to one side. Rolls are designed for the thermal and acoustic insulation for all shapes of ductwork with a maximum service temperature of 230°C.

BENEFITS



- ✓ Excellent sound absorption characteristics
- ✓ Excellent thermal performance
- ✓ Designed for ductwork in heating, ventilation and air conditioning systems
- ✓ Resilient strength and flexibility allows installation on all shapes of ductwork
- ✓ A2 Euroclass Reaction to Fire classification
- ✓ Manufactured with ECOSE® Technology for improved handling and installation


CERTIFICATION




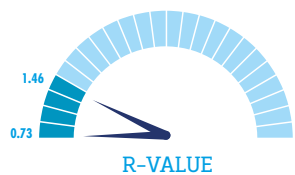
SPECIFICATIONS

DUCT ROLLS (THERMO-TEK RL PRO ALU)

Thickness (mm)	 R-value (m²K/W)	 R-value (m²K/W)	Length (m)	Width (mm)	Product Format	Area per pack (m²)	Packs per pallet	Area per pallet (m²)	Article code
25	0.73	0.75	18.00	1200	Un-cut	21.60	18	388.80	2400374
40	1.17	1.20	12.00	1200	Un-cut	14.40	18	259.20	2400373
50	1.46	1.50	9.00	1200	Un-cut	10.80	18	194.40	2400372

 South African R-values calculated assuming 23°C mean temperature.

 Euro R-values based on 10°C mean temperature, calculated according to requirements of X90:90 for declaring thermal performance and following the European norm standard including audited factory production control.



Fire: Euroclass Reaction to Fire classification | Sustainability: BRE Green Guide rating
‘Glass Mineral Wool content only’



PRODUCT DESCRIPTION

Duct Slabs (Thermo-teK BD 060 Alu) with a reinforced aluminium foil facing to one side are suitable for the thermal and acoustic insulation of square and rectangular ductwork and equipment with a maximum service temperature of 250°C. Duct Slabs are usually installed using simple pin fixing systems.

BENEFITS

- ✓ Designed for square and rectangular ductwork in heating, ventilation and air conditioning systems
- ✓ Excellent thermal performance
- ✓ Non-combustible A1 Euroclass Reaction to Fire classification
- ✓ Manufactured with ECOSE® Technology for improved handling and installation



APPLICATION

- Thermal Protection – Ductwork
- Acoustic Protection – Ductwork



CERTIFICATION



SPECIFICATIONS

PROJECT RANGE

DUCT SLABS (THERMO-TEK BD 060 ALU)

Thickness (mm)	 R-value (m²K/W)	 R-value (m²K/W)	Length (mm)	Width (mm)	Product Format	Slabs Per pack	Area per pack (m²)	Packs per pallet	Area per pallet (m²)	Article code
40	1.20	1.20	1200	600	Un-cut	8	5.76	14	80.64	2439731
50	1.50	1.50	1200	600	Un-cut	8	5.76	12	69.12	2439732



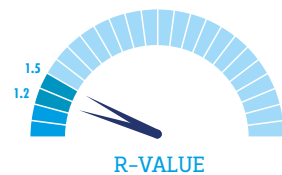
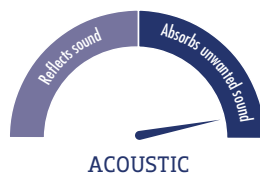
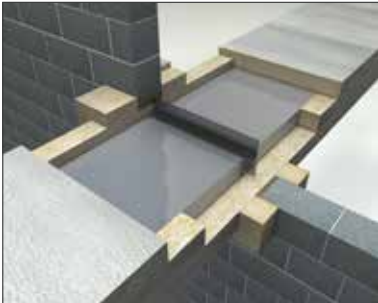
South African R-values calculated assuming 23°C mean temperature.



Euro R-values based on 10°C mean temperature, calculated according to requirements of A90-90 for declaring thermal performance and following the European norm standard including audited factory production control.

TYPICAL APPLICATIONS

Ducts



Fire: Euroclass Reaction to Fire classification | Sustainability: BRE Green Guide rating



PRODUCT DESCRIPTION

Fire Duct Slabs (Fire-teK BD 917) are high performance slabs with a reinforced aluminium foil facing to one side, and tested for use in the fire protection of HVAC steel ductwork for up to 120 minutes.

Fire Duct Slabs also provide thermal and acoustic performance and are fixed using welded pin systems.

They can be installed horizontally or vertically on steel ductwork passing through compartmentation walls or floors. The aluminium facing acts as a vapour control layer.

BENEFITS

- ✓ Non-combustible with a melting point in excess of 1000°C
- ✓ Provides up to 120 minutes fire protection of steel ductwork
- ✓ Suitable for applications above clean rooms, within air plenums, for kitchen extractors or aesthetic purposes
- ✓ Applied in a single thickness removing the need for multi-layer applications



APPLICATION

- Fire Protection – Ductwork

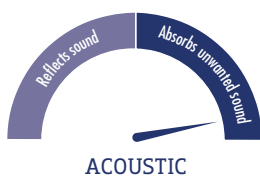
CERTIFICATION



SPECIFICATIONS

PROJECT RANGE

FIRE DUCT SLABS (FIRE-TEK BD 917)								
Thickness (mm)	Length (mm)	Width (mm)	Product Format	Slabs per pack	Area per pack (m²)	Packs per pallet	Area per pallet (m²)	Article code
45	1200	600	Un-cut	4	2.88	12	34.56	2361481
90	1200	600	Un-cut	2	1.44	12	17.28	2361482



Sustainability: BRE Green Guide rating



PRODUCT DESCRIPTION

Fire Barrier Wired Mattresses (Fire-teK WM 910) are manufactured with a galvanised wire mesh stitched to one side and have an optional foil facing, for use in the compartmentation of large and small cavities for up to 60 minutes fire protection. They are installed vertically.

They can be installed within the suspended ceiling void above partitions up to the concrete soffit to prevent the spread of flames and smoke in the event of a fire, to improve acoustics by preventing noise transmission to adjacent rooms and to compartmentalise building voids.



BENEFITS

- ✓ Non-combustible with a melting point in excess of 1000°C
- ✓ Provides up to 60 minutes fire resistance
- ✓ Prevents smoke and flame from by-passing fire-resisting walls and partitions
- ✓ Simple, clean and quick to install
- ✓ Versatile, flexible and adaptable system



APPLICATION

- Fire Protection
 - Cavities
 - Compartmentation

CERTIFICATION



SPECIFICATIONS

FIRE BARRIER WIRED MATTRESSES (FIRE-TEK WM 910)

Thickness (mm)	Length (mm)	Width (mm)	Product Format	Area per pack (m ²)	Packs per pallet	Area per pallet (m ²)	Article code
50	4000	1000	Un-cut	4	21.00	84.00	522253

*Other Wired Mattress products are available for technical applications such as insulating large and irregular shaped vessels - see technical solutions website www.ki-ts.com

TYPICAL APPLICATIONS

Fire Protection



TECHNICAL SOLUTIONS REINVENTED





A RANGE OF PRODUCTS
DESIGNED FOR PASSIVE
FIRE PROTECTION

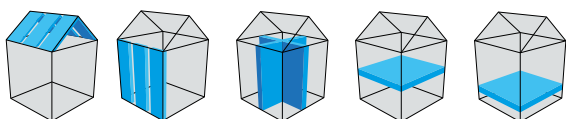


A RANGE OF PRODUCTS
DESIGNED FOR MARINE
INSULATION





with **ECOSE** TECHNOLOGY



APPLICATION

- Pitched Roofs – Rafter Level
- Timber Frame Walls
- Light Steel Frame Walls
- Partition Walls
- Intermediate Timber Floors
- Suspended Timber Ground Floors
- Fabrication

PRODUCT DESCRIPTION

Building Slabs RS45 are designed for use in multiple thermal, acoustic and fire applications in both residential and non-residential buildings.

Alternative densities and thicknesses are available on request.

BENEFITS



- ✓ Multi-purpose product range which can be used to insulate a wide range of applications on site - good all-rounder
- ✓ Non-combustible A1 Euroclass Reaction to Fire classification
- ✓ Excellent thermal performance
- ✓ Excellent sound absorption characteristics provide high levels of sound reduction
- ✓ Easy to cut with a large bladed knife or serrated saw
- ✓ Available up to 270mm thickness

CERTIFICATION



SPECIFICATIONS

BUILDING SLABS RS45

Thickness (mm)	 R-value (m²K/W)	 R-value (m²K/W)	Length (mm)	Width (mm)	Product Format	Slabs Per pack	Area per pack (m²)	Packs per pallet	Area per pallet (m²)	Article code	NRC
25	0.70	0.70	1200	600	Un-cut	20	14.40	12	172.80	2411325	0.61e
30	0.85	0.85	1200	600	Un-cut	16	11.52	12	138.24	2411424	
40	1.10	1.10	1200	600	Un-cut	12	8.64	12	103.68	2411326	
50	1.40	1.40	1200	600	Un-cut	10	7.20	12	86.40	2411327	0.96
60	1.70	1.70	1200	600	Un-cut	8	5.76	12	69.12	2411425	
75	2.09	2.10	1200	600	Un-cut	6	4.32	12	51.84	2411328	1.00e
100	2.79	2.85	1200	600	Un-cut	5	3.60	12	43.20	2411339	1.16
150	4.17	4.25	1200	600	Un-cut	3	2.16	12	25.92	531096	

e = estimate



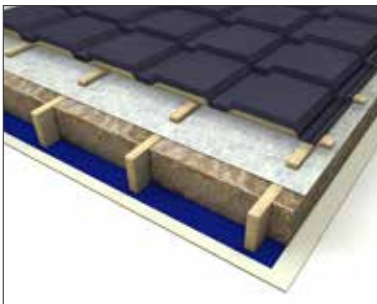
South African R-values calculated assuming 23°C mean temperature.



Euro R-values based on 10°C mean temperature, calculated according to requirements of A90:90 for declaring thermal performance and following the European norm standard including audited factory production control.

TYPICAL APPLICATIONS

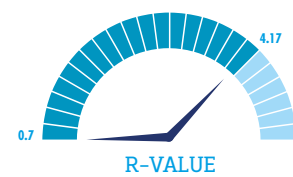
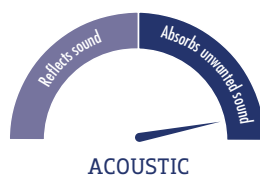
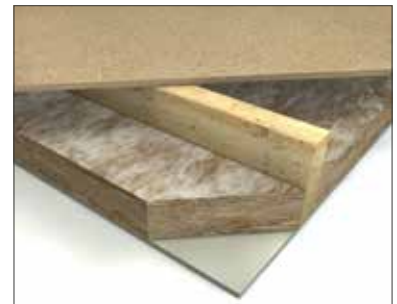
Pitched Roofs – Rafter Level



Fire Rated Partition Systems



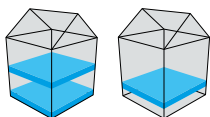
Intermediate Timber Floors



Fire: Euroclass Reaction to Fire classification | Sustainability: BRE Green Guide rating



with **ECOSE** TECHNOLOGY



APPLICATION

- Separating Floors – Concrete
- Internal Floors

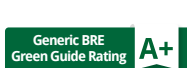
PRODUCT DESCRIPTION

Acoustic Floor Slab Plus is designed for use in various floating floor treatments to concrete intermediate and separating floors to provide high levels of impact sound reduction and reduce general noise transmission between floors. They are ideal for hotels, hospitals, and office developments particularly if the floor finish will be hard such as wood, ceramic or polished concrete.

BENEFITS

- ✓ Excellent compressive strength
- ✓ Suitable for use in reducing impact sound of separating and internal floors
- ✓ Excellent sound absorption characteristics provide high levels of sound reduction
- ✓ Non-combustible A1 Euroclass Reaction to Fire classification
- ✓ Easy to install

CERTIFICATION



SPECIFICATIONS

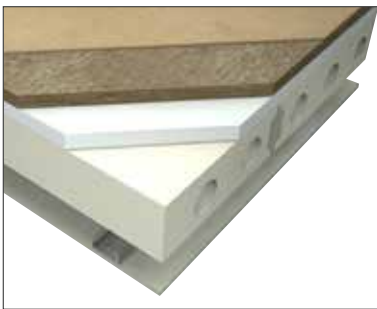
ACOUSTIC FLOOR SLAB PLUS

Thickness (mm)	Length (mm)	Width (mm)	Product Format	Slabs per pack	Area per pack (m ²)	Packs per pallet	Area per pallet (m ²)	Article code	NRC
25	1000	600	Un-cut	8	4.80	24	115.20	606069	0.75e
50	1000	600	Un-cut	4	2.40	24	57.60	606068	0.89

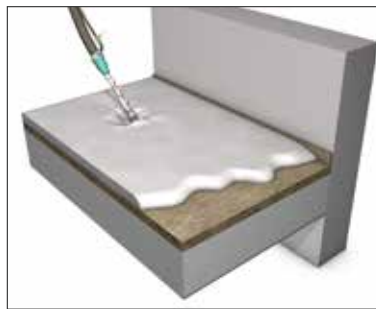
e = estimate

TYPICAL APPLICATIONS

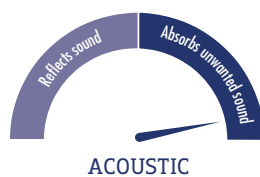
Separating or Intermediate
Floor – Concrete



Separating or Intermediate
Floor – Over Screed



FIRE



ACOUSTIC



SUSTAINABILITY

Fire: Euroclass Reaction to Fire classification | Sustainability: BRE Green Guide rating

ORDER QUANTITIES

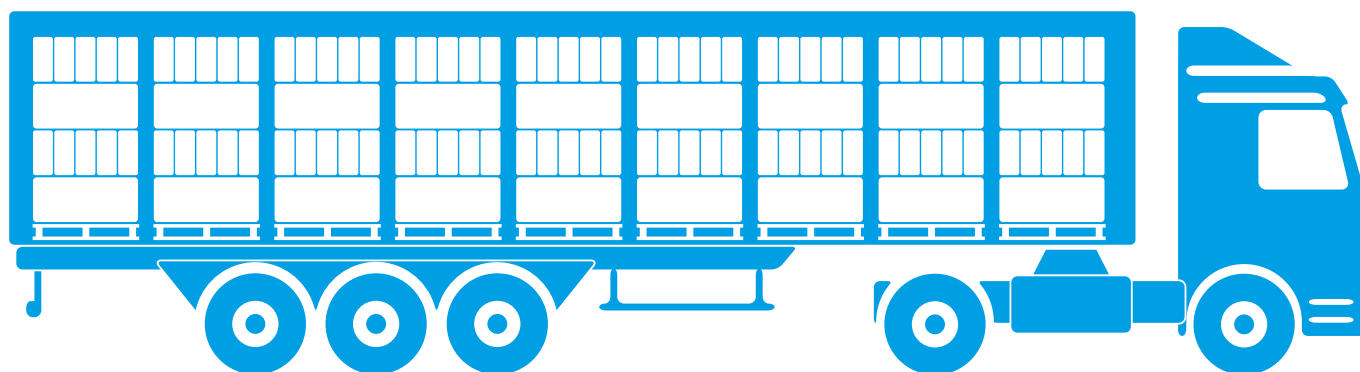
- ✓ Products are palletised*
- ✓ Minimum order quantity per SKU (Stock Keeping Unit - i.e. specific product dimension) is a single pallet as part of a full load
- ✓ A full load comprises any mix of 18 pallets of products that appear in this sales and specification guide
- ✓ Made-to-order products are available subject to lead time and minimum order quantities.

* Glass Mineral Wool products are always palletised, some Rock Mineral Wool products may not be palletised

** Customs clearance may occasionally extend the lead time for which Knauf Insulation is not able to accept responsibility

LOGISTICS

- ✓ Deliveries are made in 40' High Cube containers, ie., 18 pallets in total or equivalent in loose packs* on some Rock products
- ✓ Terms are based on full load deliveries – see your 'Customer Terms Confirmation' (CTC) document
- ✓ Lead time for standard products is typically 25 days**
 - ✓ following credit clearance / receipt of approved letter of credit
 - ✓ from acknowledgement of receipt of order
 - ✓ some destinations may have a longer lead time – please enquire
- ✓ Prices are offered on the basis of FOB incoterms (Free on Board) with the option of sea freight as a separate chargeable service – see your CTC for clarification. Other delivery options may be available on request



DEALER LOGISTICS PACKAGE, CUSTOMER SERVICES & TECHNICAL SUPPORT

CUSTOMER SERVICE

- ✓ Orders can be placed by sending your purchase order to export.sales@knaufinsulation.com
- ✓ Purchase orders should include the following information:
 - ✓ unique purchase order number
 - ✓ article codes (Please see the product guide)
 - ✓ product names (Please see the product guide)
 - ✓ price (Please see your CTC)
 - ✓ quantities required per pallets for Glass Mineral Wool products or packs for Rock Mineral Wool products*
 - ✓ port of delivery
 - ✓ contact name and telephone number
- ✓ Customer Services are available between 08.30-17.00 (GMT) Monday-Friday to assist with orders, delivery queries or pro-forma invoices.

Telephone: **+44 1744 766 767**

Email: **export.sales@knaufinsulation.com**

TECHNICAL SUPPORT

Knauf Insulation offers advice on all products and solutions through the Technical Support Team who provide free, expert advice for stockists, dealers, architects and professional end-users in the construction industry.

The Technical Support Team is available 08.30-17.00 (GMT) Monday to Friday. Emails will usually be answered within 24 hours.

Telephone: **+44 1744 766 666**

Email: **technical.uk@knaufinsulation.com**

Web: **www.knauf-insulation.co.za**

WE PROVIDE EXPERT ADVICE AND SUPPORT TO OUR CUSTOMERS



At Knauf Insulation, we aim to support our customers to ensure our products are specified, procured and installed with the highest quality standards. Our dedicated Sales, Technical, Specification and International Customer Service team are here to provide the best advice to our customers and specifiers.

Technical Support Team

We offer unparalleled expert advice on all our products and solutions through our in-house Technical Support Team.

With over 40 years insulation experience, our UK Technical Support Team provide free, expert advice for builders merchants, distributors, stockists, architects and any other customers involved in the construction industry and the wider specification community.

Our UK technical support help desk is staffed from 8.00am to 5.00pm (GMT) Monday to Thursday and 8.00am - 4.00pm (GMT) Friday by experienced insulation.

As well as technical advice, our UK Technical Support Team can provide U-value calculations, NBS clauses and 3D Heat Loss/U-value Calculations.

Alternatively, you can email technical.uk@knaufinsulation.com

We will normally respond to emails within 24 hours.

Marketing Support

We provide a fast turnaround on sample and literature requests, eliminating delays with planning and client approval of material, so that projects begin on time.

All our collaterals are also available on our website at www.knauf-insulation.co.za/downloads

Specifications Documentations and Tools

Building Information Modelling (BIM)

Since the early days, we have been leading the way when it comes to BIM. Our BIM experts across Europe and the US worked on several BIM standards across Northern Europe especially where BIM has now established a European Standard. We were the first insulation manufacturer in the world to make our product data open and available to all our customers in all BIM formats (IFC, COBie etc.). Our BIM objects are not only easily accessible and user-friendly; they are also packed with reliable, comprehensive data, such as DOP, EPDs and CE marking. They are available on our website at www.knaufinsulation.co.uk/technical-support/building-information-modelling-bim

Insulation CAD Details and NBS Specification Clauses

All our CAD details are available on our website in .DWG format and fully compatible with AutoCAD. You will need a version of AutoCAD or a .DWG viewer installed on your computer to view or use these files. They are available on our website at www.knaufinsulation.co.uk/technical-support/nbs-cad

Other certifications and accreditations

We are recognised in the UK by numerous certification and accreditation.

BBA certifications

The British Board of Agreement offers third party certification for the use of building products and systems in critical applications. We have a number of products certified, and are always seeking to increase our portfolio - www.knaufinsulation.co.uk/downloads/bba-certificates

Continuing Professional Development (CPD)

Our range of CPDs provide an essential service to architects and specifiers, helping them keep up to date with innovations in a rapidly changing and evermore challenging environment - www.knaufinsulation.co.uk/technical-support/cpd

CONTACTS

Customer Service (sales)

+44 1744 766 767

export.sales@knaufinsulation.com

Technical Support Team

+44 1744 766 666

technical.uk@knaufinsulation.com



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For more information please visit www.knauf-insulation.co.za

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challenge.
create.
care.