KNAUF INSULATION

INSULATION SOLUTIONS GUIDE - UK & IRELAND

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

CLICK HERE TO START

Interactive document

Thermal Fire Acoustic Energy savings Sustainable

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How to use this guide

This guide has been designed to allow easier access to all the insulation solutions and the products in a new digital format.

The menu system on the right, allows access to all the common areas with this guide.

There are many items within the guide that are buttons that link to other content within the document.

Solution group | Solution build-up | Recommended products

Using this system of links allows you to easily navigate from a solution build-up to the recommended products for that application. Likewise, if you are viewing a product you should be able to see all the applications that the product can be used in, and link back to that solution build-up.

All the hyperlinks within the document are active and will open up in your default web browser when clicked.

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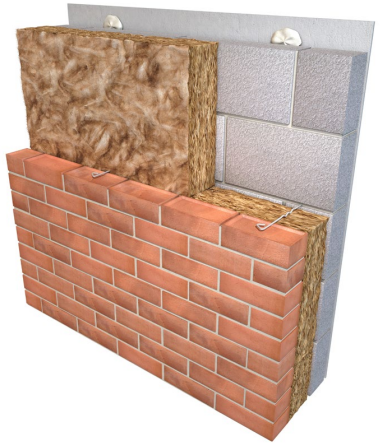
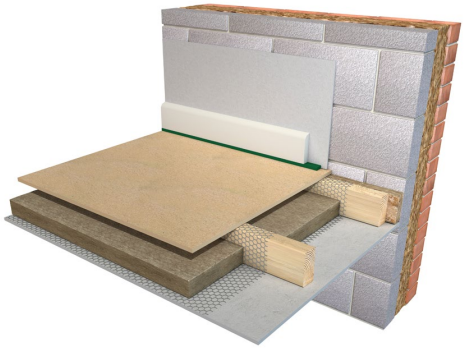
SOLUTION FINDER

Roofs



Walls

Floors



Fire protection

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PRODUCT FINDER

ROOFS

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FLOORS

FIRE PROTECTION

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Product Finder - Roofs

Pitched roof - ceiling level

Loft Rolls

OmniFit® Roll 40

Flat roof - cold roof

Rocksilk® Building Slabs

OmniFit® Slab 35

Pitched roof - rafter level

Rafter Roll 32

OmniFit® Roll 34

OmniFit® Slab 35

FrameTherm® Rolls

FrameTherm® Slab 32

Rocksilk® Flexible Slab

Rocksilk® Building Slabs

Flat roof - warm roof

Rocksilk® Flat Roof Slabs

Built-up metal roof

FactoryClad Rolls

Glass mineral wool products | Recommended cured | Recommended blown | Other suitable

Rock mineral wool products | Recommended | Other suitable

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Product Finder - Walls

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External masonry cavity walls - Fully Filled

- DriTherm® Cavity Slabs
- Supafil® 34
- Supafil® 40
- Supafil® CarbonPlus

External masonry cavity walls - Partially filled

- Rocksilk® RainScreen Slabs
- Rocksilk® RainScreen FireStop Slab

Timber frame walls

- FrameTherm® Rolls
- Supafil® Frame
- Rocksilk® RainScreen Slabs
- FrameTherm® Slab 32
- OmniFit® Slab 35
- Rocksilk® Flexible Slab
- Rocksilk® Building Slabs

Rainscreen façade

- Rocksilk® RainScreen Slabs
- OmniFit® Slab 32
- OmniFit® Slab 35
- OmniFit® Roll 34
- Rocksilk® Flexible Slab
- Rocksilk® Building Slabs

Cavity barriers

- Rocksilk® RainScreen FFCB
- Rocksilk® RainScreen OSCBs
- Rocksilk® RainScreen FireStop Slab

Frame construction with masonry outer

- Rocksilk® RainScreen Slabs
- OmniFit® Slab 35

External wall insulation

- Rocksilk® EWI Slabs

Built-up metal wall

- FactoryClad Rolls

Separating party wall

- Masonry Party Wall Slabs
- Timber Frame Party Wall Slabs
- Supafil® Party Wall

Internal walls

- Acoustic Roll
- OmniFit® Slab 35
- Rocksilk® Flexible Slab
- Rocksilk® Building Slabs
- Heraklith® Tektalan A2 SmartTec
- Heraklith® A2 Decorative Panel

Glass mineral wool products	Recommended cured	Recommended blown	Other suitable		
Rock mineral wool products	Recommended	Other suitable	Wood wool products	Recommended	

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Product Finder - Floors

Suspended timber ground floors

- **OmniFit® Roll 40**
- **OmniFit® Slab 35**
- **Rocksilk® Flexible Slab**
- OmniFit® Roll 34
- Rocksilk® Building Slabs

Separating timber floors

- **Acoustic Roll**
- **Rocksilk® Acoustic Floor Slabs**
- **OmniFit® Roll 40**
- **OmniFit® Slab 35**
- Rocksilk® Building Slabs

Soffit floor

- **Rocksilk® Soffit Linerboards**
- **Heraklith® Tektalan A2 SmartTec**
- **Heraklith® A2 Decorative Panel**

Internal floors

- **Acoustic Roll**
- **OmniFit® Roll 40**
- **OmniFit® Slab 35**
- Rocksilk® Building Slabs

Glass mineral wool products — Recommended cured | Recommended blown | Other suitable

Rock mineral wool products — Recommended | Other suitable

Wood wool products — Recommended

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Product Finder - Fire Protection

Loft conversion floor

Rocksilk® Flexible Slab

Cavity barriers

Rocksilk® RainScreen FFCB

Rocksilk® RainScreen OSCBs

Rocksilk® RainScreen FireStop Slab

Rock mineral wool products | Recommended | Other suitable

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Knauf Insulation & The Knauf Group

We are part of the Knauf Group, a family-owned multi-national manufacturer of building materials and construction systems.

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KNAUF INSULATION

July 2024

Insulation products to suit all your needs

We are committed to helping our customers meet the increasing demand for energy efficiency and sustainability in all buildings.

View our range of case studies on our website:
knaufinsulation.co.uk/media/case-studies

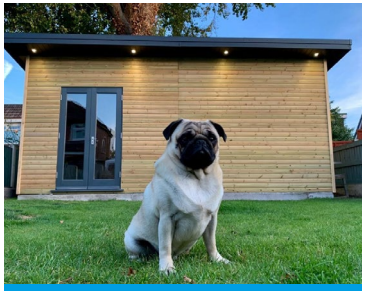
As the only UK manufacturer of both glass and rock mineral wool, we are uniquely placed to provide the best insulation solution for each application.

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 industrial applications and fire protection, and bespoke applications.

We offer a wide range of non-combustible insulation solutions for all buildings.

Our extensive product range is designed to provide solutions for all types of roofs, walls and floors.

Commercial



Specialist

Housing

High-rise

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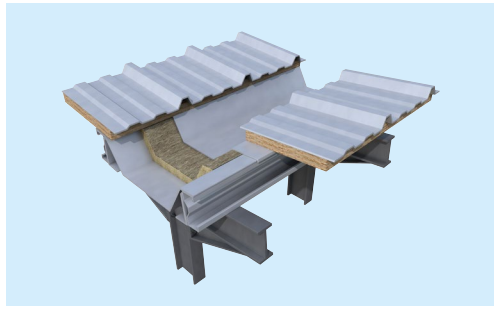
Insulation products to suit all your needs

OFFSITE

Our offsite solutions include a wide variety of products suitable for both panelised and volumetric construction.

Understanding that every system is tailor-made, we can work with you to recommend the best insulation solution for your system.



BESPOKE APPLICATIONS

Our UK Special Products team is on hand to help develop bespoke products or systems that will add value to your business and help you stand out from the competition.

By having a fully customisable product specification, we want to make our products work as best they can for you.

WOOD WOOL

Our cement bonded Heraklith® wood wool panels are made from wood shavings to which water, and a mix of cement and lime is added. They're ideally suited for improving the acoustics of a space, but they can also be used for thermal performance and fire safety when combined with a rock mineral wool core.

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FOR A BETTER WORLD

A vision of sustainability - low carbon insulation for low carbon buildings

At Knauf Insulation, sustainability is at the heart of everything we do.

As a market leader of insulation solutions, helping to reduce the environmental impact of buildings, sustainability and quality drive everything we do.

Our sustainability journey started over 15 years ago. We're proud of how we've changed our business, our products and helped our colleagues, communities, and customers by reducing our impact on the environment.

We are supporting our customers as they navigate an ever-changing landscape of demanding green building requirements and increasingly stringent environmental regulations. We have the experience and expertise to support our customers to achieve their sustainable ambitions.

Today, Knauf Insulation's focus is two-fold: "Low carbon insulation" for "Low carbon buildings".

1. The manufacture of our products emits carbon.
   Whilst our mineral wool products already have low embodied carbon compared to other mainstream insulants, we are fully committed to reduce their embodied carbon further and decarbonize our operations fully by 2045.
2. Our insulation plays a major part in the operational carbon of buildings and in achieving Net Zero. On average, it takes 95 days for our insulation solutions to save the carbon emitted during their manufacture.

In fact, based on Knauf Insulation's 2022 sales, the total benefit across Europe equates to 3.6 million tonnes of operational carbon saved annually.

However, achieving Net Zero requires buildings that perform in the real world. Our second focus is to bring high quality, high performance products to the market, combined with supporting content and tools to enable real performance and quality of installation.

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FOR A BETTER WORLD

Timeline

We need to build on our successes. We must do more for our people and our environment and that's why we launched our 'FOR A BETTER WORLD' sustainability strategy in 2020. Most recently, Knauf has set new ambitious targets for the Group when it comes to Carbon reduction and Circular Economy, to which we will align from 2025.

Our sustainability journey – Past and Future.

We reduced our waste to landfill by 50%

We achieved -20% CO_2 emissions and -20% energy use

We aligned with the UN Sustainable Development Goals

-50% Scope 1&2

-30% Scope 3

NET ZERO

PUT PEOPLE FIRST

We will ensure our communities and people thrive, safely.

ACHIEVE ZERO CARBON

We will minimise the impact of our products, plants and offices.

DELIVER A CIRCULAR ECONOMY

We will do more with less.

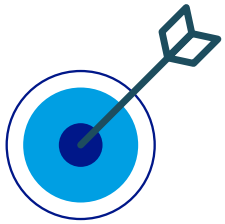
CREATE BETTER BUILDINGS

We will help make buildings fit for the future.

KNAUF INSULATION

FOR A BETTER WORLD

From 2025, we will align our targets with the new ambitions of the Knauf Group.



CARBON

NET ZERO

CO_2 EMISSIONS (SCOPE 1,2 & 3)

BY 2045

SCOPE 1
Direct emissions

SCOPE 2
Indirect emission
(Owned)

SCOPE 3
Indirect emission
(Not owned)

-50%
CO_2 EMISSIONS
(SCOPE 1&2)

-30%
OF CO_2 EMISSIONS
(SCOPE 3)

BY 2032

CIRCULAR ECONOMY

DISPOSAL

0
WASTE TO DISPOSAL
AS OF 2032

WATER

-2%
WATER WITHDRAWALS
YEARLY

CHEMICALS

0
PRODUCTS
CONTAINING RED
LISTED CHEMICALS

AS OF 2032

CIRCULAR ECONOMY

BE A LEADING ACTOR
OF THE CIRCULAR
ECONOMY

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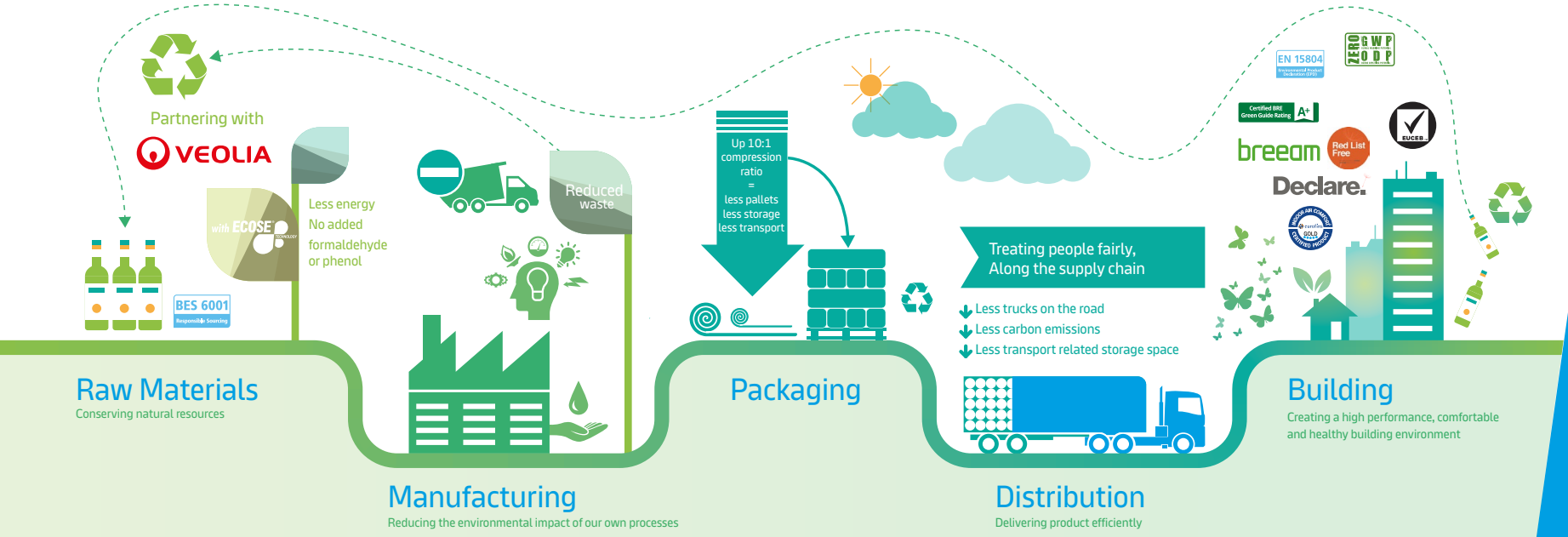
Minimising environmental impacts



Our glass mineral wool contains up to 80% recycled content.
And our rock mineral wool is manufactured using around 35% recycled content (recycled material mostly from the steel industry along with customer production waste). By maximising the amount of recycled content in the manufacture of our products, we minimise our need for virgin raw materials.

Our unique bio-based binder, ECOSE® Technology contains no added formaldehyde or phenol. It is made from natural raw materials that are rapidly renewable and is less energy-intensive to manufacture than traditional binders, so it is more environmentally friendly.

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

Our cured glass mineral wool and blowing wool products
are registered in the BRE's UK-specific Certified Environmental Profiles scheme. The majority of our products have a generic Green Guide rating of A+.

Our entire glass mineral wool range, and our unfaced rock mineral wool products made with ECOSE® Technology have been awarded Declare 'Red List Free'. This certifies that these products don't contain any harmful chemicals on the red list.

The electricity we use for the manufacture of our glass mineral wool comes from 100% renewable sources meaning that our CO_2 emissions associated to the electricity consumption in our glass mineral wool plants is equal to ZERO.

Our commitment to fair and safe working practices in our own facilities is embedded in our code of conduct, and reflected in the ISO 45001 certification covering all our production sites.

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

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

Our products contain very low levels of VOCs 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 our Environmental Product Declarations, in accordance to ISO 14025, ISO 21930,EN 15804 +A2.

Packaging 'For A Better World'
In 2021 we further improved our industry-leading compression packaging, and have been able to further increase the amount of material per pack or pallet for our glass mineral wool products.

This means even fewer trucks on the road with less storage and handling for our customers.
In addition, we have re-designed our packaging so they're easier to identify, while reducing the amount of ink by up to 50%.

We've also introduced a new packaging film with a minimum of 30% recycled plastic content.
This means the plastic we do use is even easier to recycle and reduces our carbon footprint.

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Minimising the use of raw materials in partnership with Veolia

Our glass mineral wool is made with up to 80% recycled content (including glass from windows, bottles and jars). All of the glass cullet used in our manufacturing plant in St.Helens, Merseyside, comes from Veolia's glass recycling facility which is located next to our plant.

By maximising the amount of recycled glass cullet in the manufacture of our products, we minimise our need for virgin raw materials.

Our partnership with Veolia brings many benefits:

- It provides security of supply of this strategic raw material, so we can maintain the recycled content in the manufacture of our glass mineral wool to up to 80%.
- It reduces waste going to landfill; it is estimated that over 60,000 tonnes of used glass bottles and jars are given a new lease of life each year.
- Keeping a high recycled content enables us to minimise the energy required to melt our raw materials.
- The proximity of the facility saves approximately 375,000 miles of road transport every year.

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Certification, accreditations and industry standards

We're proud to have gained a number of certifications and accreditations that provide our customers with the assurance that our products are manufactured to the relevant industry standards, having passed a series of comprehensive and rigorous assessments which ensures they're fit for their intended purpose.

Euroclass reaction to fire classification is a harmonised standard for the classification of reaction to fire of construction products. This classification system, rated from F (the worst) to A1 (non-combustible), is based on the test procedures listed in BS EN 13501-1. All of our glass mineral wool, wood wool boards and rock mineral wool slabs are non-combustible and achieve the best possible Euroclass A1 or A2-s1,d0 reaction to fire classification.

BES 6001 is an independent, third-party assessment and certification scheme for construction product manufacturers. It enables them to prove that their products have been made with constituent materials that have been responsibly sourced. It's recognised by the BREEAM family of certification schemes and the Code for Sustainable Homes, where credits can be awarded for construction products independently certified through BES 6001. Knauf Insulation holds the "VERY GOOD" rating for all 3 UK plants.

BRE Green Guide Rating is part of BREEAM and is a measure of the performance of materials and building systems against specific environmental impacts, ranking from ratings A+ to E. The majority of our products have received BRE Green Guide Ratings, ranking from A+ to C.

ISO 14001 ISO 9001
ISO 45001 ISO 50001

ISO (International Organisation for Standardisation) is an independent, non-governmental, international organisation that develops standards to ensure the quality, safety, and efficiency of products, services, and systems. All of our manufacturing plants are certified to ISO 14001, 45001, 9001 and 50001.

DECLARE 'Red List' Free is a third party accreditation and is similar to a food nutrition label but for building products; it's a straightforward ingredient list and allows product transparency disclosure because it identifies where a product comes from and what it's made of. Our entire glass mineral wool range, and our unfaced rock mineral wool slabs made with ECOSE® Technology have been awarded Declare 'Red List Free', which certifies that these products don't contain any harmful chemical from the red list.

CCPI Verified (Code for Construction Products Information) was initiated by the Construction Product Association (CPA) as a direct response to Dame Judith Hackitt's review of Building Regulations and Fire Safety set up in the wake of the Grenfell Tower tragedy. The CCPI aims to provide assurance that any product information whether it's in a brochure, presentation, website, or social media is clear, accurate and unambiguous, and can be relied upon by specifiers and end users, so they have the necessary facts needed when making design decisions, installing, using and/or maintaining verified products.

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Certification, accreditations and industry standards

CE Marking is where a product falls within the scope of a harmonised European Standard (hEN) (or a designated standard in Great Britain), it shall be placed on the market in compliance with the Construction Products Regulation for the EU and Northern Ireland (and the amending statutory instruments for Great Britain). By placing the CE Mark on the product the manufacturer confirms that this is the case. The label carting the CE Mark provides information about the manufacturer, the assessment of conformity, the date of manufacture, the declared product characteristics and how to access the DOP. All Knauf Insulation products that fall within the scope of a harmonised European Standard are CE Marked.

EUCEB (European Certification Board for Mineral Wool Products) is a non-profit association, whose general purpose is to voluntarily certify that manufactured mineral wool fibres have a chemical composition within the ranges of exonerated reference fibres, which have been tested in accordance with the European protocols and have shown to be in conformity with the Note Q of Regulation (EC) No 1272/2008.

SCSS- Supply Chain Sustainability School is a free learning environment, upskilling those working within, or aspiring to work within, the built environment sector. Members of the SCSS complete a regular assessment and receive a badge based on their sustainability maturity. Knauf Insulation holds a Gold badge. As a SCSS partner since 2023, Knauf Insulation engages in leadership groups to exchange knowledge with sustainability experts and contribute to important projects.

Eurofins Indoor Air Comfort Gold (IAC) product certification is a tool to show compliance of a product with low VOC emissions criteria set out in Europe. Our products manufactured with ECOSE® Technology hold the Eurofins Indoor Air Comfort (Gold) certification, which demonstrates that our products have the best-in-class low levels of VOC emissions. It's also recognised by the BREEAM family of certification schemes.

The British Board of Agrément 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.

FM Approvals (Factory Mutual) is an international leader in third-party testing and certification services. The FM APPROVED mark is recognised and respected worldwide.

Kiwa provides third party Testing, Inspection and Certification (TIC) for products, services, processes and systems globally.

UL Solutions (Underwriters Laboratory) delivers testing, inspection and certification services, together with software products and advisory offerings.

Build on us.

A unique combination of benefits

It's estimated that buildings account for 40% of worldwide carbon emissions, and increasing their energy efficiency continues to be 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.**

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 internal 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 internal temperature by slowing heat transfer by convection, conduction and radiation.

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

Fire Safety

The fire performance of our insulation gives it the 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, our non-combustible mineral wool insulation solutions will not add to its development stages,minimising its overall effect and consequences.

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 varying 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.

Air leaks, uncontrolled condensation and the possibility of mould spores, mildew or microbial organic compounds are all minimised in a well-insulated, airtight building envelope. This 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.

Real performance

Glass and rock mineral wool are easier to install correctly than other insulants, such as rigid boards, because they adapt to any slight imperfections in the substrate and knit together, eliminating any air gaps.

Mineral wool is engineered to adapt to any imperfections, and any settlement/movement over time, so it maintains close contact and preserves thermal performance for the life of the building.

Evidence shows the absence of air gaps is crucial to achieving real performance in the relevant application. Any insulation material that doesn't deliver 'as-built' thermal performance is failing in its primary purpose, and therefore presents an unnecessary risk as the construction industry seeks to close the performance gap.

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Non-combustible insulation solutions

Reaction to fire and fire resistance are two different - but equally important - considerations when it comes to designing a building.

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*, helping specifiers to understand how much 'fuel' will be added to the building as well as how a material will contribute to the development stages of a fire when evacuation is crucial.

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.

All of our glass mineral wool, wood wool boards and rock mineral wool slabs are non-combustible and achieve the best possible Euroclass A1 or A2-s1,d0 reaction to fire classification.

By choosing non-combustible insulation materials, building designers and specifiers can design out the risk of fire within the building fabric from the start.

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 180 minutes to assist the design of safe buildings.

Our 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.

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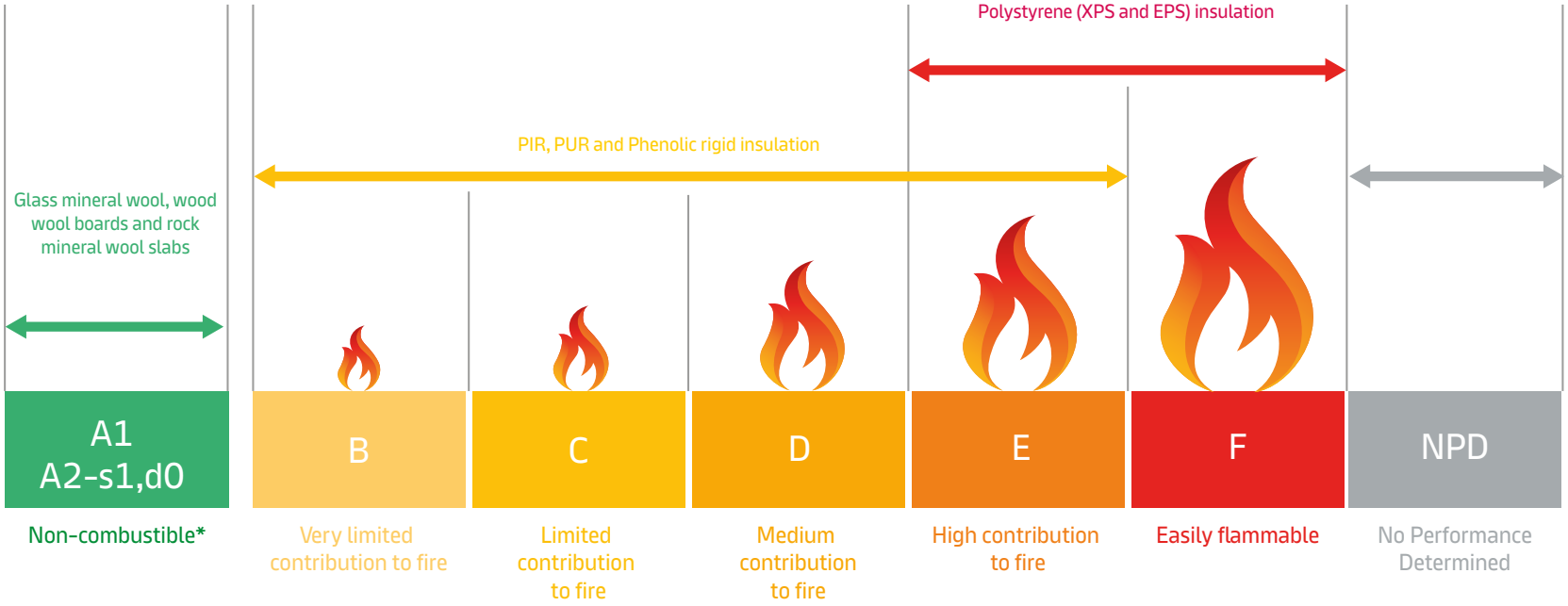
Non-combustible insulation solutions

Typical insulation product Euroclass reaction to fire classifications



*As set out in changes to the Building Regulations 2010 which bans the use of combustible materials, limiting the use of materials to those that achieve A1 or A2-s1,d0 on buildings in scope of the ban (as defined in regulation 7(4))

Notes: Other classifications of smoke and flaming droplets within A2 are classed as limited combustibility (Not shown here as no insulant falls in that category). Flames are illustrative only.

NPD = No Performance Determined. In this instance no performance is declared and information regarding reaction to fire performance is unknown.

Illustration for guidance only. It is crucial to check the actual Euroclass reaction to fire classification of a product before use.

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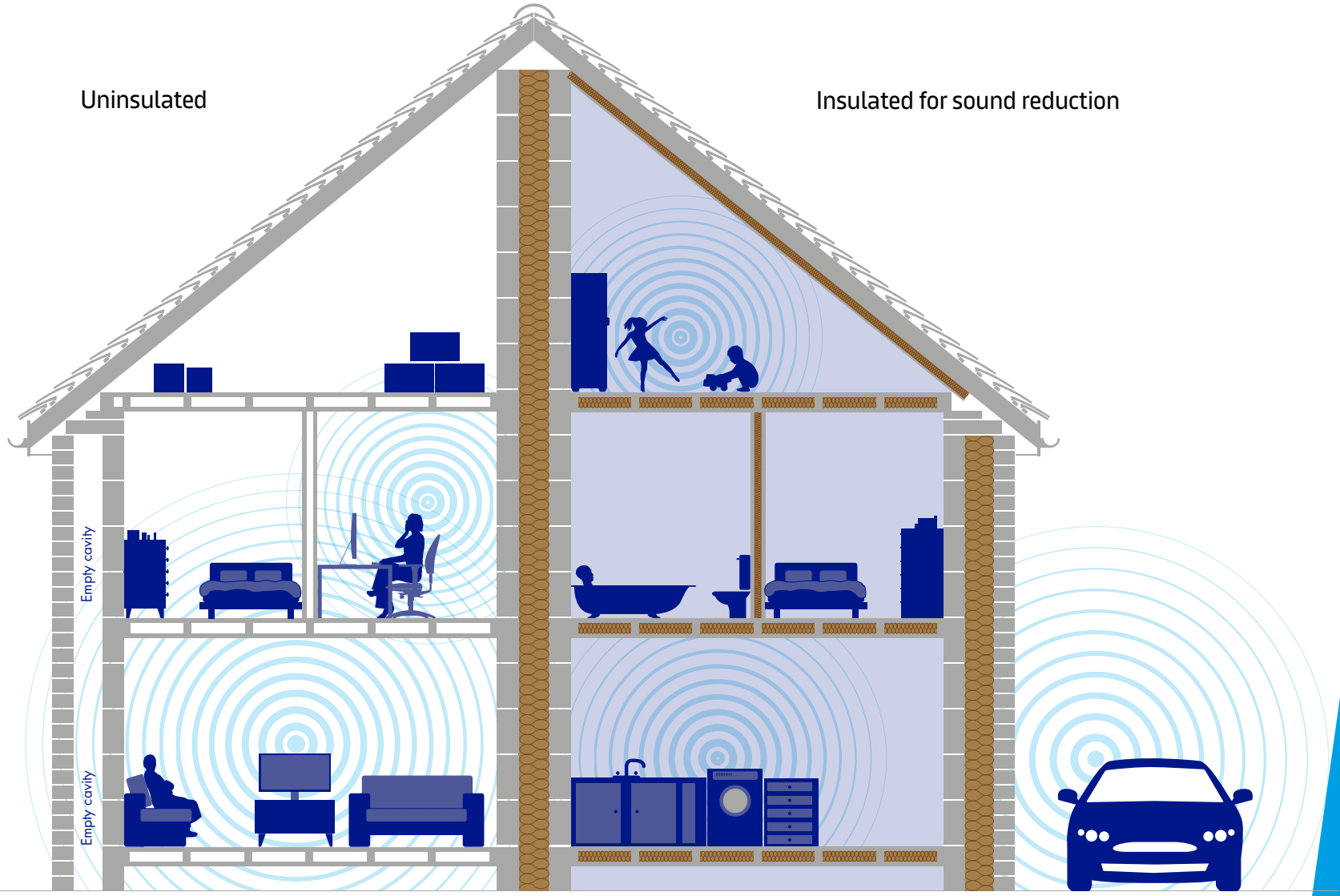
July 2024

Acoustic insulation for quieter and healthier buildings



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Technical Services Team

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KNAUF INSULATION

July 2024

Acoustic insulation for quieter and healthier buildings

Our glass and rock mineral wool solutions contribute to high standards of sound absorption, so whatever your application, there's a Knauf Insulation product for it.

Noise pollution costs Europe €24Bn per year in lost productivity, health costs and impaired learning [1].

That's why we need better buildings designed with acoustics in mind. But there's a strong case to go beyond minimum regulatory levels. Our mineral wool insulation solutions absorb sound, creating homes, offices, schools and hospitals that are quieter, healthier and more productive.

The difference between sound insulation and sound absorption

Sound insulation is the ability of a material to prevent the transmission of sound energy through it. The sound insulation performance of a construction element is critical when considering the ingress of noise from outside to inside via the building envelope or from one room to another through an internal or separating wall or floor. Typically, the higher the mass of a material, the better its sound insulation properties.

Sound absorption describes the ability of a material to prevent sound energy from reflecting from its surface. Sound energy is absorbed by a material by converting to heat energy; generally speaking, materials that are 'soft' are better sound absorbers than materials that are rigid and 'hard'. Sound absorbing materials are often used to treat walls or ceilings to prevent unwanted echoes (reverberation) within large spaces.

Using absorption for noise reduction

Glass and rock mineral wool insulation products have varying acoustic absorption performance. The use of these materials in carefully specified constructions with accurate detailing can contribute significantly towards the requirements stipulated in Building Regulations.

The presence of a sound absorbing material, such as mineral wool, within the cavity can improve the overall sound insulation rating of a double leaf partition by as much as 10 dB compared with an empty cavity.

Introducing separation for enhanced performance

Introducing separation in combination with absorption can achieve much larger improvements in sound insulation. Leaves must be independent i.e. there should be no physical connections between the two leaves of the construction.

When introducing separation, a cavity of at least 50mm wide prevents 'mass-air-mass resonance', whereby the air between the two leaves acts as a spring and transmits sound energy at a specific frequency through the partition. This resonant frequency is dependent upon the mass of the leaves and the cavity depth. The cavity should also contain a sound absorbing material to prevent the build-up of reverberant sound.

[1] https://blog.ted.com/9-ways-that-sound-affects-our-health-wellbeing-and-productivity/

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Insulation for maintaining a comfortable environment

Indoor air quality is moving up the agenda and VOCs are in the spotlight.

The government's Clean Air Strategy 2019 seeks to address poor indoor air quality by reducing emission sources of VOCs and improving building ventilation. Public England's Indoor Air Quality guidelines identify reducing indoor-generated formaldehyde as of the greatest importance due to its prevalence and known health impacts

What are VOCs?

Volatile Organic Compounds (VOCs) are chemicals that evaporate at room temperature, becoming vapours or gases.

Common sources of VOCs include domestic cleaning products, furnishings, office printers and building materials e.g. paint, insulation etc. Many different chemicals are classed as VOCs, but one of the most common in building materials is formaldehyde, which is classed as a VVOC (Very Volatile Organic Compound).

Why are VOCs important?

VOCs are one of the main causes of poor indoor air quality, particularly as buildings become more airtight.

VOCs and indoor air pollution can have long-term consequences on the health of installers and later the building occupiers – for example, skin and eye irritation, nausea, headaches and asthma.

How to limit VOCs

The construction sector is under pressure to reduce sources of VOCs in buildings. NICE (National Institute of Health & Care Excellence) guidelines recommend architects, builders, developers and landlords favour materials that only emit low levels of VOCs and formaldehyde. The British Lung Foundation recommends using building materials with low VOC emissions.

We have already seen the impact of this on the paint industry – regulation changes have resulted in the development of low VOC paints, which are increasingly popular with consumers. This means VOC emissions are now an essential consideration in deciding which products to specify, stock and install to reduce the risk of being left behind by changing Building Regulations and customer demand.

How to choose insulation with low VOCs

The best way to be sure that a product does not compromise indoor air quality is to look for independent certification by Eurofins. Products that meet the highest standards for VOC emissions are certified 'Indoor Air Comfort GOLD' by Eurofins.

All of our glass mineral wool products, and rock mineral wool products manufactured with ECOSE® Technology, have been awarded Eurofins 'Indoor Air Comfort GOLD' certification.

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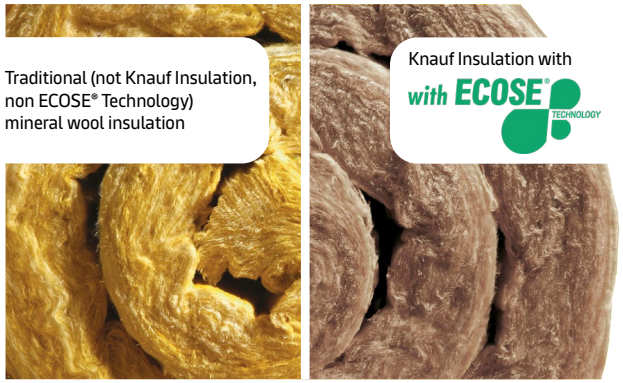
Mineral wool insulation with ECOSE® Technology

ECOSE® Technology is our unique bio-based binder which is used in the manufacture of all of our glass mineral wool products, and the majority of our rock mineral wool products.

Products manufactured with ECOSE® Technology, **contain no added formaldehyde or phenol.**

They are made from natural raw materials that are rapidly renewable and are **less energy-intensive to manufacture than traditional binders.**

Products made with ECOSE® Technology are soft to touch and easy to handle. They generate low levels of dust and VOCs and have been awarded the Eurofins Gold Certificate for Indoor Air Comfort.



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.

- **Soft to touch**
- **Low levels of dust**
- **Low VOCs***

**Volatile Organic Compounds*

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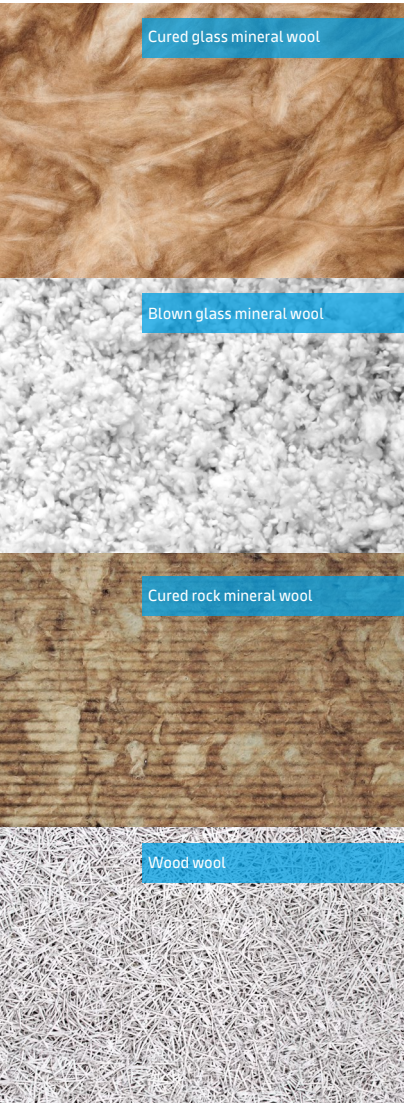
The only UK manufacturer of both glass and rock mineral wool insulation

Our mineral wool insulation solutions provide a unique combination of thermal performance, fire safety, acoustic performance, comfort and real performance.



Glass Mineral Wool

Our glass mineral wool insulation is made with up to 80% recycled content (including glass from windows, bottles and jars), to which sand, limestone and soda ash is added before being melted in a furnace. The molten glass is spun to form millions of fine strands of wool.

To manufacture our cured glass mineral wool, we use our unique 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 slab, and its thermal insulation value.

Our blown glass mineral wool is an un-bonded, virgin fibrous insulation, which is produced in the same way as the cured glass mineral wool, however, it's not cured but left as a loose-fill product to be blown into various applications.

Rock Mineral Wool

Our rock mineral wool insulation solutions are mainly made from volcanic rock, typically basalt and dolomite, and around 35% recycled content (recycled material mostly from the steel industry along with customer production waste). 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. Most of our rock mineral wool products are made with our ECOSE® Technology.

Wood Wool

Cement-bonded wood wool panels are made from wood shavings to which water and a mix of cement and lime is added. Wood wool panels are ideally suited for improving the acoustics of a space, however, they can also be used for thermal performance and fire safety when combined with a rock mineral wool core.

Heraklith® wood wool panels can be used to comply with performance requirements for buildings. Thanks to their thermal, fire safety and acoustic performance, our solutions contribute to comfortable and aesthetically pleasing working and living environments.

Industry-leading Compression Packaging

Our industry-leading compression packaging technology (up to 10:1 ratio across our glass mineral wool products) allows for more product per pack - and therefore less packaging used, fewer trucks on the roads and reduced transport-related carbon emissions. All of this 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. As part of our continuous improvement process, we continually strive for further developments in our manufacturing and supply chain operations to enhance quality and minimise our impact on the environment.

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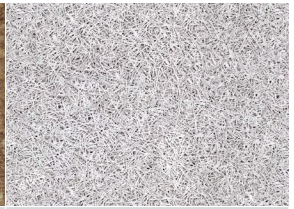
The only UK manufacturer of both glass and rock mineral wool insulation

		 Cured glass mineral wool	 Blown glass mineral wool	 Rock mineral wool	 Wood wool
Features	Naturally non-combustible	✔	✔	✔	✔
	Compression packed to limit transport & warehouse requirements	✔	✔	-	-
	Strand type	Long strands giving high levels of tear strength	Loose to allow blown installation	Short strands giving high levels of compressive strength	-
	Available in slabs	✔	-	✔	✔
	Available in rolls	✔	-	-	-
	Available loose for blown installation	-	✔	-	-
	Available with a variety of facings	✔	-	✔	-
Applications	Residential buildings	✔	✔	✔	✔
	Commercial buildings	✔	✔	✔	✔
	New build	✔	✔	✔	✔
	Refurbishment	✔	✔	✔	✔
	Fire protection	-	-	✔	✔

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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 Customer Service teams are here to provide advice to our customers and specifiers.

Technical Services Team

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

With over 40 years insulation experience, our Technical Services 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.

As well as technical advice, our Technical Services Team can provide U-value calculations, Psi-value calculations condensation risk analysis and 3D Heat Loss/U-value calculations plus, acoustic calculations and wind driven rain to BS 8104 calculations.

You can contact the team on **01744 766 666** or alternatively by email **technical.uk@knaufinsulation.com**

Specification Team

If you need project specification support over the phone, online, on-site, or wish to book a CPD we have a dedicated team of Project Specification Managers who cover all areas of the UK and Ireland.

Visit **knaufinsulation.co.uk/contact-finder** to find your local representative.

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 **knaufinsulation.co.uk/all-downloads**

Specifications, Documentations and Tools

Building Information Modelling (BIM)

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 **knaufinsulation.co.uk/technical-support/building-information-modelling-bim**

Agrement Certificates

Agrement certificates are third party certification for building products and systems in critical applications. It is also incredibly important to specifiers, as it provides them with assurance that the product is manufactured to the highest level of quality, and has passed a series of comprehensive and rigorous assessments, ensuring it's fit for purpose.
You can find our certificates at **knaufinsulation.co.uk/downloads**

Continuing Professional Development (CPD)

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

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Explore our online U-value calculator

Free, accurate and easy to use.

U-value calculations are important for working out thermal efficiency, by measuring the transfer of heat through material.

Why use our online U-value calculator?

You can use our online U-value calculator to give you quick access to accurate U-values.

Simply select the construction type and use the drop down menus to change individual components or corrections in the template.

Once the U-value is calculated, we'll recommend the most suitable Knauf Insulation glass or rock mineral wool product for your roof, wall or floor application. You can download detailed calculations, BIM files and product data, or send a copy of the calculation to your email address.

After you've generated your U-values, you'll have the option to analyse the risk of condensation. The tool quickly calculates the risk of condensation, and you can then view the boundary conditions (data used) and download the calculation, including temperature data and dewpoint graphs.

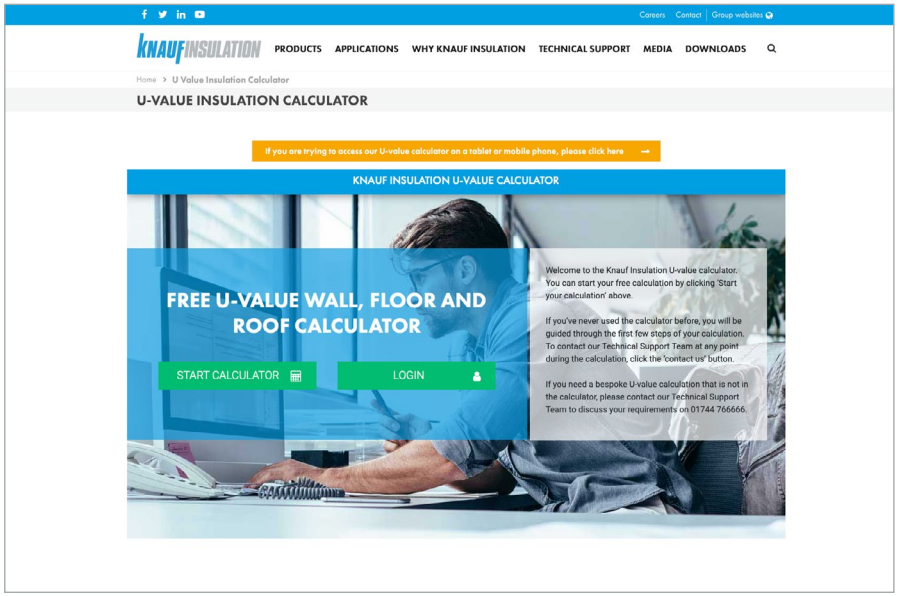
If you need further assistance or information, our Technical Services Team will work with you on your project.

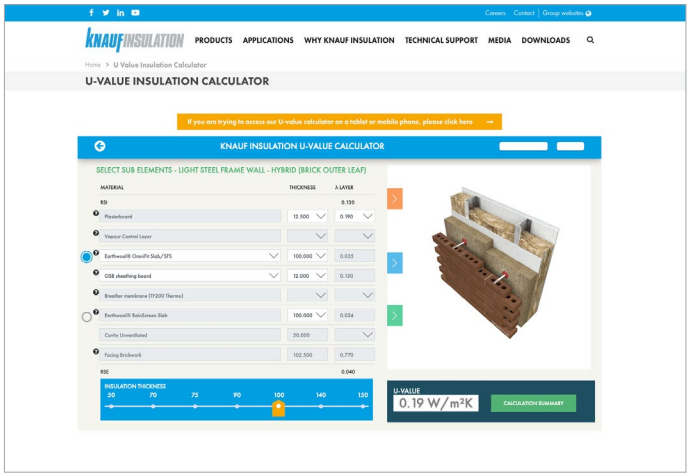
Our calculator follows the methodology of BRE calculations, in accordance with BS EN ISO 6946 and conventions given in BR443.

All solutions included in the tool are non-combustible.

We believe we have the most comprehensive and up to date range of materials in both glass and rock mineral wool to choose from, so you can be confident your U-value calculation is accurate and complies with Building Regulations.

Start your next calculation today by visiting:
knaufinsulation.co.uk/uvalue-calculator





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Build on us.

Explore our online Psi-value calculator

We offer bespoke Psi-value calculations

Psi-values are an important part of building design because they (along with U-values) determine thermal efficiency.

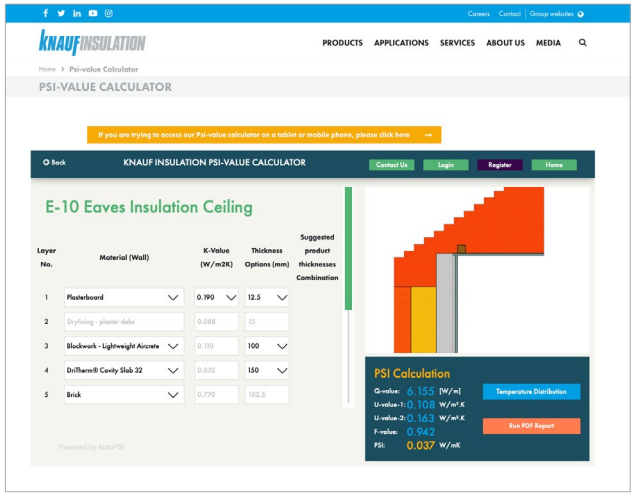
Psi-values measure the heat loss properties of junctions where two elements meet, for example where a floor meets an external wall, or a window interrupts a wall. They're measured in Watts per metre Kelvin (W/mK).

Both Psi-values and U-values measure the heat escape from a building, so you must take both into account when assessing energy efficiency. The lower the U-values and Psi-values of a build, the better the building retains heat.

Help is at hand

We're actively working on tools to help housebuilders and SAP assessors calculate their Psi-values more accurately. In the meantime, you can use our free online Psi-value calculator. Our Technical Team is also on hand to give help and advice. Contact them on 01744 766 666 or email **technical.uk@knaufinsulation.com.**

Start your next calculation today by visiting:
knaufinsulation.co.uk/psi-value-calculator



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Build on us.

Explore our online condensation risk analysis tool

An industry first

Free to use. Saves time. Gives peace of mind.

Our new online condensation risk analysis tool saves you precious time by evaluating the risk of interstitial condensation alongside generating U-value calculations, all in less than five minutes!

Interstitial condensation in a structure can result in rot or corrosion, so calculations evaluating this risk give you peace of mind that your design won't cause unintended damage to the building's fabric.

Quick & easy to use

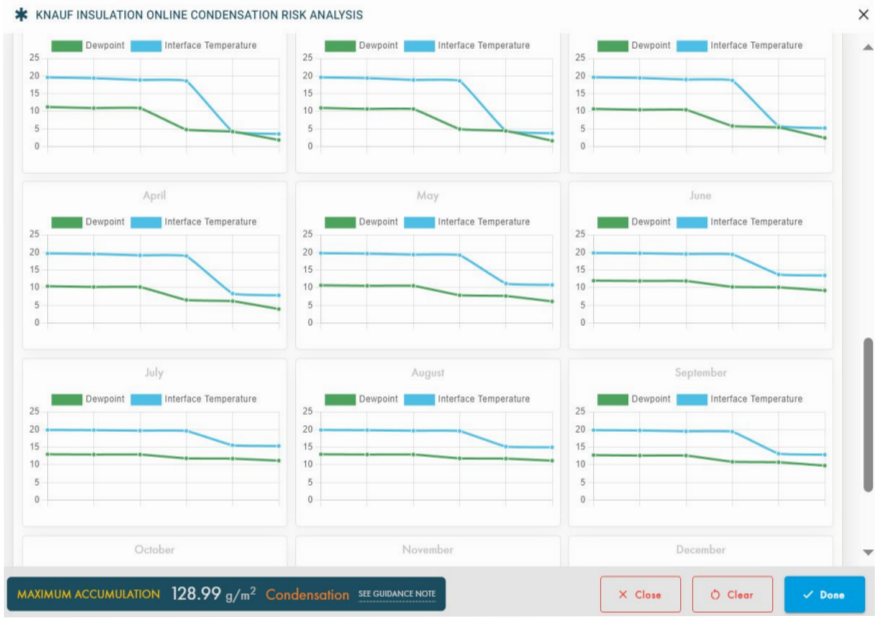
After you've generated your U-values, you'll have the option to analyse the risk of condensation.

The tool will pre-populate the build-up and U-value data and then you then simply enter the postcode for the building location. This identifies the country and the nearest available region for climatic data. You then select the property type from the dropdown menu.

The tool quickly calculates the risk of condensation, and you can then view the boundary conditions (data used) and download the calculation, including temperature data and dewpoint graphs.

All calculations are performed in line with BS EN ISO13788 and follow the guidance in BS 5250: 2021 Code of Practice for the Management of Moisture in Buildings.

Try our free online condensation risk analysis calculator and see how much time you could save - **knaufinsulation.co.uk/uvalue-calculator**



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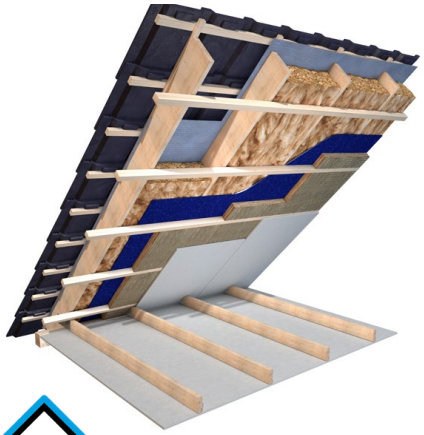
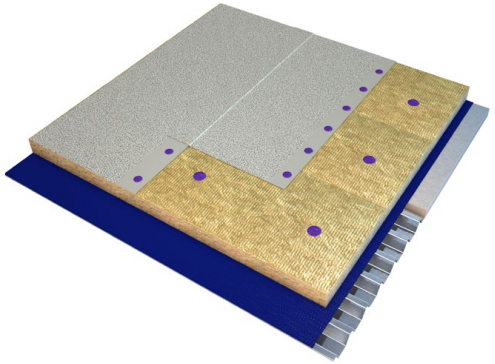
ROOFS

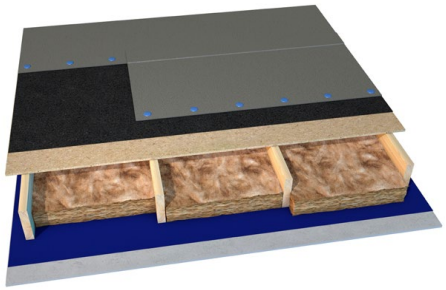
Ceiling Level



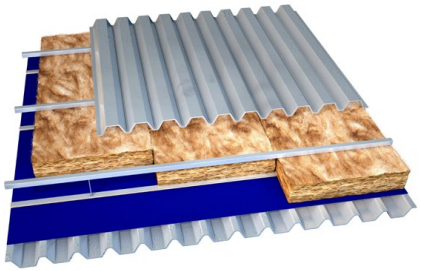
Rafter Level



Flat Roof - Warm Roof



Flat Roof - Cold Roof



Built-Up Metal Roof

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Pitched roof - ceiling level - cold roof

Application overview

In a cold roof, insulation is required for thermal performance to prevent thermal bridging and heat loss through the loft space.

In this application, the mineral wool insulation is installed in a number of layers with the first layer being laid between ceiling joists, and subsequent layers being laid at right angles to the ceiling joists, with all edges butt jointed together, and allowing for ventilated eaves to allow moisture to escape.

Recommended product

Loft Roll 44

Other suitable products

Loft Roll 40

OmniFit® Roll 40

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Pitched roof - ceiling level - cold roof

Typical U-values

Loft Roll 40 / OmniFit® Roll 40

U-value (W/m^2K)	**Thickness** (mm)		
	Between joists	**Over joists**	**Total thickness**
0.09	100	350 (100+250)	450
0.10	100	300 (2x150)	400
0.11	100	300 (2x150)	400
0.12	100	250 (100+150)	350
0.13	100	200	300
0.14	100	200	300
0.15	100	200	300
0.16	100	150	250

Loft Roll 44

U-value (W/m^2K)	**Thickness** (mm)		
	Between joists	**Over joists**	**Total thickness**
0.09	100	400 (2x200)	500
0.10	100	340 (2x170)	440
0.11	100	300 (2x150)	400
0.12	100	300 (2x150)	400
0.13	100	250 (100+150)	350
0.14	100	250 (100+150)	350
0.15	100	200	300
0.16	100	170	270

Note: Joist sizes assumed to be 100 x 47mm at 400mm centres, default timber fraction, 12.8%. Assumed 12.5mm standard plasterboard and cold ventilated roof with felt or sarking board. All dimensions are nominal. Air Permeability values 4 and 5. The air permeability value is indicative. Air pressure testing still required.

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Pitched roof - ceiling level - cold roof *with improved air permeability*

Application overview

In a cold roof, insulation is required for thermal performance to prevent thermal bridging and heat loss through the loft space.

In this application, the mineral wool insulation is installed in a number of layers with the first layer being laid between ceiling joists, and subsequent layers being laid at right angles to the ceiling joists, with all edges butt jointed together, and allowing for ventilated eaves to allow moisture to escape.

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Pitched roof - ceiling level - cold roof *with improved air permeability*

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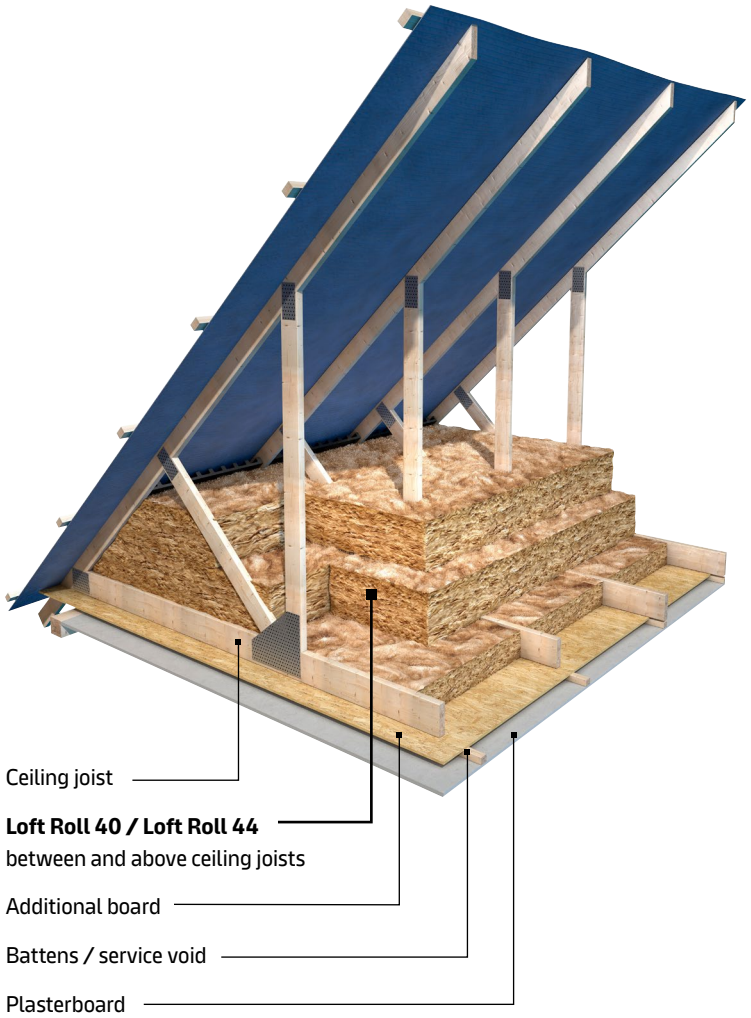
Pitched roof - ceiling level - cold roof *with additional board*



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Loft Roll 44

U-value (W/m^2K)	**Thickness** (mm)		
	Between joists	**Over joists**	**Total thickness**
0.09	100	400 (170+200)	470
0.10	100	340 (2x170)	440
0.11	100	300 (2x150)	400
0.12	100	250 (100+150)	350
0.13	100	250 (100+150)	350
0.14	100	200	300
0.15	100	200	300
0.16	100	170	270

Note: Joist sizes assumed to be 100 x 47mm at 400mm centres, default timber fraction, 12.8%. Assumed 12.5mm standard plasterboard and cold ventilated roof with felt or sarking board. All dimensions are nominal. Air Permeability values 1 and 0.5.

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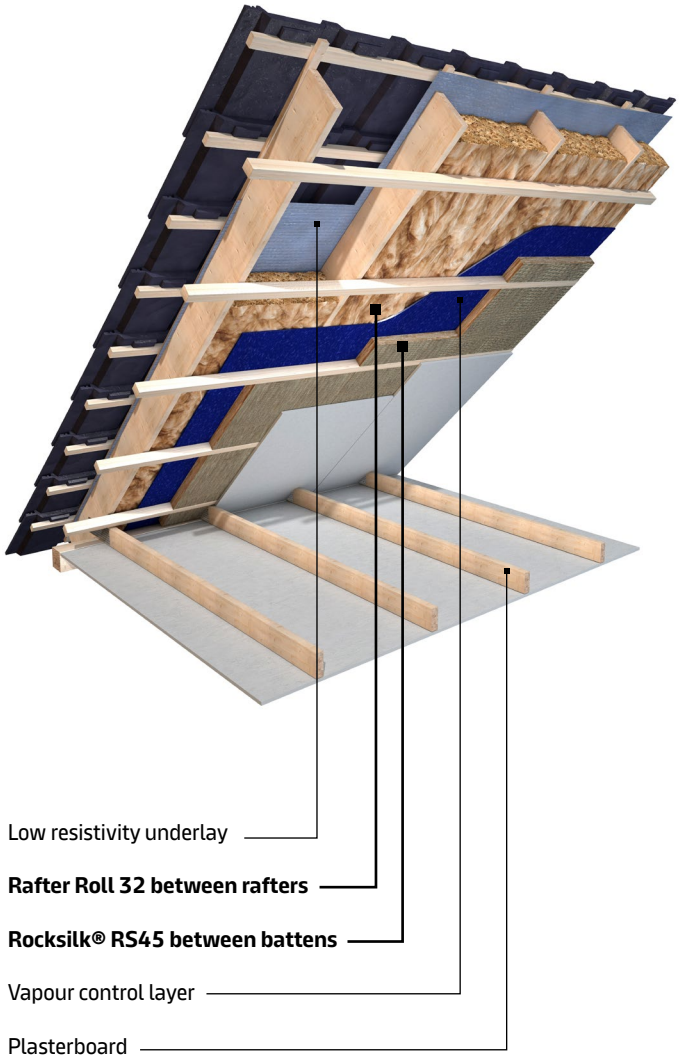
Pitched roof - rafter level - warm roof *with insulated battens*



Application overview

In a warm roof, insulation is required for thermal performance to prevent thermal bridging and heat loss through the roof, as well as acoustic performance to reduce unwanted external sound.

In this application, the mineral wool insulation is friction-fitted between rafters, with the option to underline the rafters with a layer of insulation or laminated plasterboard to enhance thermal performance.

Recommended product (Between rafters)

Rafter Roll 32

Recommended product (Beneath rafters)

Rocksilk® RS45

Other suitable products (Between rafters)

FrameTherm® Rolls and Slabs
OmniFit® Roll 34
OmniFit® Slab 35
Rocksilk® RS45
Rocksilk® Flexible Slab

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Pitched roof - rafter level - warm roof *with insulated battens*

Typical U-values

Batten and counter batten with Rafter Roll 32 (Between rafters) and Rocksilk® RS45 between battens internally

With low resistivity underlay pulled taught and insulation to full depth of rafters.

Thickness (mm)	**U-value** (W/m²K)	
	Rocksilk® RS45 thickness (mm)	
	25	50
250 (100 + 2x75)	0.14	0.13
225 (3x75)	0.15	0.14
200 (2x100)	0.17	0.15
175 (100+75)	0.19	0.17
150 (2x75)	0.21	0.18

Note: Rafter sizes assumed to be 38mm wide at 600mm centres (6.3% bridging and the same depth as the insulation). Rocksilk® RS45 (0.035 W/mK) installed internally between 47mm wide timber battens at 600mm centres. (12% bridging and the same depth as the insulation layer). 12.5mm Plasterboard internal finish (λ0.190).

Batten and counter batten with Rafter Roll 32 (Between rafters)

With low resistivity underlay pulled taught and insulation to full depth of rafters.

Thickness (mm)	**U-value** (W/m²K)
250 (100+2x75)	0.16
225 (3 x 75)	0.17
200 (2 x 100)	0.19
175 (100+75)	0.21
150 (2 x 75)	0.25

Note: Rafter sizes assumed to be 38mm wide at 600mm centres (6.3% bridging and the same depth as the insulation). 12.5mm Plasterboard internal finish (λ0.190).

Rafter Roll 32 (Between rafters) and Rocksilk® RS45 between battens internally

With draped membrane and 50mm air gap to insulation.

Rafter Depth	**Rafter Roll 32 thickness** (mm)	**U-value** (W/m²K)		
		Rocksilk® RS45 thickness (mm)		
		None	25	50
250	200 (2x100)	0.18	0.17	0.15
225	175 (100+75)	0.21	0.19	0.17
200	150 (2x75)	0.23	0.21	0.18
150	100 (1x100)	0.32	0.28	0.24

Note: Rafter sizes assumed to be 38mm wide at 600mm centres (6.3% bridging and the same depth as the insulation plus the airspace). A nominal 50mm ventilated airspace is required between Rafter Roll and the existing HR roof tile underlay. Rocksilk® RS45 (0.035 W/mK) installed internally between 47mm wide timber battens at 600mm centres. (12% bridging and the same depth as the insulation layer). 12.5mm Plasterboard internal finish (λ0.190). Where no Rocksilk® RS45 is installed between battens the service void has an assumed airspace resistance of 0.160.

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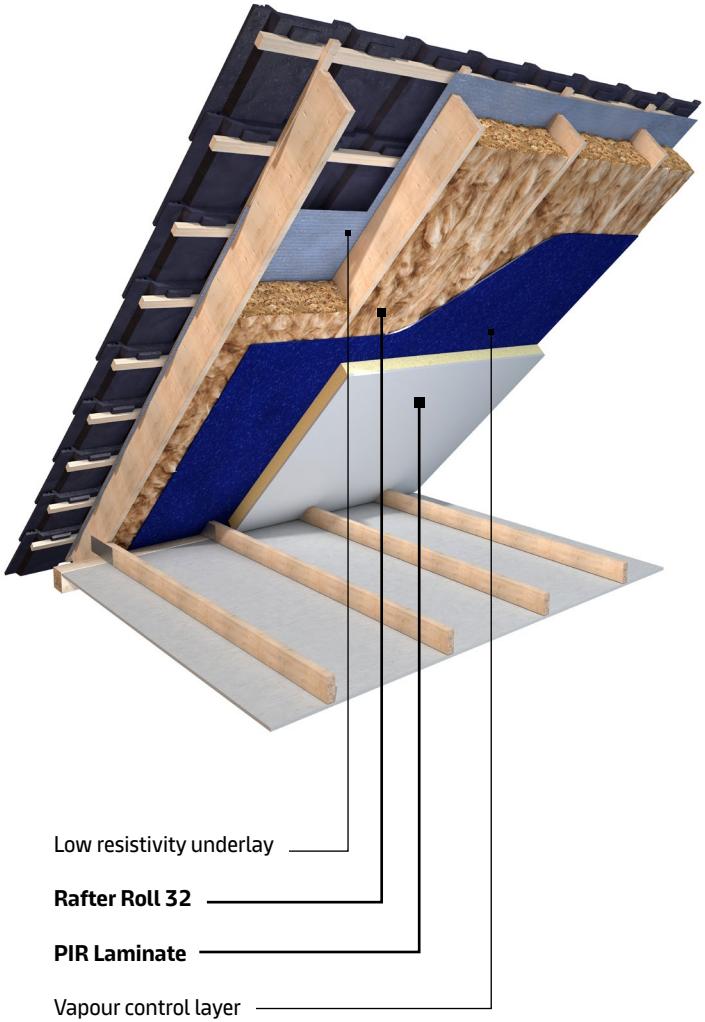
Pitched roof - rafter level - warm roof *with PIR Laminate*



Application overview

In a warm roof, insulation is required for thermal performance to prevent thermal bridging and heat loss through the roof, as well as acoustic performance to reduce unwanted external sound.

In this application, the mineral wool insulation is friction-fitted between rafters, with the option to underline the rafters with a layer of insulation or laminated plasterboard to enhance thermal performance.

Recommended product (Between rafters)

Rafter Roll 32

Other suitable products (Between rafters)

FrameTherm® Rolls and Slabs
OmniFit® Roll 34
OmniFit® Slab 35
Rocksilk® RS45
Rocksilk® Flexible Slab

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Pitched roof - rafter level - warm roof *with PIR Laminate*

Typical U-values

Batten and counter batten with Rafter Roll 32 (Between rafters) and PIR Laminate internally

With low resistivity underlay pulled taught and insulation to full depth of rafters.

Thickness (mm)	**U-value** (W/m²K)				
	PIR Laminate (mm)				
	None	**35**	**50**	**65**	**75**
250 (100 + 2x75)	0.16	0.12	0.12	0.11	0.11
225 (3x75)	0.17	0.13	0.13	0.12	0.11
200 (2x100)	0.19	0.15	0.14	0.13	0.12
175 (100+75)	0.21	0.17	0.15	0.14	0.13
150 (2x75)	0.25	0.19	0.17	0.16	0.15

Note: Rafter sizes assumed to be 38mm wide at 600mm centres (K=0.13 W/mK lambda 6.3% bridging and the same depth as the insulation). 12.5mm Plasterboard finish (0.190 W/mK) where no laminate board exists. Where PIR Laminate is used this consists of PIR of (0.022 W/mK) lambda where the remainder of the thickness is 9.5mm plasterboard at 0.190W/mK.

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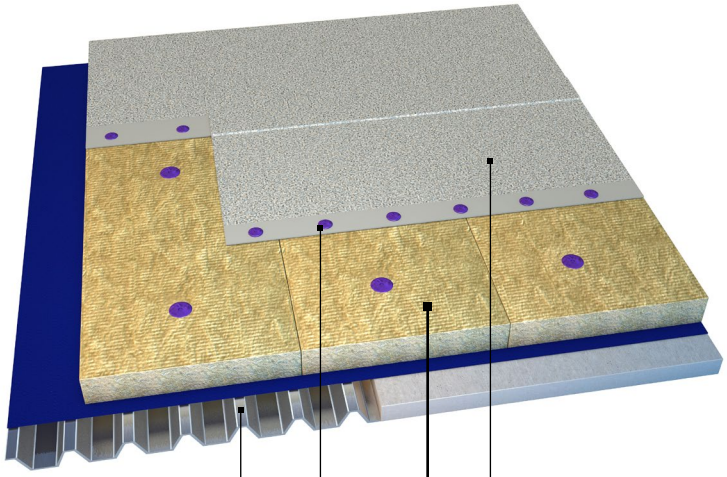
Flat roof - warm roof



Structural deck

Vapour control layer

Rocksilk® Flat Roof Slab

Single-ply waterproofing system mechanically fixed to the deck

Application overview

In a warm flat roof, insulation is required for thermal, fire safety and acoustic performance to contribute to the overall performance of the building.

Mechanically fixed, single-ply build-ups consist of a system that is held in position by mechanical fasteners alone. These secure the membrane over the top of the insulation and VCL, and are fastened in place into the roof deck. Mechanically fixed single-ply construction is suited to applications where speed of installation is key.

Recommended products

Rocksilk® Flat Roof Slab
Rocksilk® Flat Roof Slab Extra * Not BBA certified

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Flat roof - warm roof

Typical U-values

Rocksilk® Flat Roof Slab with single-ply membrane

Thickness (mm)	U-value (W/m²K)		
	*Timber deck (18mm)	150mm Reinforced concrete 2% steel	Profiled metal deck (0.7mm steel)
345 (100 x2 + 145)	0.11	0.11	0.11
325 (145 + 180)	0.11	0.12	0.12
300 (120 + 180)	0.12	0.13	0.13
290 (145 x2)	0.13	0.13	0.13
280 (100 + 180)	0.13	0.14	0.14
265 (120 + 145)	0.14	0.14	0.14
245 (100 + 145)	0.15	0.15	0.16
240 (120 x2)	0.15	0.16	0.16
220 (100 + 120)	0.16	0.17	0.17

Rocksilk® Flat Roof Slab Extra with single-ply membrane

Thickness (mm)	U-value (W/m²K)		
	*Timber deck (18mm)	150mm Reinforced concrete 2% steel	Profiled metal deck (0.7mm steel)
345 (125 x2 + 95)	0.11	0.11	0.11
335 (105 x2 + 125)	0.11	0.12	0.12
315 (105 x3)	0.12	0.12	0.13
300 (150 x2)	0.12	0.13	0.13
285 (95 x 3)	0.13	0.14	0.14
275 (125+ 150)	0.13	0.14	0.14
245 (95 + 150)	0.15	0.16	0.16
230 (105 + 125)	0.16	0.17	0.17
220 (95 + 125)	0.16	0.18	0.18

*Note: The U-values have been calculated assuming that all structural decks are lined with polythene vapour control layer. Fixings assumed to be stainless steel at 5 per m² with a cross-sectional area of no more than 18.1mm². 2mm Single ply, mechanically fixed, waterproofing membrane K=0.250. *Timber deck calculations assume 125mm thick unventilated timber joists, lined with 12.5mm standard plasterboard K=0.19. Multiple layers are required for several of the solutions detailed above.*

For any U-value calculations for alternative construction build-ups, please contact our Technical Services Team on 01744 766 666 or visit our online tool at knaufinsulation.co.uk/uvalue-calculator

For written U-value calculations, please email details of your full construction build-up to technical.uk@knaufinsulation.com and we will respond accordingly to meet your requirements.

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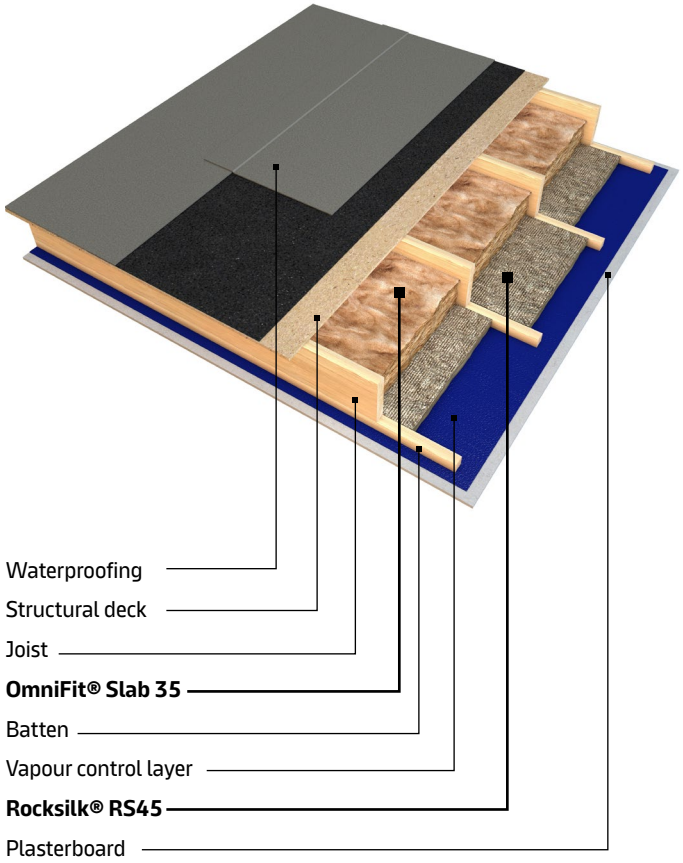
Flat roof - cold roof



Application overview

In a cold flat roof, insulation is required for thermal, fire safety and acoustic performance to contribute to the overall performance of the building.

In this application, the mineral wool insulation is fitted between joists, or between and below joists. A cavity should be left between the insulation and the waterproofing layer for ventilation purposes.

Recommended products

OmniFit® Slab 35

Rocksilk® RS45

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Flat roof - cold roof

Typical U-values

Using Omnifit® slab 35 and Rocksilk® RS45

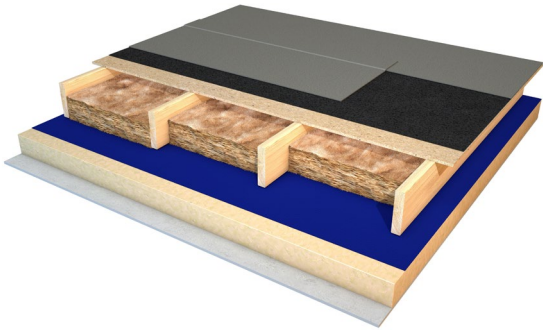
OmniFit® Slab 35 thickness (mm)	**U-value** (W/m²K)		
	Rocksilk® RS45 thickness (mm)		
	25	50	75
250 (200)	0.18	0.16	0.15
225 (100 +75)	0.20	0.18	0.16
200 (150)	0.22	0.20	0.18
175 (50+75)	0.26	0.22	0.20
150 (100)	0.30	0.26	0.22

Note: Joist sizes assumed to be 47mm wide at 600mm centres (7.83% bridging) 50mm ventilated airspace. Rocksilk® RS45 (0.035 W/mK) installed internally between timber battens (11.8% bridging) and the same depth as the insulation layer). 12.5mm Plasterboard internal finish (λ0.190).

Using Omnifit® slab 35 and PIR Laminate

OmniFit® Slab 35 thickness (mm)	**U-value** (W/m²K)			
	PIR Laminate (mm)			
	35	50	65	75
250 (200)	0.17	0.15	0.14	0.13
225 (100 +75)	0.18	0.17	0.15	0.14
200 (150)	0.21	0.18	0.17	0.16
175 (50+75)	0.23	0.21	0.19	0.17
150 (100)	0.27	0.24	0.21	0.19

Note: Joist sizes assumed to be 47mm wide at 600mm centres (7.83% bridging) 50mm ventilated airspace. Where PIR Laminateis used this consists of PIR of (0.022 W/mK) lambda where the remainder of the thickness is 9.5mm plasterboard at 0.190W/mK.



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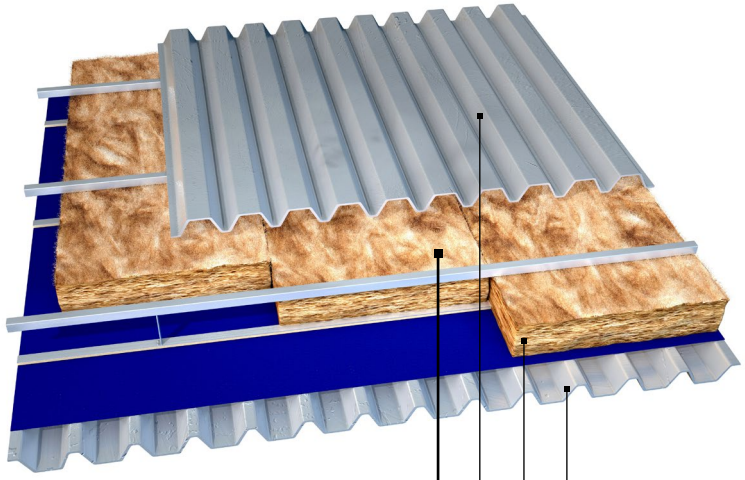
For written U-value calculations, please email details of your full construction build-up to **technical.uk@knaufinsulation.com** and we will respond accordingly to meet your requirements.

Why mineral wool?

Built-up metal roof



Application overview

In a built-up metal roof, insulation is required for thermal performance to reduce unwanted heat loss through the roof, and acoustic performance to reduce unwanted sound such as the drumming effect of rain on the roof.

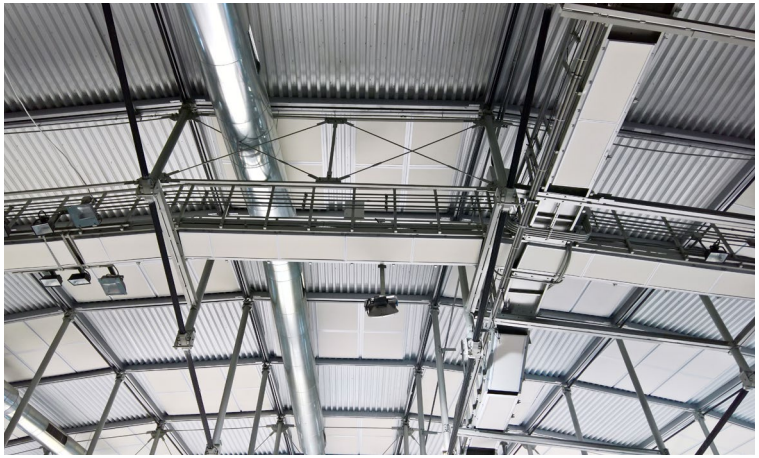
In this application, the mineral wool insulation is installed between a low profile metal liner sheet, separated from an outer, higher profile metal weather sheet.

Recommended product

FactoryClad Roll 32

Other suitable products

FactoryClad Roll 35 & 40



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Built-up metal roof

Typical U-values

Using FactoryClad Roll 32

FactoryClad Roll 32 thickness (mm)	**U-value** (W/m²K)
	Rails at 1.20metre spacings
160 (2x80)	0.24

Note: Knauf Insulation recommends that the roof system designer / manufacturer is contacted for U-values specific to their systems.

Using FactoryClad Roll 35

	U-value (W/m²K)						
	0.28	**0.22**	**0.20**	**0.18**	**0.17**	**0.16**	**0.15**
Thickness (mm)	140	180	200	220	240	260	280

Note: Generic rail and bracket U-value calculations can be provided by our Technical Services Team, however, for proprietary rail and bracket systems and all standing seam systems, the system manufacturer should be consulted for project specific U-value calculations.

Using FactoryClad Roll 40

FactoryClad Roll 40 thickness (mm)	**U-value** (W/m²K)
	Rails at 1.20metre spacings
440 (2x220)	0.11
400 (2x200)	0.12
360 (2x180)	0.13
340 (200+140)	0.14
320 (2x160)	0.15
300 (200+100)	0.16
280 (2x140)	0.17
260 (160+100)	0.18
240 (2x120)	0.19
220	0.21
200	0.23
180	0.25

Note: Knauf Insulation recommends that the roof system designer / manufacturer is contacted for U-values specific to their systems.

These U-values are taken from default values in the BRE U-value calculator using twin-skin metal-panel rail and bracket system as examples only.

To ensure an accurate U-value calculation, contact the roof or wall manufacturer for the U-value specific to the system and associated components being used.

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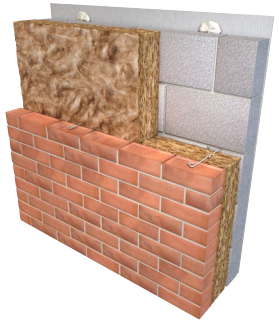
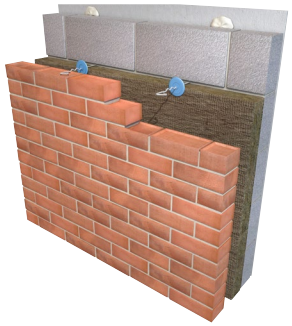
WALLS



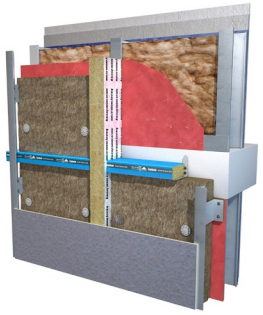
External Masonry Cavity Walls - Fully filled



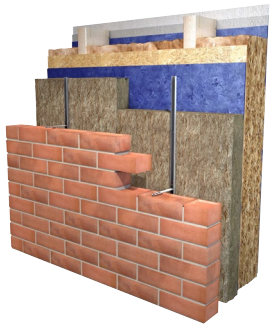
External Masonry Cavity Walls - Partially Filled

Timber Frame Walls

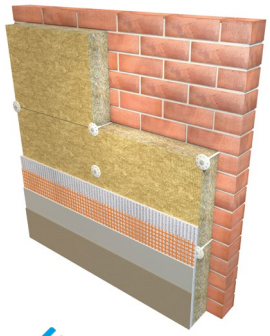
Rainscreen Façade System



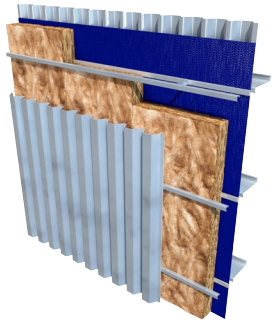
Cavity Barriers



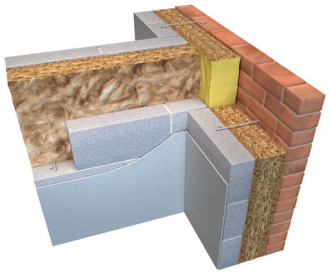
Frame Construction with Masonry Outer



External Wall Insulation



Built-Up Metal Wall



Party Walls

Internal Walls

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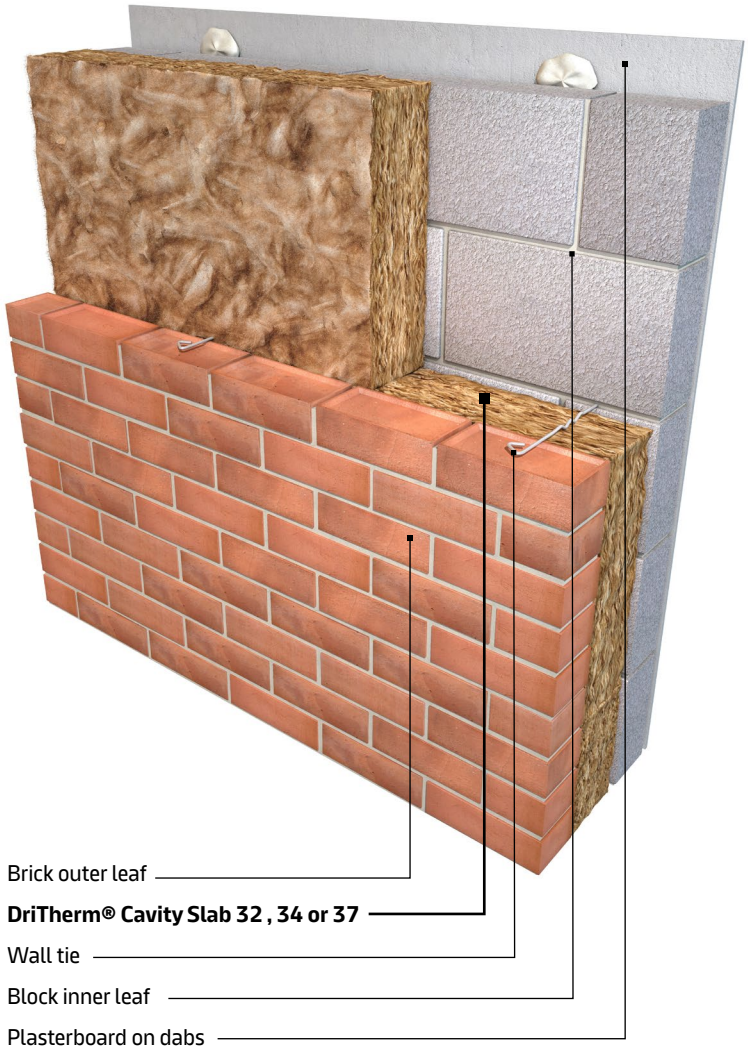
External masonry cavity walls *Built-in*



Application overview

In an external masonry cavity wall, insulation is necessary for thermal performance to prevent unwanted heat loss. Insulation can be fully-filled which requires direct contact with both leaves of the wall.

In this application, the mineral wool insulation is installed as the walls are built, with slabs being friction fitted between the inner and outer leaves of the wall and in between wall ties.

Recommended product

DriTherm® Cavity Slab 32

Other suitable products

DriTherm® Cavity Slab 34

DriTherm® Cavity Slab 37

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External masonry cavity walls *Built-in*

Typical U-values

Built-in using DriTherm® Cavity Slab 32

DriTherm® Cavity Slab 32 thickness (mm)	U-value (W/m²K)				
	Medium block (0.45 W/mK)	Lightweight aggregate (0.28 W/mK)	High strength aircrete (0.19 W/mK)	Standard aircrete (0.15 W/mK)	Lightweight aircrete (0.11 W/mK)
300 (2x150)	0.11	0.10	0.10	0.10	0.10
250 (100+150)	0.12	0.12	0.12	0.12	0.12
200 (2x100)	0.15	0.15	0.15	0.14	0.14
175 (100+75)	0.17	0.17	0.16	0.16	0.16
150	0.19	0.18	0.18	0.17	0.17
125	0.22	0.21	0.21	0.20	0.20
100	0.26	0.25	0.25	0.24	0.23

Built-in using DriTherm® Cavity Slab 37

DriTherm® Cavity Slab 37 thickness (mm)	U-value (W/m²K)				
	Medium block (0.45 W/mK)	Lightweight aggregate (0.28 W/mK)	High strength aircrete (0.19 W/mK)	Standard aircrete (0.15 W/mK)	Lightweight aircrete (0.11 W/mK)
300 (2x150)	0.12	0.12	0.12	0.11	0.11
250 (100+150)	0.14	0.14	0.14	0.13	0.13
200 (2x100)	0.17	0.17	0.16	0.16	0.16
175 (100+75)	0.19	0.19	0.18	0.18	0.17
150	0.21	0.21	0.20	0.20	0.19
125	0.25	0.24	0.23	0.23	0.22
100	0.29	0.28	0.27	0.27	0.25

Built-in using DriTherm® Cavity Slab 34

DriTherm® Cavity Slab 34 thickness (mm)	U-value (W/m²K)				
	Medium block (0.45 W/mK)	Lightweight aggregate (0.28 W/mK)	High strength aircrete (0.19 W/mK)	Standard aircrete (0.15 W/mK)	Lightweight aircrete (0.11 W/mK)
300 (2x150)	0.11	0.11	0.11	0.11	0.10
250 (100+150)	0.13	0.13	0.13	0.12	0.12
200 (2x100)	0.16	0.16	0.15	0.15	0.15
175 (100+75)	0.18	0.18	0.17	0.17	0.16
150	0.20	0.19	0.19	0.18	0.18
125	0.23	0.22	0.22	0.21	0.20
100	0.27	0.27	0.26	0.25	0.24

Note: The U-values have been calculated assuming that all walls are lined with 12.5mm standard plasterboard on dabs on standard blocks with 10mm mortar joints. Wall ties assumed to be stainless steel at 2.5 per m² with a cross-sectional area of no more than 12.5mm² for structural cavities up to 100mm wide. For cavities greater than 100mm up to 150mm, the cross sectional area of wall ties is assumed to be 24mm². For cavities above 150mm, the cross sectional area of wall ties is assumed to be 60mm². Air gap correction level is zero. Multiple layers are required for several of the solutions detailed above.

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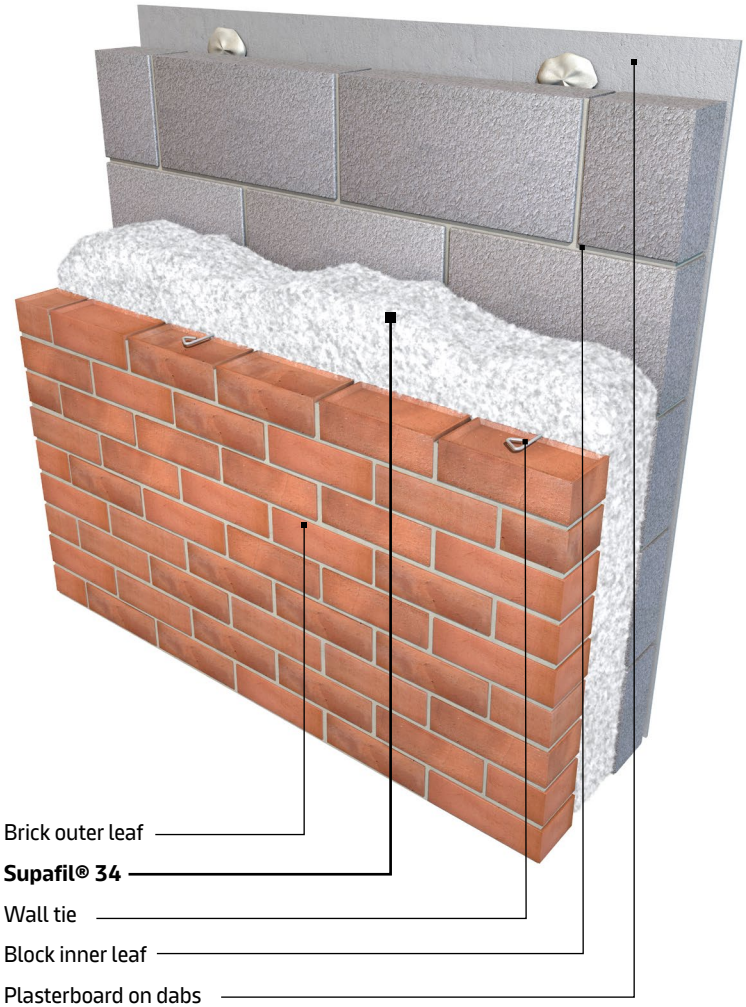
External masonry cavity walls *Blown-in (new build)*



Application overview

In an external masonry cavity wall, insulation is necessary for thermal performance to prevent unwanted heat loss. Insulation can be fully-filled which requires direct contact with both leaves of the wall.

In this application where the property is a new build, the mineral wool insulation is injected into the masonry wall cavity via a series of pre-drilled installation holes by approved technicians once walls are fully built and when the building is watertight.

Recommended product

Supafil® 34

BBA APPROVAL INSPECTION TESTING CERTIFICATION

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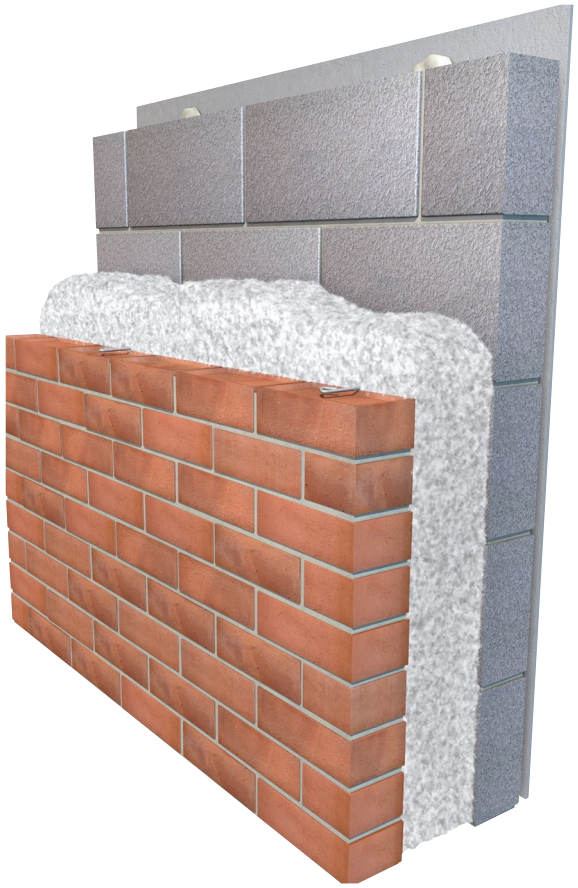
External masonry cavity walls *Blown-in (new build)*

Typical U-values

Blown-in (injected) using Supafil® 34

Cavity width (mm)	U-value (W/m²K)				
	Medium block (0.45 W/mK)	Lightweight aggregate (0.28 W/mK)	High strength aircrete (0.19 W/mK)	Standard aircrete (0.15 W/mK)	Lightweight aircrete (0.11 W/mK)
200	0.16	0.16	0.15	0.15	0.15
175	0.18	0.18	0.17	0.17	0.16
150	0.20	0.19	0.19	0.18	0.18
125	0.23	0.22	0.22	0.21	0.20
100	0.27	0.27	0.26	0.25	0.24

Note: The U-values have been calculated assuming that all walls are lined with 12.5mm standard plasterboard on dabs on standard blocks with 10mm mortar joints. Wall ties assumed to be stainless steel at 2.5 per m² with a cross-sectional area of no more than 12.5mm² for structural cavities up to 100mm wide. For cavities greater than 100mm up to 150mm, the cross-sectional area of wall ties is assumed to be 24mm². For cavities above 150mm, the cross-sectional area of wall ties is assumed to be 60mm². Air gap correction level is zero.



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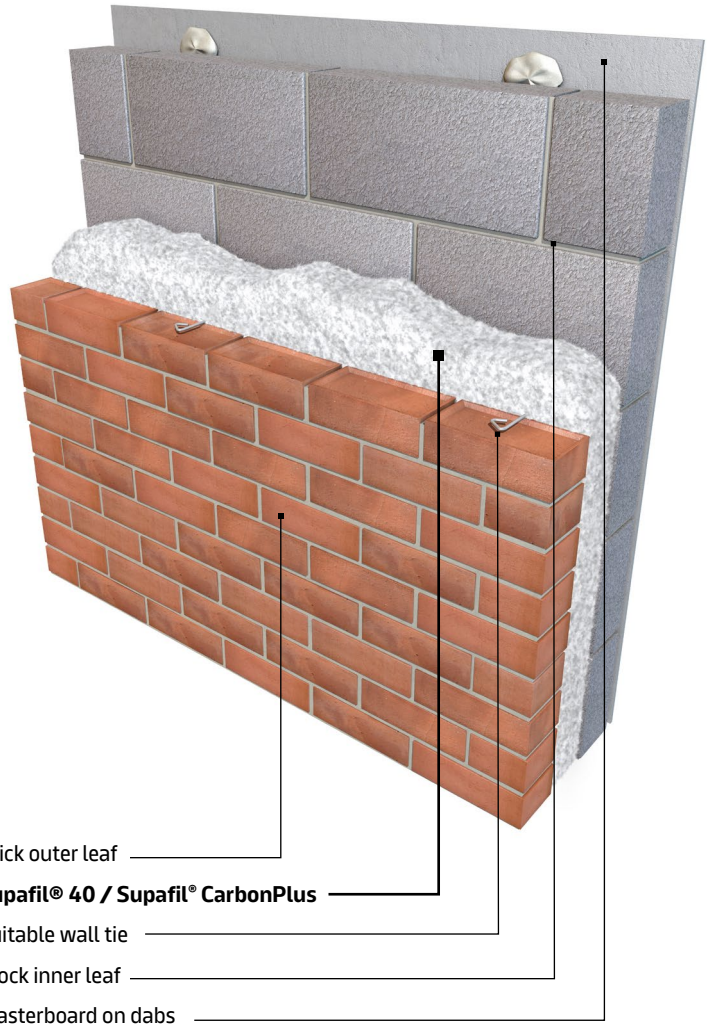
External masonry cavity walls *Blown-in (retrofit)*



Application overview

In an external masonry cavity wall, insulation is necessary for thermal performance to prevent unwanted heat loss. Insulation can be fully-filled which requires direct contact with both leaves of the wall.

In this application where the property is pre-existing, the mineral wool insulation is injected into the masonry wall cavity via a series of pre-drilled installation holes by approved technicians from the outside of the property.

Recommended products

Cavities between 50mm - 125mm

Supafil® 40

BBA BRITISH BOARD OF AGREEMENT CERTIFICATE No. 88/2033

Cavities between 40mm - 75mm

Supafil® CarbonPlus

BBA APPROVAL INSPECTION TESTING CERTIFICATION CERTIFICATE 13/4969

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External masonry cavity walls *Blown-in (retrofit)*

Typical U-values

For fully filled masonry cavity walls - existing - Using Supafil® 40
(Brick outer leaf / cavity / 100mm inner leaf as detailed below)

Cavity width (mm)	U-value (W/m²K)			
	Brick (0.56 W/mK)	Block (1.13 W/mK)	Block (0.51 W/mK)	Block (0.34 W/mK)
100	0.32	0.33	0.32	0.31
85	0.36	0.37	0.36	0.35
75	0.39	0.41	0.39	0.38
65	0.44	0.45	0.43	0.42
50	0.52	0.55	0.52	0.50

For fully filled masonry cavity walls - existing - Using Supafil® CarbonPlus
(Brick outer leaf / cavity / 100mm inner leaf as detailed below)

Cavity width (mm)	U-value (W/m²K)			
	Brick (0.56 W/mK)	Block (1.13 W/mK)	Block (0.51 W/mK)	Block (0.34 W/mK)
75	0.35	0.36	0.35	0.34
65	0.39	0.40	0.39	0.37
50	0.47	0.49	0.46	0.45

Note: The U-values have been calculated assuming that all walls are lined with 12.5mm standard plasterboard on dabs on standard blocks with 10mm mortar joints. Wall ties assumed to be stainless steel at 2.5 per m² with a cross-sectional area of 100mm - 12.5mm², >100 - 150mm - 24mm², >150mm - 60mm². Air gap correction level is zero.

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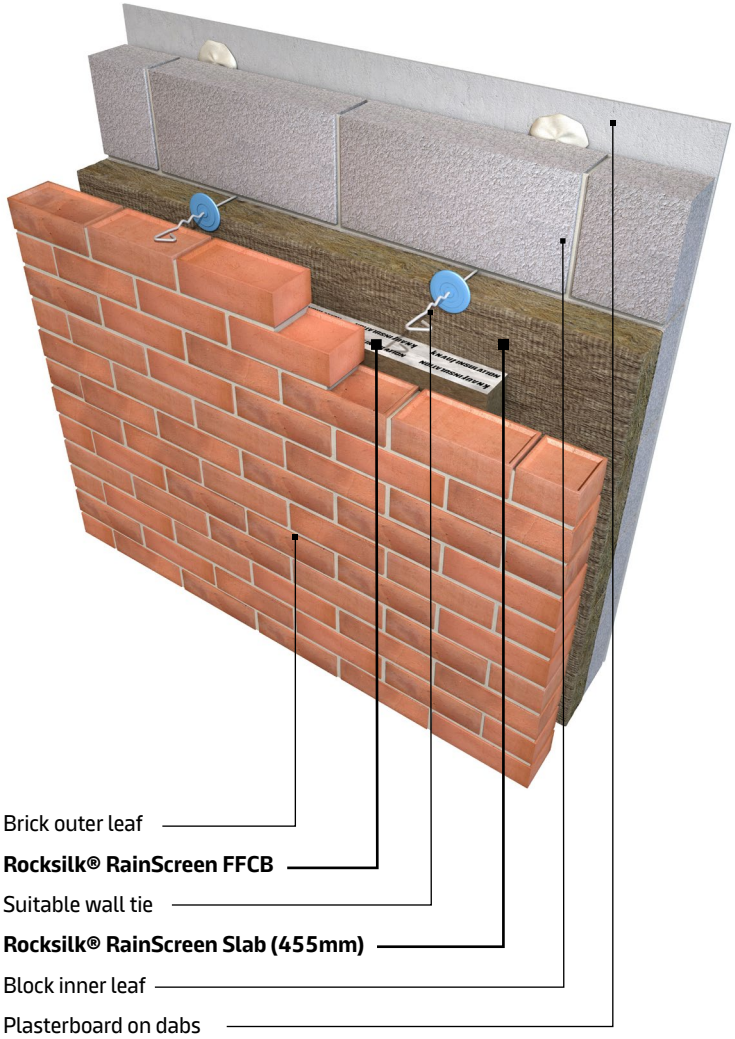
External masonry cavity walls *Partially filled*



Application overview

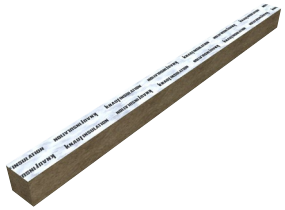
In an external masonry cavity wall insulation is necessary for thermal performance to prevent unwanted heat loss. In a partially-filled masonry cavity wall there is a requirement for an air cavity to be present between the insulation and the masonry outer leaf (typically a 50mm residual cavity is specified).

In this application, the mineral wool insulation is installed and secured to the inner masonry leaf as the walls are built.

Recommended products

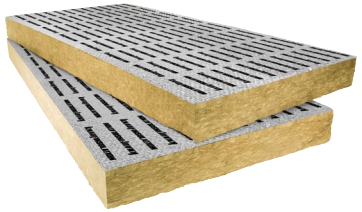
In external rainscreen zone

Rocksilk® RainScreen Slab (455mm)



Cavity barriers

Rocksilk® RainScreen FFCB



Cavity barriers

Rocksilk® RainScreen FireStop Slab

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KNAUF INSULATION

July 2024

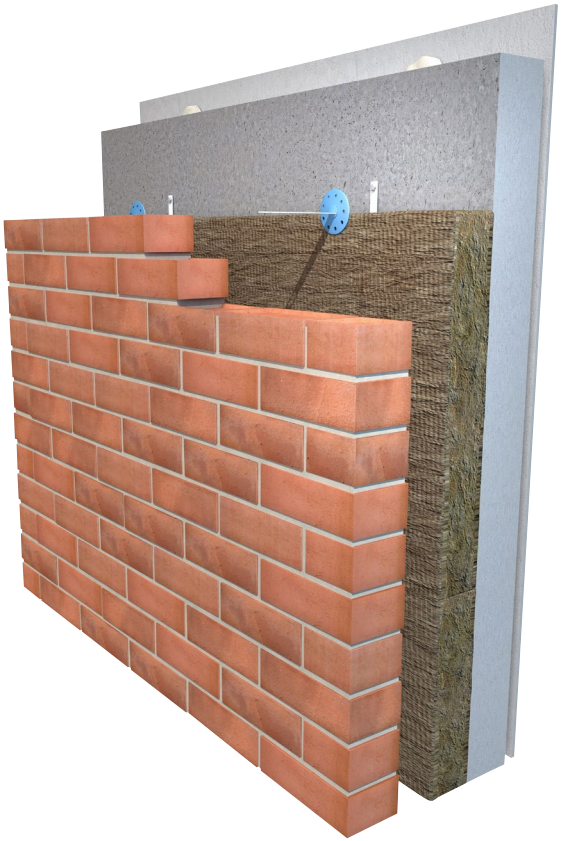
External masonry cavity walls *Partially filled*

Typical U-values

Using Rocksilk® RainScreen Slab (455mm) to partially fill cavity

RockSilk® RainScreen Slab (455mm) thickness (mm)	**U-value** (W/m²K)				
	Medium block (0.45 W/mK)	**Lightweight aggregate** (0.28 W/mK)	**High strength aircrete** (0.19 W/mK)	**Standard aircrete** (0.15 W/mK)	**Lightweight aircrete** (0.11 W/mK)
300 (2x150)	0.11	0.11	0.11	0.10	0.10
250 (100+150)	0.13	0.13	0.12	0.12	0.12
200 (2x100)	0.16	0.15	0.15	0.15	0.14
175 (100+75)	0.17	0.17	0.17	0.16	0.16
150	0.20	0.19	0.19	0.19	0.18
125 (50+75)	0.23	0.22	0.22	0.21	0.20
100	0.26	0.25	0.25	0.24	0.23

Note: The U-values have been calculated assuming that all walls are lined with 12.5mm standard plasterboard on dabs on standard blocks with 10mm mortar joints. Wall ties assumed to be stainless steel at 2.5 per m² with a cross-sectional area of no more than 12.5mm² for structural cavities up to 100mm wide. For cavities greater than 100mm up to 150mm, the cross-sectional area of wall ties is assumed to be 24mm². For cavities above 150mm, the cross-sectional area of wall ties is assumed to be 60mm². Air gap correction level is zero. Multiple layers are required for several of the solutions detailed above.



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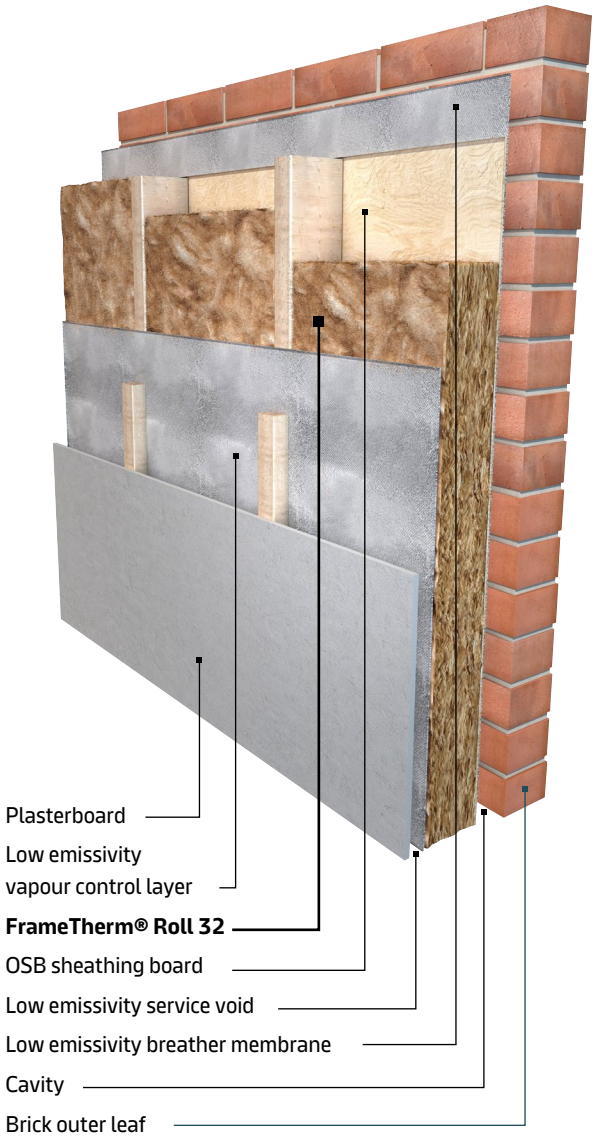
Timber frame walls *Built-in insulation between studs with low emissivity service void*



Application overview

In a timber frame wall, insulation is required for both thermal and acoustic performance. 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.

In this application, the mineral wool insulation is friction-fitted between timber studs, with a low emissivity vapour control layer and the option to further enhance thermal performance using a low emissivity service void.

Recommended product

FrameTherm® Roll 32

FrameTherm® Slab 32

Other suitable products

OmniFit® Slab 35
Rocksilk® RS45
Rocksilk® Flexible Slab

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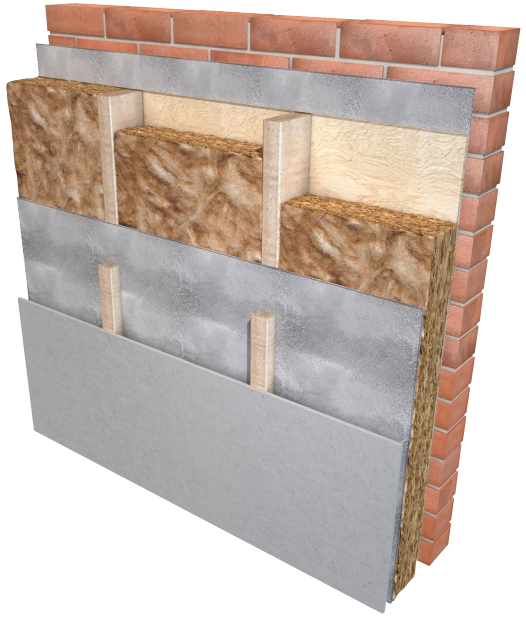
Timber frame walls *Built-in insulation between studs with low emissivity service void*

Typical U-values

Using FrameTherm® rolls between timber framed walls with a low emissivity service void and cavity

		U-value (W/m²K)	
Stud thickness (mm)	**Product used**	**Masonry outer leaf (Cavity Unventilated)**	**Tile / timber clad outer leaf (Cavity Ventilated)**
140	FrameTherm® Roll 32	0.19	0.22
140	FrameTherm® Roll 35	0.20	0.23
140	FrameTherm® Roll 40	0.21	0.25

Note: Timber bridging is assumed as 15% and the stud depth is taken to be the same as the thickness of insulation specified. Thermal conductivity of timber studs is 0.12W/mK Ventilated low emissivity airspace assumed to increase the R-value of the cavity to 0.29m²K/W and unventilated low emissivity airspace assumed to increase R-value of cavity to 0.77m²K/W. Unventilated service void R-value 0.78m²K/W. 9mm timber sheathing (0.13 W/mk). Please refer to specific national Building Regulations with respect to reaction to fire when selecting materials for use in external walls of buildings restrictions apply to buildings of certain heights.



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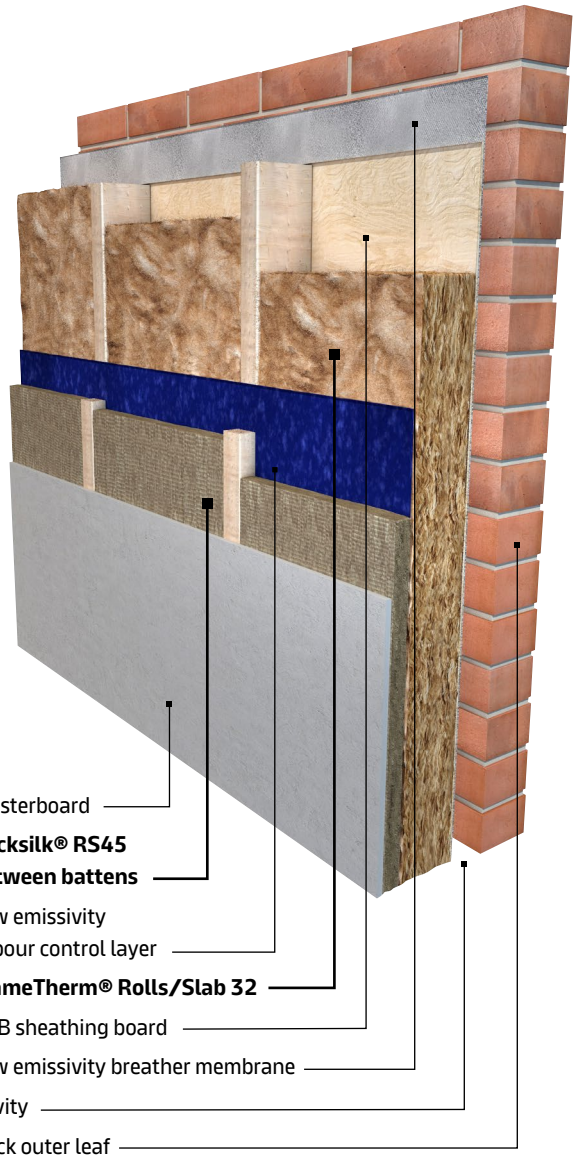
Timber frame walls *Low emissivity cavity and Rocksilk® RS45 between battens internally*



Application overview

In a timber frame wall, insulation is required for both thermal and acoustic performance. 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.

In this application, the mineral wool insulation is friction-fitted between timber studs, with a low emissivity vapour control layer and the option to further enhance thermal performance using mineral wool insulation between battens.

Recommended product

FrameTherm® Roll 32

FrameTherm® Slab 32

Rocksilk® RS45

Other suitable products

OmniFit® Slab 35

Rocksilk® Flexible Slab

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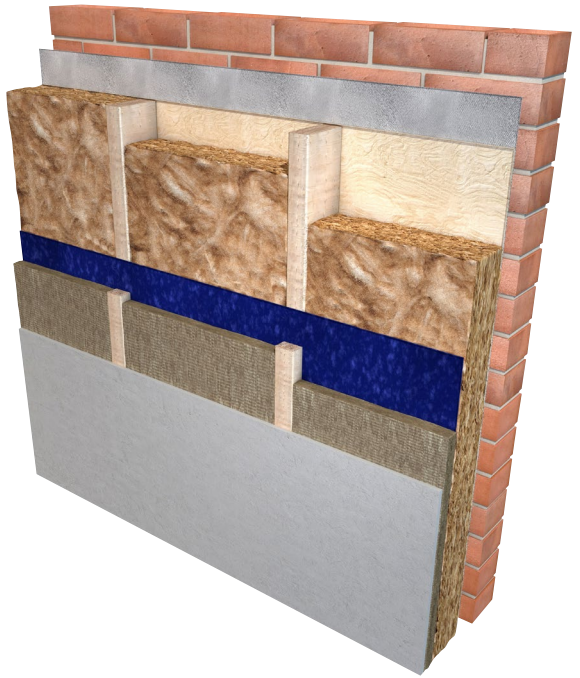
Timber frame walls *Low emissivity cavity and Rocksilk® RS45 between battens internally*

Typical U-values

Using FrameTherm® Roll 32 between timber framed walls with low emissivity cavity and Rocksilk® RS45 between battens internally

		U-value (W/m^2K)			
		Rocksilk® RS45 thickness (mm)			
Outer Leaf	**Product used**	**25**	**30**	**40**	**50**
Masonry (Cavity Unventilated)	FrameTherm® Roll 32	0.20	0.19	0.18	0.17
	FrameTherm® Roll 35	0.20	0.20	0.19	0.18
	FrameTherm® Roll 40	0.22	0.21	0.20	0.19
Tile / timber clad (Cavity Ventilated)	FrameTherm® Roll 32	0.23	0.22	0.21	0.20
	FrameTherm® Roll 35	0.24	0.23	0.22	0.21
	FrameTherm® Roll 40	0.25	0.25	0.23	0.22

Note: 140mm Timber frame with assumed bridging of 15%, fully filled with insulation. Thermal conductivity of timber studs is 0.12W/mK Ventilated low emissivity airspace assumed to increase the R-value of the cavity to 0.29m²K/W and unventilated low emissivity airspace assumed to increase R-value of cavity to 0.77m²K/W. 9mm timber sheathing (0.13W/mk) Rocksilk® RS45 (0.035W/mK) installed internally between 47mm wide timber battens at 600mm centres. (12& bridging and the same depth as the insulation layer). 12.5mm Plasterboard internal finish (0.190 W/mK). Please refer to specific national Building Regulations with respect to reaction to fire when selecting materials for use in external walls of buildings restrictions apply to buildings of certain heights.



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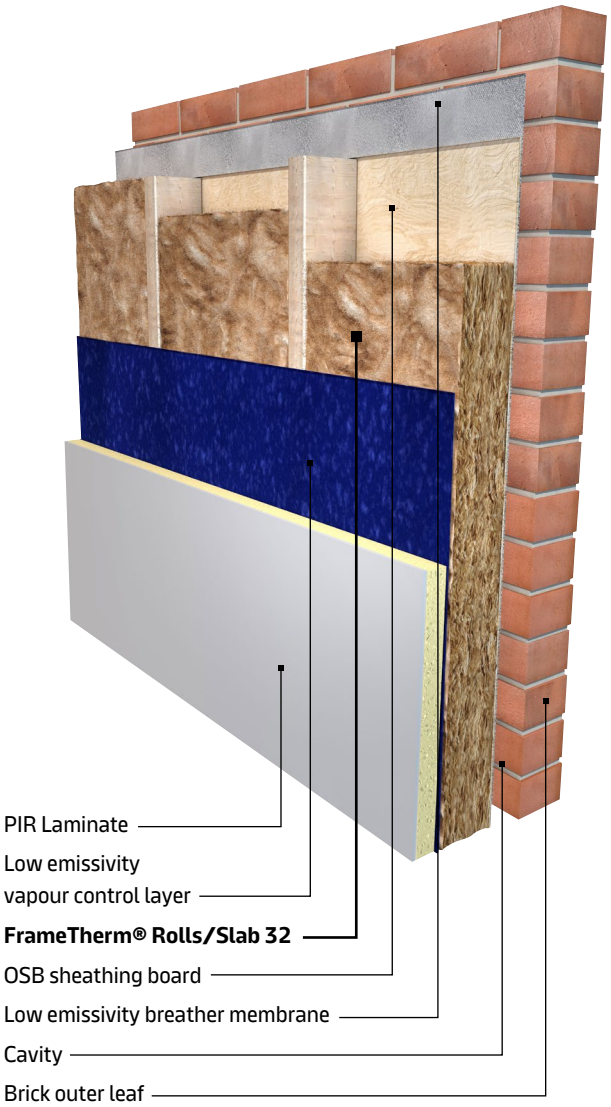
Timber frame walls *Low emissivity cavity and PIR laminate*



Application overview

In a timber frame wall, insulation is required for both thermal and acoustic performance. 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.

In this application, the mineral wool insulation is friction-fitted between timber studs, with a low emissivity vapour control layer and the option to further enhance thermal performance using a layer of laminated plasterboard.

Recommended product

FrameTherm® Roll 32

FrameTherm® Slab 32

Other suitable products

OmniFit® Slab 35
Rocksilk® RS45
Rocksilk® Flexible Slab

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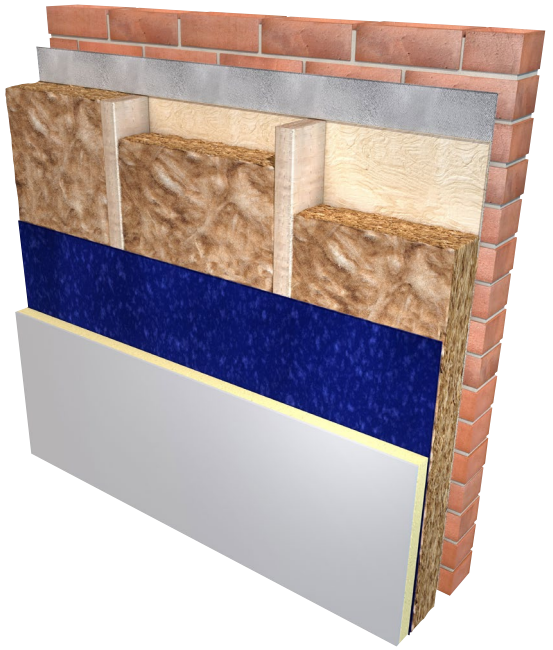
Timber frame walls *Low emissivity cavity and PIR laminate*

Typical U-values

Using FrameTherm® Roll between timber framed studs with low emissivity cavity and PIR Laminate internally

		U-value (W/m²K)			
		PIR Laminate			
Outer Leaf	**Product used**	**35**	**50**	**65**	**75**
Masonry (Cavity Unventilated)	FrameTherm® Roll 32	0.18	0.16	0.15	0.14
	FrameTherm® Roll 35	0.19	0.17	0.16	0.15
	FrameTherm® Roll 40	0.20	0.18	0.16	0.15
Tile / timber clad (Cavity Ventilated)	FrameTherm® Roll 32	0.21	0.18	0.17	0.16
	FrameTherm® Roll 35	0.22	0.19	0.17	0.16
	FrameTherm® Roll 40	0.23	0.20	0.18	0.17

Note: 140mm Timber frame with assumed bridging of 15%, fully filled with insulation. Thermal conductivity of timber studs is 0.12W/mK Ventilated low emissivity airspace assumed to increase the R-value of the cavity to 0.29m²K/W and unventilated low emissivity airspace assumed to increase R-value of cavity to 0.77m²K/W. 9mm timber sheathing (0.13W/mk). Where PIR Laminate is used this consists of PIR of (0.022W/mK) lambda where the remainder of the thickness is 9.5mm plasterboard at 0.190W/mK. Please refer to specific national Building Regulations with respect to reaction to fire when selecting materials for use in external walls of buildings restrictions apply to buildings of certain heights.



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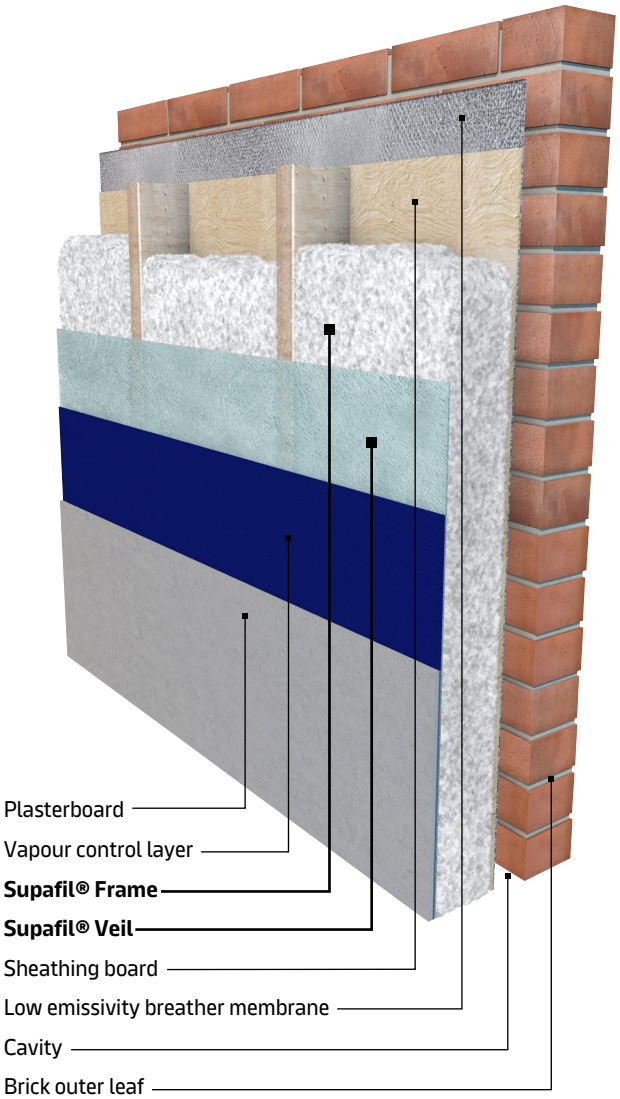
Timber frame walls *Blown-in with CLS stud*



Application overview

In a timber frame wall, insulation is required for both thermal and acoustic performance. Timber frame walls generally provide better levels of thermal insulation than masonry walls of comparable thickness. However, due to the reduced mass of the wall insulation materials need to provide a higher level of acoustic performance to compensate.

In this application, the mineral wool insulation is used in combination with a breathable translucent membrane, which is affixed to the timber frame to create a cavity into which the insulation is consequently blown.

Recommended product

Supafil® Frame

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Timber frame walls *Blown-in with CLS stud*

Typical U-values

Using Supafil® Frame between timber studs

Stud thickness (mm)	Vapour permeable membrane	U-value (W/m²K)	
		Standard clay brick outer leaf (0.77W/mK)	Tile / timber clad outer leaf
200	Standard	0.20	0.22
140	Standard	0.27	0.29
200	Low E	0.17	0.21
140	Low E	0.23	0.28

Low Emissivity membrane used in the above calculations = Protect TF200 Thermo. U-values calculated assuming Supafil® Frame installed density of 30kg/m³ and having thermal conductivity of 0.033W/mK.

Supafil® Frame conductivity

The thermal conductivity of Supafil® Frame is dependent on application and installed density.

Application	Angle range (°)	Installed density (kg/m³)	Thermal conductivity (W/mK)
Enclosed rafter spaces and timber frame stud walls	0-90	30.0	0.033
	0-90	26.0	0.034
	0-90	23.0	0.036
Enclosed rafter spaces	0-25	19.0	0.038

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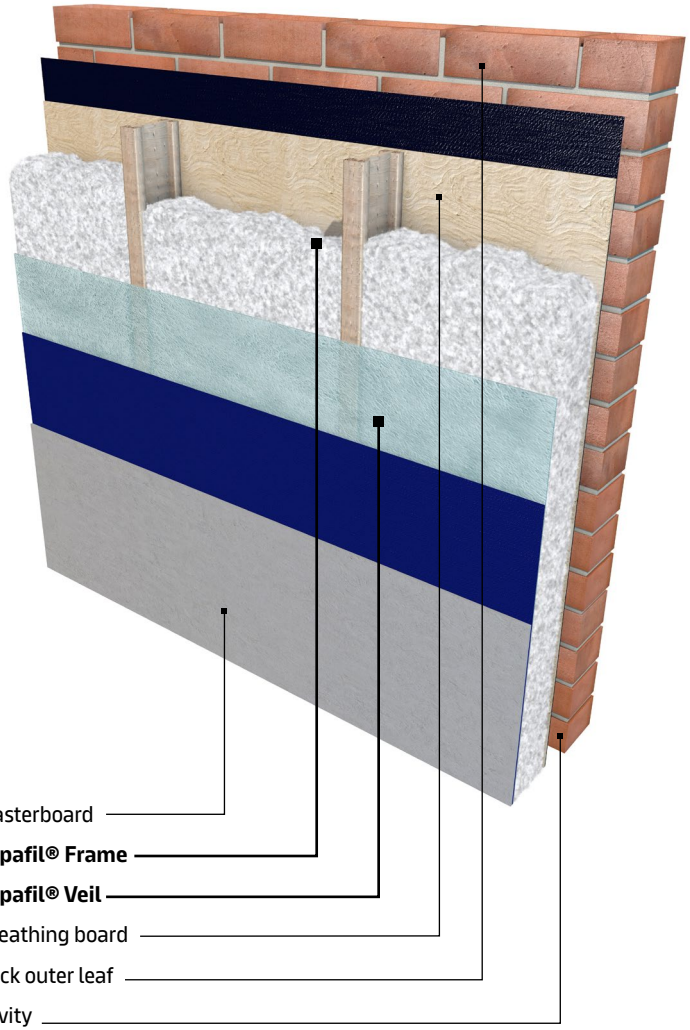
Timber frame walls *Blown-in with engineered I stud*



Application overview

In a timber frame wall, insulation is required for both thermal and acoustic performance. Timber frame walls generally provide better levels of thermal insulation than masonry walls of comparable thickness. However, due to the reduced mass of the wall insulation materials need to provide a higher level of acoustic performance to compensate.

In this application, the mineral wool insulation is used in combination with a breathable translucent membrane, which is affixed to the timber frame to create a cavity into which the insulation is consequently blown.

Recommended product

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Timber frame walls *Blown-in with engineered I stud*

Typical U-values

Using Supafil® Frame between engineered I studs

Stud thickness (mm)	Vapour permeable membrane	U-value (W/m²K)	
		Standard clay brick outer leaf (0.77W/mK)	Tile / timber clad outer leaf
220	Standard	0.15	0.15
195	Standard	0.16	0.17
220	Low E	0.14	0.15
195	Low E	0.15	0.17

Low Emissivity membrane used in the above calculations = Protect TF200 Thermo. U-value calculated using Supafil Frame installed density of 30 kg/m³ and having thermal conductivity of 0.033W/mK. 9mm timber sheathing (0.13 W/mK) I-stud K=0.12 flange depth 45mm, joist width 47mm @ 600mm centres + addition = 8.83% bridging, web fraction 0.017% (10mm)

Supafil® Frame conductivity

The thermal conductivity of Supafil® Frame is dependent on its installed density.

Application	Angle range (°)	Installed density (kg/m³)	Thermal conductivity (W/mK)
Timber frame stud walls	0-90	30.0	0.033
	0-90	26.0	0.034
	0-90	23.0	0.036

For any U-value calculations for alternative construction build-ups, please contact our Technical Services Team on 01744 766 666 or visit our online tool at knaufinsulation.co.uk/uvalue-calculator

For written U-value calculations, please email details of your full construction build-up to **technical.uk@knaufinsulation.com** and we will respond accordingly to meet your requirements.

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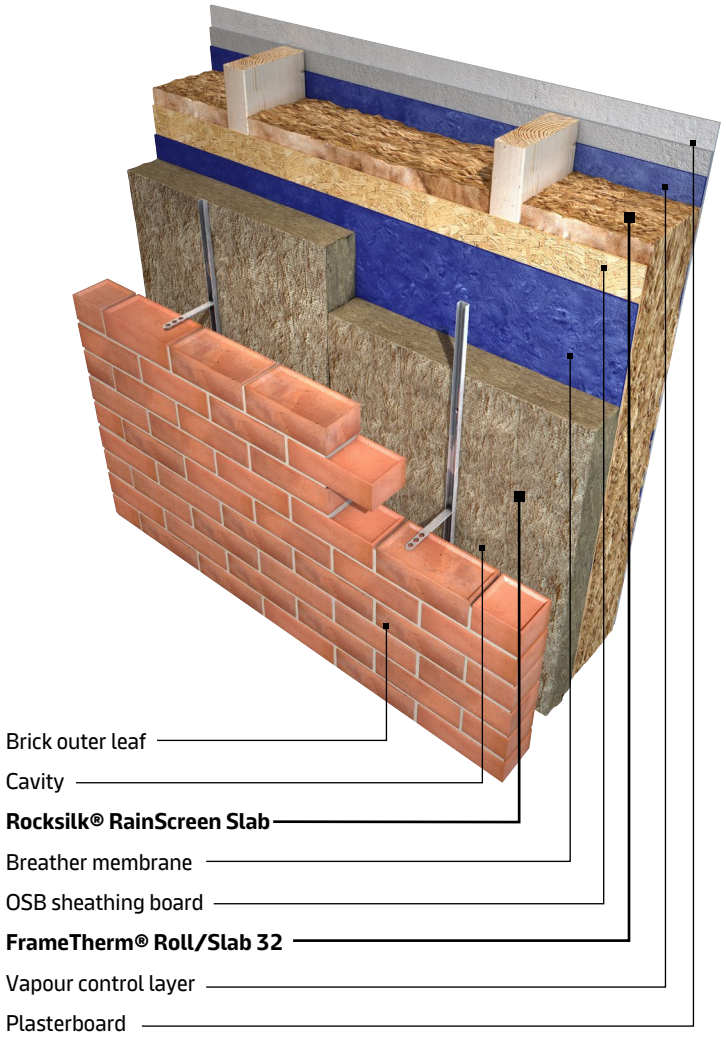
Timber frame walls *Built-in insulation between studs with partially filled cavity*



Application overview

In a timber frame wall, insulation is required for both thermal and acoustic performance. Timber frame walls generally provide better levels of thermal insulation than masonry walls of comparable thickness. However, due to the reduced mass of the wall insulation materials need to provide a higher level of acoustic performance to compensate.

In this application, the mineral wool insulation is friction-fitted between timber studs, with additional mineral wool insulation partially filling the external cavity to further enhance thermal performance (glass mineral wool rolls or slabs).

Recommended product
(Between timber studs)

FrameTherm® Roll 32

Recommended product
(Partially filled cavity)

Rocksilk® RainScreen Slab

FrameTherm® Slab 32

Other suitable products
(Between timber studs)

OmniFit® Slab 35
Rocksilk® RS45
Rocksilk® Flexible Slab

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Timber frame walls *Built-in insulation between studs with partially filled cavity*

Typical U-values

For partially filled masonry cavities using Rocksilk® Rainscreen Slab
(Brick outer leaf / cavity /timber frame inner leaf as detailed below)

Rocksilk® RainScreen Slab (mm)	U-value (W/m²K)	
	102.5mm Brick outer leaf or 100mm Dense block and render	
	FrameTherm® Roll / Slab 32	
	90mm	140mm
250	0.10	0.09
210	0.11	0.10
200	0.11	0.10
180	0.12	0.11
150	0.14	0.12
120	0.16	0.13
100	0.17	0.14
75	0.20	0.16
50	0.23	0.18

Note: Default timber fraction BR443:2019. Timber studs fully filled with FrameTherm® Roll or Slab 32 (0.032W/mK). 9mm sheathing and 2x15mm Standard wallboard internal finish. Rocksilk® RainScreen Slab (0.034W/mK) installed with 50mm residual cavity using ACS 25/15 Framefix restraint system secured with stainless steel fixings. The above values are for guidance only, please contact our Technical Services Team direct for specific values.

For partially filled masonry cavities using Rocksilk® Rainscreen Slab
(Brick outer leaf / cavity /timber frame inner leaf as detailed below)

Rocksilk® RainScreen Slab (mm)	U-value (W/m²K)				
	102.5mm Brick outer leaf or 100mm Dense block and render				
	OmniFit® Slab 35				
	90mm	100mm	140mm	150mm	200mm
250	0.10	0.10	0.09	0.09	0.08
210	0.11	0.11	0.10	0.10	0.09
200	0.12	0.11	0.10	0.10	0.09
180	0.12	0.12	0.11	0.11	0.10
150	0.14	0.14	0.12	0.12	0.10
120	0.16	0.15	0.14	0.13	0.12
100	0.18	0.17	0.15	0.14	0.13
75	0.20	0.19	0.17	0.16	0.14
50	0.24	0.23	0.19	0.18	0.15

Note: Default timber fraction BR443:2019. Timber studs fully filled with OmniFit® Slab 35 (0.035W/mK). 9mm sheathing and 2x15mm Standard wallboard internal finish. Rocksilk® RainScreen Slab (0.034W/mK) installed with 50mm residual cavity using ACS 25/15 Framefix restraint system secured with stainless steel fixings. The above values are for guidance only, please contact our Technical Services Team direct for specific values.

For any U-value calculations for alternative construction build-ups, please contact our Technical Services Team on 01744 766 666 or visit our online tool at knaufinsulation.co.uk/uvalue-calculator

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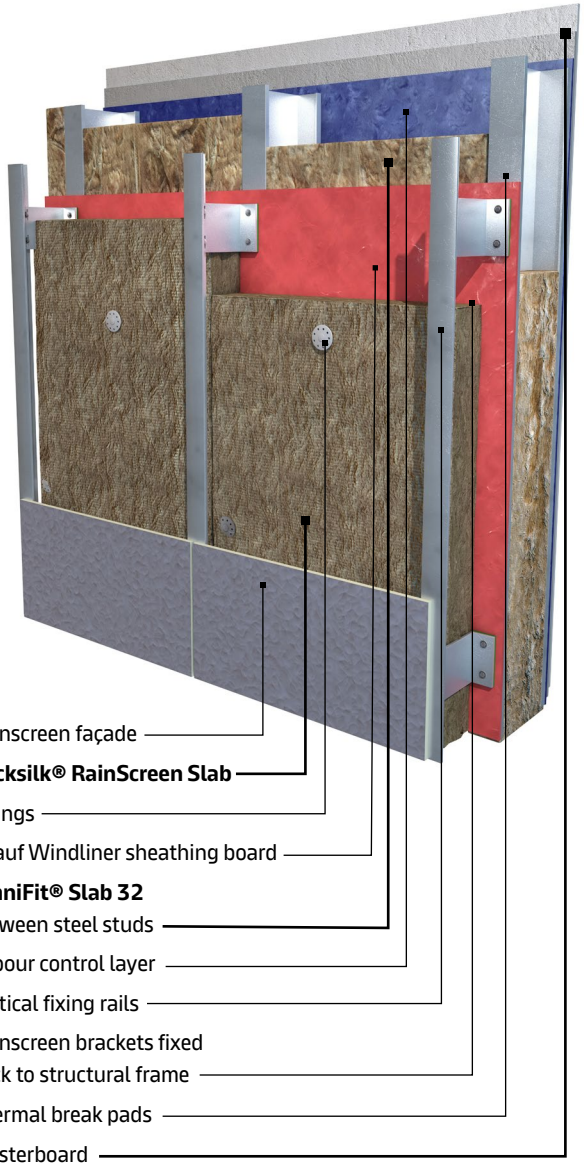
Rainscreen façade systems *with light steel frame construction*



Application overview

In a rainscreen façade system, insulation is required for thermal, fire safety and acoustic performance to enhance the overall performance of the building.
The fire performance of insulation materials is a crucial consideration, particularly when designing buildings over 11m in height or when the building is to have high occupancy levels or be used by vulnerable occupants.

In this application, mineral wool insulation is installed between light steel frame studwork, a layer of sheathing board then sits before a further layer of mineral wool rainscreen insulation, which is installed between verticle fixing rails in the external rainscreen zone.

Recommended product

(In external rainscreen zone)

Rocksilk® RainScreen Slab

(Between light steel frame studwork)

OmniFit® Slab 32

Other suitable products

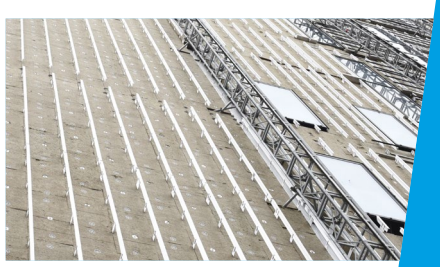
(Between light steel frame studwork)

OmniFit® Slab 35

Rocksilk® RS45

Rocksilk® Flexible Slab

OmniFit® Slab 35 Only



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Rainscreen façade systems *with light steel frame construction*

Typical U-values

Using Rocksilk® RainScreen Slab and OmniFit® Slab 32

Rocksilk® RainScreen Slab (mm)	U-value (W/m²K)				
	OmniFit® Slab 32 thickness between light steel frame stud inner leaf			Dense block inner leaf λ1.130	Reinforced Concrete λ2.300
	90mm	100mm	150mm	100mm	200mm
250	0.15	0.15	0.14	0.22	0.23
210	0.16	0.16	0.15	0.25	0.25
200	0.17	0.16	0.15	0.25	0.26
180	0.18	0.17	0.16	0.27	0.28
150	0.19	0.19	0.17	0.35	-
120	0.21	0.21	0.19	-	-
100	0.23	0.22	0.20	-	-
75	0.26	0.25	0.22	-	-
50	0.30	0.29	0.25	-	-

Using Rocksilk® RainScreen Slab and OmniFit® Slab 35

Rocksilk® RainScreen Slab (mm)	U-value (W/m²K)				
	OmniFit® Slab 32 thickness between light steel frame stud inner leaf			Dense block inner leaf λ1.130	Reinforced Concrete λ2.300
	90mm	100mm	150mm	100mm	200mm
250	0.16	0.16	0.15	0.22	0.23
210	0.17	0.17	0.16	0.25	0.25
200	0.18	0.17	0.16	0.25	0.26
180	0.19	0.18	0.17	0.27	0.28
150	0.20	0.20	0.19	0.35	-
120	0.24	0.23	0.21	-	-
100	0.24	0.23	0.23	-	-
75	0.27	0.26	0.23	-	-
50	0.31	0.30	0.26	-	-

Notes: The above are based on an aluminium helping hand brackets with base dimensions 75 x 62mm sat on a 5mm PVC thermal break pad, bracket is 5mm thick, aluminium bracket length to give 50mm residual cavity. Brackets set at 600 x600mm centres fixed to structure. Dense block as λ=1.13, steelwork as 2mm with 50mm flange at 600 x 600mm centres infilled with OmniFit® Slab 35. Internal lining is standard 2 x 12.5mm wall board, cement particle sheathing board. Cavity is fully ventilated. The above values are for guidance only, please contact our Technical Services Team direct for specific values – all of our calculations for Rainscreen Façade Systems are carried out to BS EN 10211 using compliant software.

Did you know that Rocksilk® RainScreen Slab and OmniFit® Slab 35 are specified in the Knauf Throughwall System?

The Knauf ThroughWall system is designed to meet required building performance while allowing a flexibility of external finishes to be applied, such as rainscreen cladding and brickwork.

For full information on the system performance, installation method and standard details visit **knauf.co.uk/systems-and-products/systems/exterior-systems/throughwall-system**

Why mineral wool?

Available CPD

Non-combustible insulation solutions for rainscreen façade systems

The CPD includes the following topics:

- Fire regulations related to Rainscreen Façade Systems
- Considerations for buildings over 18m in height
- Your options as a designer to achieve compliance and minimise risk

Visit knaufinsulation.co.uk/technical-support/cpd to book your CPD today!

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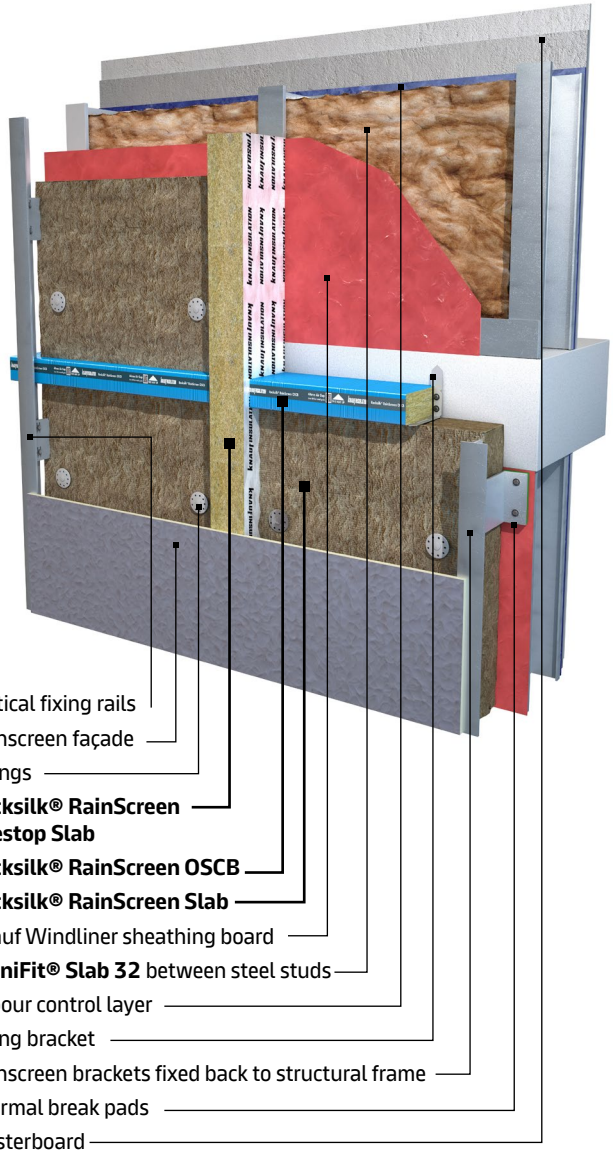
Open state cavity barriers *with ventilated cavities*

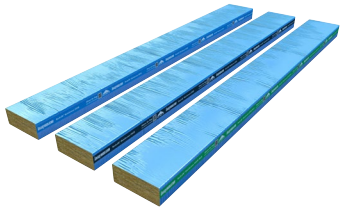


Application overview

In a ventilated rainscreen façade system, open state cavity barriers are required to close the cavity in the event of a fire, preventing a chimney effect allowing smoke and flame to quickly spread up the building.

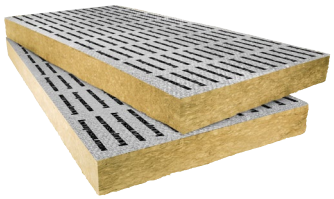
In this application, a ventilated cavity has to be maintained between the rainscreen insulation and the external cladding to allow the construction to breathe and moisture collected within the cavity to escape. When positioned at compartment wall level, they sub-divide the building both vertically and horizontally into compartments. They are also used to close off penetrations such as windows and doors.

Recommended product



Horizontal barrier product

Rocksilk® RainScreen OSCBs



Vertical barrier product

Rocksilk® RainScreen Firestop Slab

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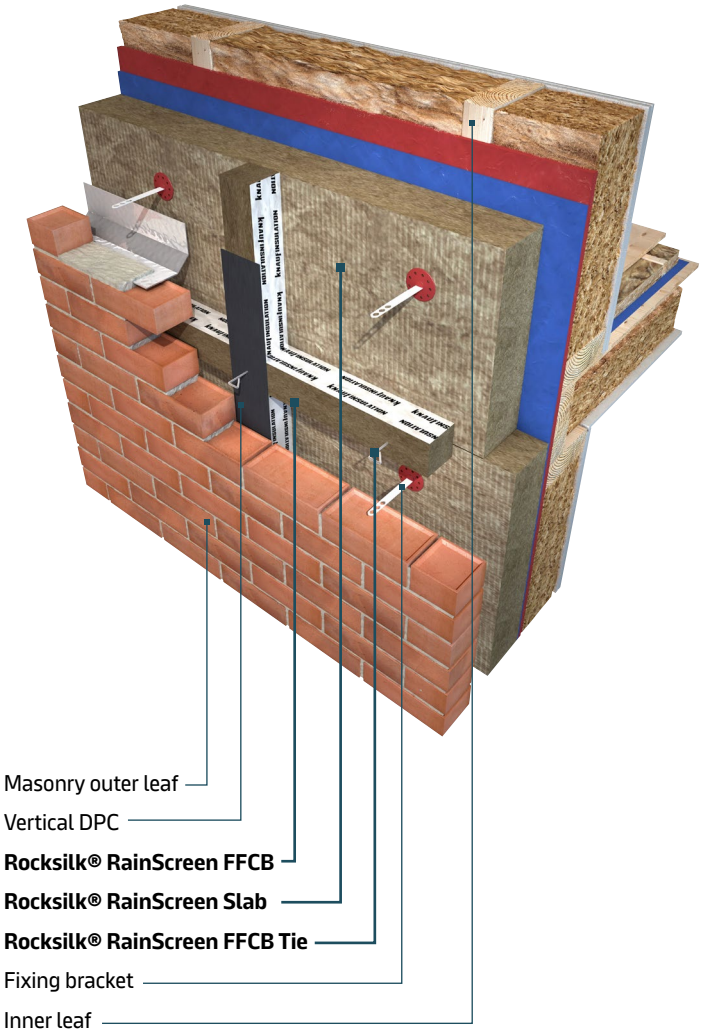
Closed state cavity barriers *with masonry outer leaf*



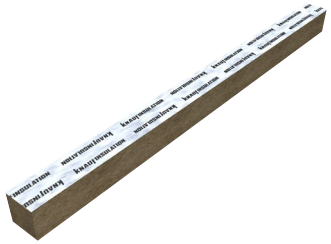
Application overview

In a façade with a masonry outer leaf there is no requirement to have a ventilated cavity maintained throughout, as installation of cavity trays allow trapped moisture to escape, drying the construction.

Closed state cavity barriers therefore fully fill the cavity, from inner leaf to out.

When positioned at compartment wall level, they sub-divide the building both vertically and horizontally into compartments. They are also used to close off penetrations such as windows and doors.

Recommended product



Rocksilk® RainScreen FFCB

Other suitable products

Rocksilk® RainScreen FireStop Slab

Rocksilk® RainScreen OSCB

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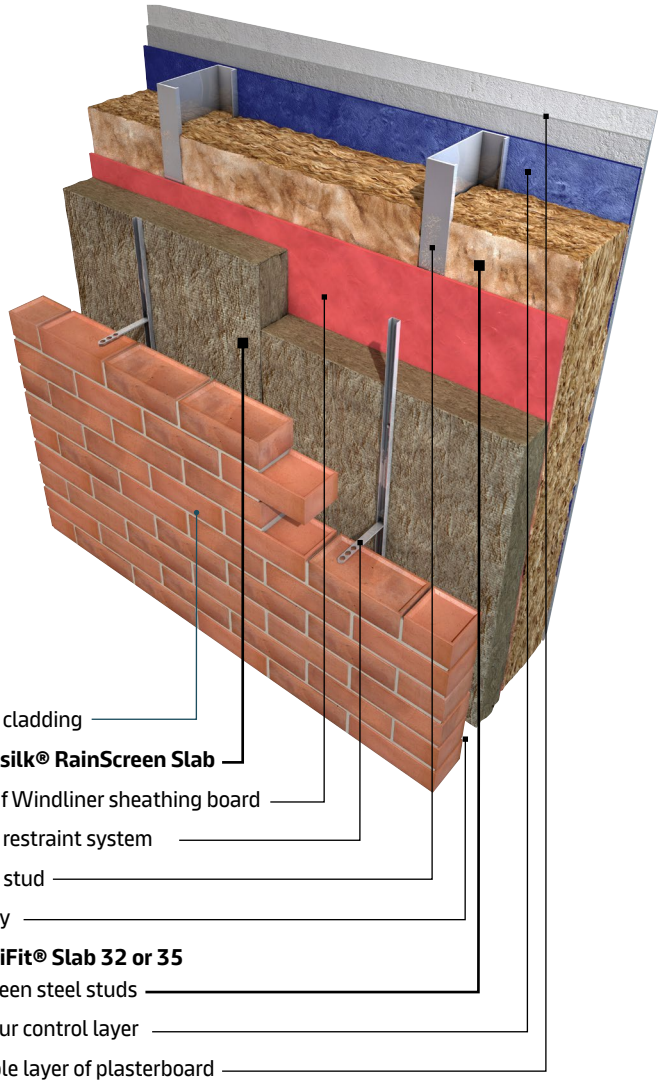
Rainscreen façade systems *with masonry outer leaf*



Application overview

In a rainscreen façade system, insulation is required for thermal, fire safety and acoustic performance to enhance the overall performance of the building. The fire performance of insulation materials is a crucial consideration, particularly when designing buildings above 11m in height or when the building is to have high occupancy levels or be used by vulnerable occupants.

In this application, a partial-fill cavity features mineral wool insulation secured to the inner steel or timber framing system, leaving a cav ity of air between the insulation and the masonry outer leaf. The cavity between the insulation and the outer leaf performs as a barrier to external moisture, preventing it from tracking to the inner construction.

Recommended product

(In external rainscreen zone)

Rocksilk® RainScreen Slab

(Between light steel frame studwork)

OmniFit® Slab 32

Other suitable products

(Between light steel frame studwork)

OmniFit® Slab 35

OmniFit® Roll 34

Rocksilk® RS45

Rocksilk® Flexible Slab

OmniFit® Slab 35 Only

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Rainscreen façade systems *with masonry outer leaf*

Typical U-values

Using Rocksilk® RainScreen Slab and OmniFit® Slab 32

Rocksilk® RainScreen Slab (mm)	**U-value** (W/m^2K)							
	102.5mm Brick K=0.770		**100mm Dense Block** K=1.210		**100mm Medium Dense Block** K=0.510		**100 mm Aircrete Block** K=0.150	
	100mm SFS	**150mm SFS**	**100mm SFS**	**150mm SFS**	**100mm SFS**	**150mm SFS**	**100mm SFS**	**150mm SFS**
250	0.10	0.09	0.10	0.09	0.10	0.09	0.10	0.09
210	0.12	0.10	0.12	0.10	0.11	0.10	0.11	0.10
200	0.12	0.11	0.12	0.11	0.12	0.11	0.11	0.10
180	0.13	0.12	0.13	0.12	0.13	0.11	0.12	0.11
150	0.14	0.13	0.14	0.13	0.14	0.13	0.13	0.12
120	0.16	0.14	0.17	0.14	0.16	0.14	0.15	0.13
100	0.18	0.16	0.18	0.16	0.18	0.16	0.16	0.14
75	0.21	0.18	0.21	0.18	0.20	0.18	0.18	0.16
50	0.25	0.22	0.25	0.22	0.25	0.21	0.22	0.19

Using Rocksilk® RainScreen Slab and OmniFit® Slab 35

Rocksilk® RainScreen Slab (mm)	**U-value** (W/m^2K)							
	102.5mm Brick K=0.770		**100mm Dense Block** K=1.210		**100mm Medium Dense Block** K=0.510		**100 mm Aircrete Block** K=0.150	
	100mm SFS	**150mm SFS**	**100mm SFS**	**150mm SFS**	**100mm SFS**	**150mm SFS**	**100mm SFS**	**150mm SFS**
250	0.10	0.10	0.10	0.10	0.10	0.09	0.10	0.09
210	0.12	0.11	0.12	0.11	0.12	0.11	0.11	0.10
200	0.12	0.11	0.12	0.11	0.12	0.11	0.12	0.11
180	0.13	0.12	0.13	0.12	0.13	0.12	0.12	0.11
150	0.15	0.13	0.15	0.13	0.15	0.13	0.14	0.12
120	0.17	0.15	0.17	0.15	0.17	0.15	0.16	0.14
100	0.19	0.16	0.19	0.16	0.19	0.16	0.17	0.15
75	0.21	0.19	0.21	0.19	0.21	0.19	0.19	0.17
50	0.26	0.23	0.26	0.23	0.25	0.22	0.21	0.20

*Note: 1.2mm Gauge SFS at 600mm centres, fully filled with OmniFit® Slab 32 (0.032W/mK). 12mm cementitious sheathing board and 2x15mm wallboard internal finish. Rocksilk® RainScreen Slab (0.034W/mK) installed with 50mm residual cavity using ACS 25/15 Framefix restraint system secured with stainless steel fixings. *20mm Render (1.00 W/mK)* The above values are for guidance only, please contact our Technical Services Team direct for specific values.*

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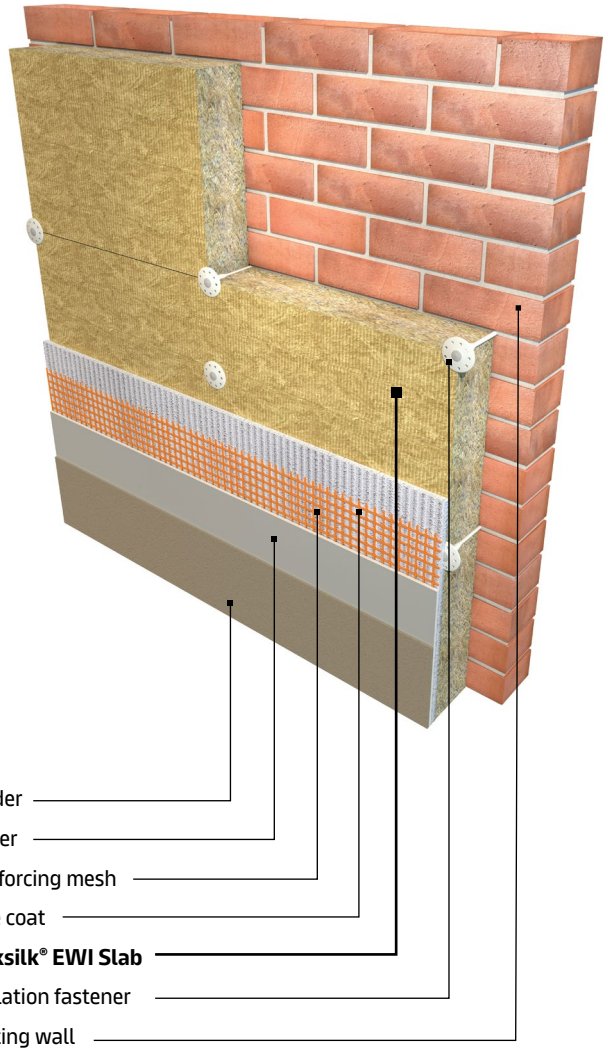
External wall insulation



Application overview

In an external wall, insulation is required for thermal performance to reduce unwanted heat loss from the building, and acoustic performance to alleviate any unwanted external noise.

In this application, the mineral wool insulation is installed to the external fabric of an exisiting or new building, and is finished with a render coat. When non-combustible insulation is used, no additional fire breaks are required.

Important factors to consider 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.

Recommended product

Rocksilk® EWI Slab
Rocksilk® EWI Slab Extra

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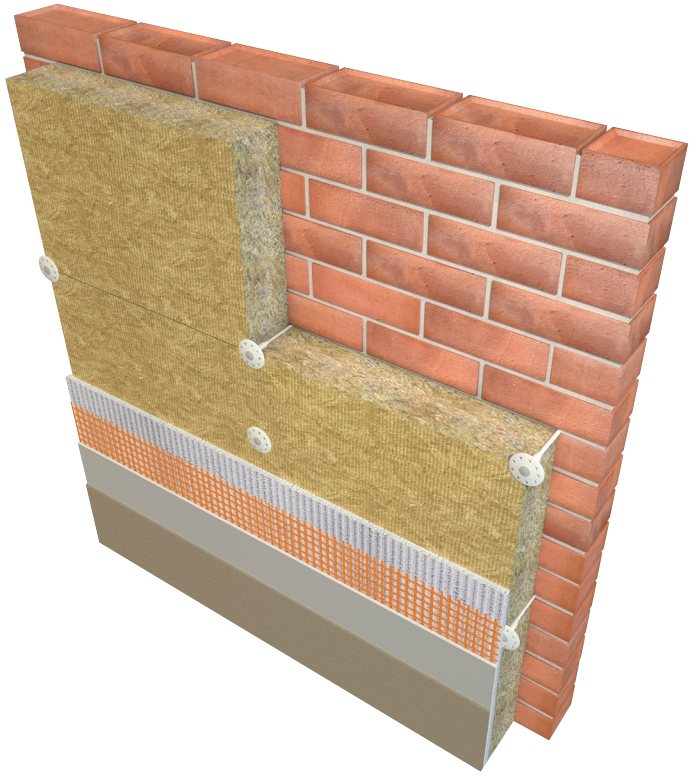
External wall insulation

Typical U-values

Using Rocksilk® EWI Slab - Refurbishment

Thickness (mm)	**U-value** (W/m²K)	
	225mm solid brick wall (0.77 W/mK)	**215mm solid block wall** (0.45 W/mK)
200*	0.17	0.16
180*	0.18	0.18
160*	0.20	0.20
140*	0.23	0.22
120	0.26	0.25
100	0.31	0.29

**Thicknesses above 120mm are bespoke and subject to availability and minimum order quantities. Contact us for more details.*



Using Rocksilk® EWI Slab - New build

Thickness (mm)	**U-value** (W/m²K)		
	215mm solid block wall (0.34 W/mK)	**215mm solid block wall** (0.19 W/mK)	**215mm solid block wall** (0.16 W/mK)
200*	0.16	0.15	0.15
180*	0.17	0.16	0.16
160*	0.19	0.17	0.17
140*	0.21	0.20	0.19
120	0.24	0.22	0.22
100	0.28	0.25	0.24

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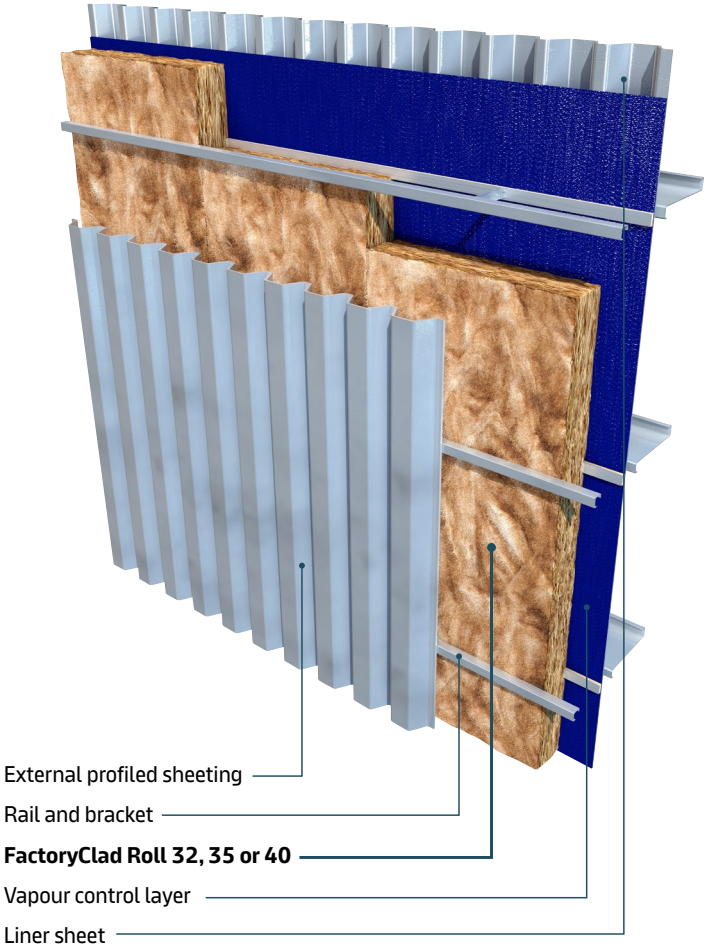
Built-up metal walls



Application overview

In a built-up metal wall, insulation is required for thermal performance to reduce unwanted heat loss through the wall, and acoustic performance to reduce unwanted sound, such as motorway traffic.

In this application, the mineral wool insulation is installed between a low profile metal liner sheet, separated from an outer, higher profile metal weather sheet.

Recommended product

FactoryClad Roll 32

Other suitable products

FactoryClad Roll 35

FactoryClad Roll 40

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Built-up metal walls

Typical U-values

Using FactoryClad Roll 32 with rails at 1.20m spacings

	U-value (W/m²K)	
	0.22	**0.16**
Thickness (mm)	160 (2x80)	240 (3x80)

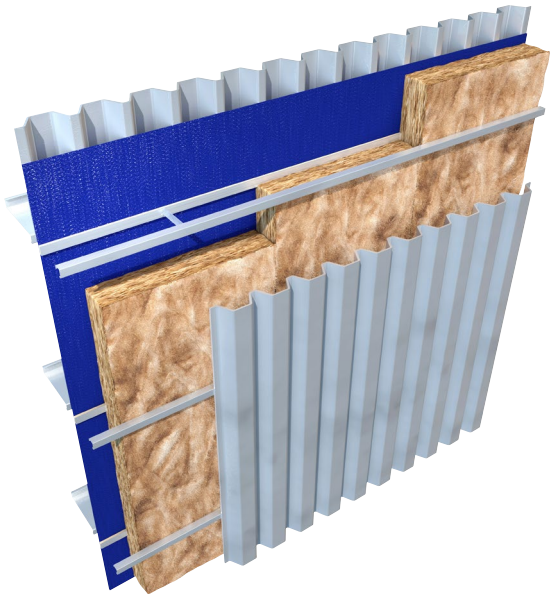
Using FactoryClad Roll 35 with rails at 1.20m spacings

	U-value (W/m²K)						
	0.28	**0.22**	**0.20**	**0.18**	**0.17**	**0.16**	**0.15**
Thickness (mm)	140	180	200	220	240	260	280

Using FactoryClad Roll 40 with rails at 1.20m spacings

	U-value (W/m²K)					
	0.26 - 0.25	**0.24 - 0.23 - 0.22**	**0.21**	**0.20 - 0.19**	**0.18**	**0.17 - 0.16**
Thickness (mm)	180	200	220	240	260	280

Note: Generic rail and bracket U-value calculations can be provided by our Technical Services Team, however, for proprietary rail and bracket systems and all standing seam systems, the system manufacturer should be consulted for project specific U-value calculations.



Note: The above tables should be used for guidance only.

Our Technical Services Team can calculate the specification of insulation needed to achieve specific U-values (including the effect of thermal bridging for simple rail and bracket systems) but normally you would consult the system manufacturer, which is also the case for standing seam systems.

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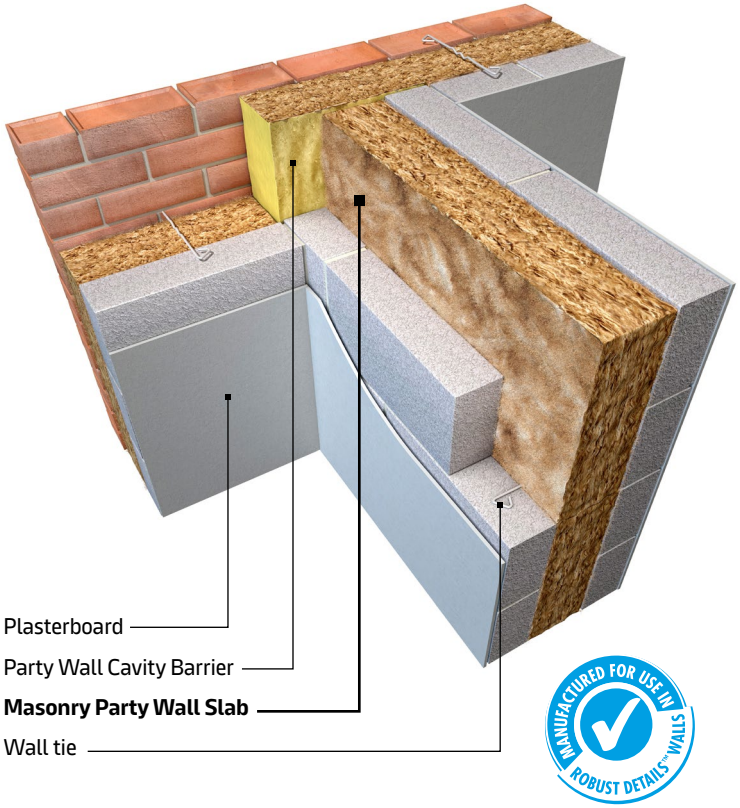
Separating (Party) Walls *Built-in*



Application overview

In a separating party wall, insulation is required, and should be fully-filled, for thermal performance to prevent heat loss through thermal bypass, and also for acoustic performance to reduce the noise transfer between dwellings.

In this application, the mineral wool insulation is installed as the walls are built, with slabs being friction fitted between the inner and outer leaves of the wall and in between wall ties.

In a party wall, it is important to use a build-up that features within a range of constructions registered in the Robust Details Handbook, reducing the need for on-site acoustic testing.

Recommended product (Masonry)

Masonry Party Wall Slab

Recommended product (Timber frame)

Timber Frame Party Wall Slab

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Separating (Party) Walls *Built-in*

Typical U-values

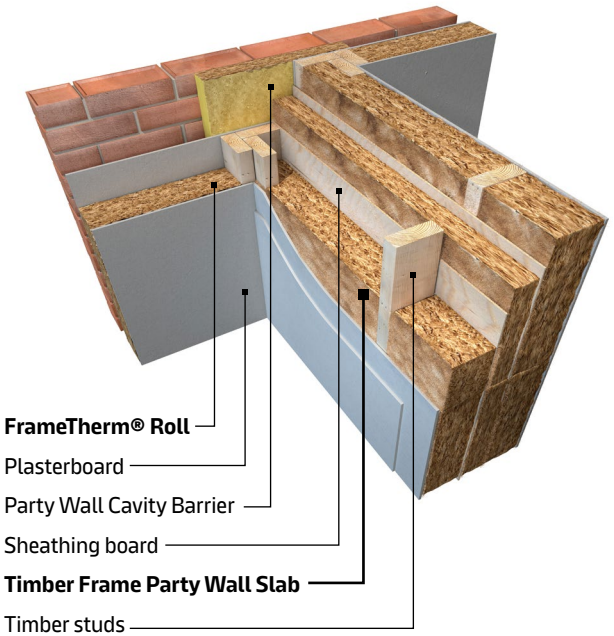
Using separating (party) wall - built-in

U-value (W/m^2K)	**Party Wall Construction**
0.0*	Solid
0.5	Unfilled cavity with no effective edge sealing
0.2	Unfilled cavity with effective edge sealing around all exposed edges and in line with insulation layers in abutting elements
0.0*	Fully filled cavity (e.g. by using Masonry Party Wall Slab or Timber Frame Party Wall Slab) and with effective edge sealing around all exposed edges and in line with insulation layers in abutting elements

** By either building a solid wall or fully filling a party wall cavity with mineral wool insulation results in a U-value of 0.0 W/m²K, i.e. zero heat loss.*

CLICK HERE for compatibility with Robust Detail walls

Timber Frame (Party) Separating Wall - Built-in



Note: The above tables should be used for guidance only.

Our Technical Services Team can calculate the specification of insulation needed to achieve specific U-values (including the effect of thermal bridging for simple rail and bracket systems) but normally you would consult the system manufacturer, which is also the case for standing seam systems.

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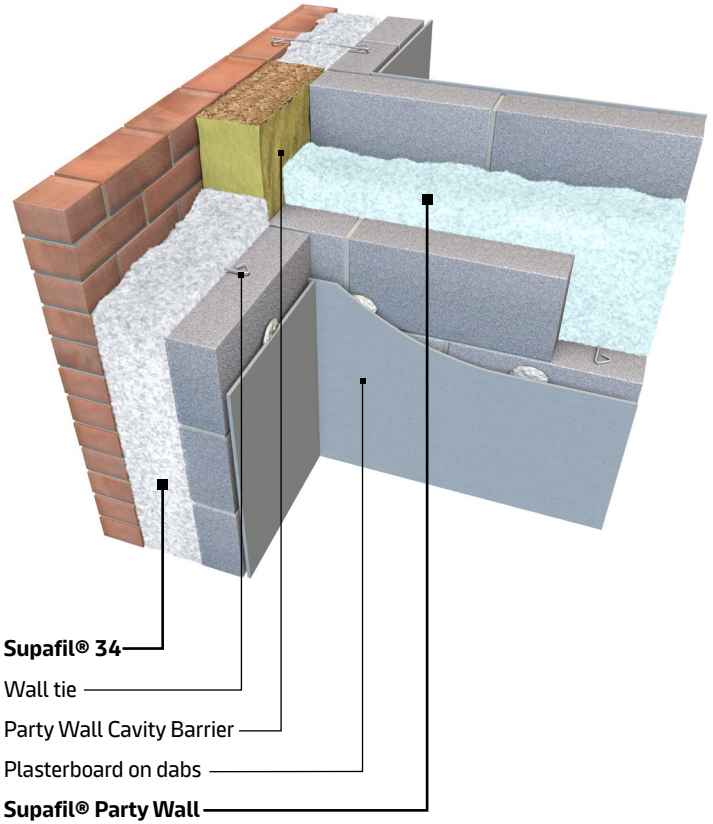
Separating (Party) Walls *Blown-in*



Application overview

In a separating party wall, insulation is required, and should be fully-filled, for thermal performance to prevent heat loss through thermal bypass, and also for acoustic performance to reduce the noise transfer between dwellings.

In this application, the mineral wool insulation (blowing wool) is injected into the wall cavity via a series of pre-drilled holes once the walls are fully built.

In a party wall, it is important to use a build-up that features within a range of constructions registered in the Robust Details Handbook, reducing the need for on-site acoustic testing.

Recommended product (Masonry)

MANUFACTURED FOR USE IN ROBUST DETAILS™ WALLS

Supafil® Party Wall

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Separating (Party) Walls *Blown-in*

Typical U-values

Using separating (party) wall - Blown-in

U-value (W/m^2K)	Party Wall Construction
0.0*	Solid
0.5	Unfilled cavity with no effective edge sealing
0.2	Unfilled cavity with effective edge sealing around all exposed edges and in line with insulation layers in abutting elements
0.0*	Fully filled cavity (e.g. by using Supafil® Party Wall), and with effective edge sealing around all exposed edges and in line with insulation layers in abutting elements

**By either building a solid wall or fully filling a party wall cavity with mineral wool insulation results in a U-value of 0.0 W/m²K, i.e. zero heat loss.*

Robust Detail Separating Walls and Party Wall Bypass Solutions - Supafil® Party Wall

Robust Detail Wall Type	Minimum Cavity Width (mm)	Block Type	Block Density (kg/m^3)	Wall Finish	Parge coat	Zero U-value
E-WM-1	75	Dense	1850 to 2300	Wet plaster	Yes	Yes
E-WM-2	75	Light aggregate	1350 to 1600	Wet plaster	Yes	Yes
E-WM-3	75	Dense	1850 to 2300	Plasterboard ($8kg/m^2$) on dabs	Yes	Yes
E-WM-4	75	Light aggregate	1350 to 1600	Plasterboard ($8kg/m^2$) on dabs	Yes	Yes
E-WM-5	75	Besblock 'Star Performer'	1528	Plasterboard ($8kg/m^2$) on dabs on cement render	Yes	Yes
E-WM-6	75	Aircrete	600 to 800	Plasterboard ($8kg/m^2$) on dabs on cement render	Yes	Yes
E-WM-10	75	Aircrete - thin joint	600 to 800	Plasterboard ($8kg/m^2$) on dabs on cement render	Yes	Yes
E-WM-11	100	Light aggregate (or nominated hollow or cellular blocks)	1350 to 1600	Plasterboard ($8kg/m^2$) on dabs	Yes	Yes
E-WM-12	75	Plasmor Aglite Ultima	1050	Plasterboard ($8kg/m^2$) on dabs	Yes	Yes
E-WM-13	75	Aircrete - thin joint	600 to 800	Plasterboard ($8kg/m^2$) on dabs on cement render	Yes	Yes
E-WM-16	100	Dense	1850 to 2300	Plasterboard ($9.6kg/m^2$) on dabs	Yes	Yes
E-WM-18	100	Dense	1850 to 2300	Wet plaster	Yes	Yes
E-WM-19	100	Dense or light aggregate (or nominated hollow or cellular blocks)	1350 to 1600 or 1850 to 2300	Plasterboard on dabs on cement render	Yes	Yes
E-WM-21	100	Light aggregate	1350 to 1600	Wet plaster	Yes	Yes
E-WM-26	100	Besblock 'Star Performer'	1528	Plasterboard ($10kg/m^2$) on dabs	No	Yes
E-WM-28	100	Light aggregate	1350 to 1600	Plasterboard ($8kg/m^2$) on dabs	No	Yes
E-WM-30	100	Aircrete - standard and thin joint	600 to 800	Plasterboard ($8kg/m^2$) on dabs	No	Yes
E-WM-31	100	H+H - Celcon Elements - thin joint	575	Plasterboard ($8kg/m^2$) on dabs	No	Yes

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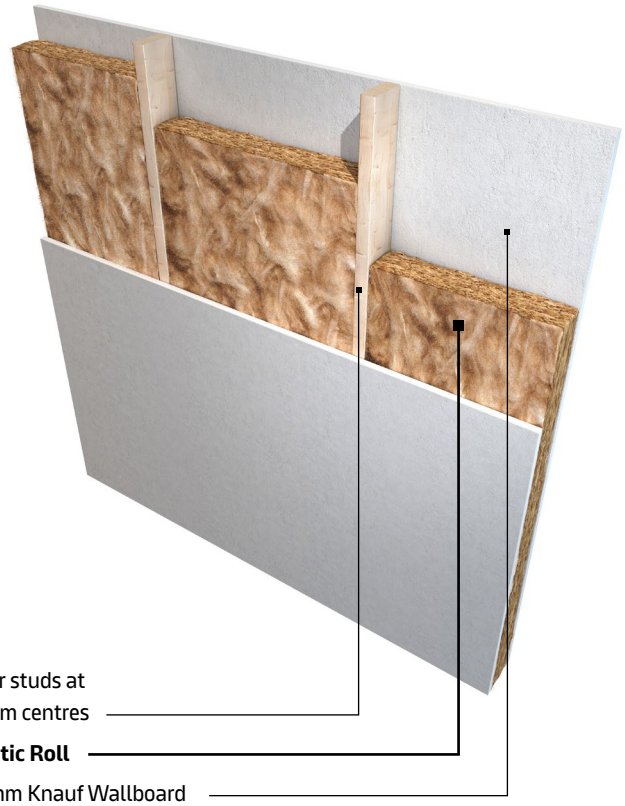
Internal walls



Application overview

In an internal partition wall, insulation is required for acoustic performance to provide sound absorption to contribute to reduction of noise between rooms.

In this application, the acoustic mineral wool insulation is friction fitted between metal or timber studs and finished with plasterboard on either side. Internal walls can incorporate different types of plasterboard, as well as variations in the type or orientation of studwork, all of which affect the levels of acoustic performance of the entire system.

Recommended product

Acoustic Roll

Other suitable products

OmniFit® Slab 35
Rocksilk® RS45
Rocksilk® Flexible Slab
Heraklith® A2 Tektalan SmartTec
Heraklith® A2 Decorative Panel

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Internal walls - Sound insulation performance

Timber stud partitions

Stud Size (mm)	Facing	Thickness of insulation (mm)	Sound insulation (R_wdB)
63x38	12.5mm standard plasterboard each side	None	35
63x38	12.5mm standard plasterboard each side	50mm Acoustic Roll	40
63x38	12.5mm Knauf Soundshield each side	50mm Acoustic Roll	44

Metal stud partitions

Stud type	Stud Size (mm)	Facing	Thickness of insulation (mm)	Sound insulation (R_wdB)
50mm C stud	600 c/s	12.5mm Knauf Wallboard each side	25mm Acoustic Roll	43
70mm C stud	600 c/s	15mm Knauf Fireshield each side	25mm Acoustic Roll	49
50mm C stud	600 c/s	2 layers of 12.5mm Knauf Soundshield each side	25mm Acoustic Roll	54
70mm C stud	600 c/s	2 layers of 12.5mm Knauf Fireshield each side	50mm Acoustic Roll	54

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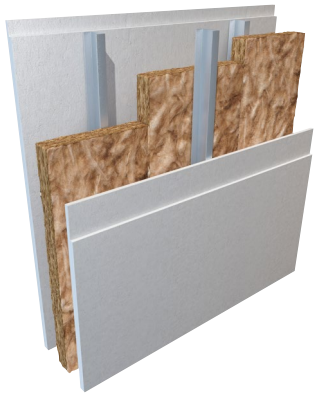
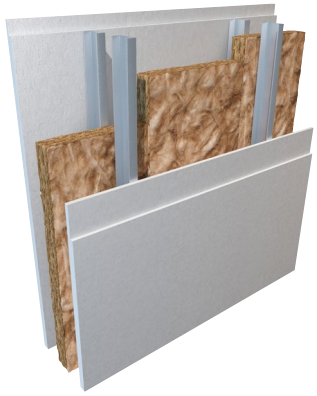
Internal walls - Sound insulation performance



Staggered metal stud partitions

Stud type	Channel size	Facing	Thickness of insulation (mm)	Sound insulation (R_wdB)
60mm 'I' stud	72mm	2 layers of 12.5mm Knauf Soundshield each side	50mm Acoustic Roll	57
92mm 'I' stud	148mm	2 layers of 15mm Knauf Soundshield each side	50mm Acoustic Roll	62



Twin metal stud partitions

Stud type	Facing	Thickness of insulation (mm)	Sound insulation (R_wdB)
92mm C stud	19mm Knauf Plank and two layers of 12.5mm Wallboard each side	100mm Acoustic Roll	69
146mm C stud	19mm Knauf Plank and two layers of 12.5mm Wallboard each side	100mm Acoustic Roll	74

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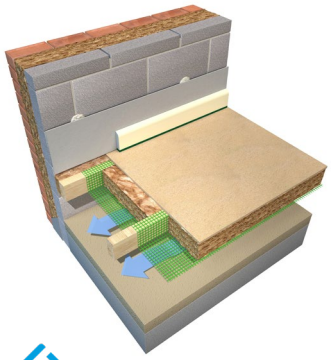
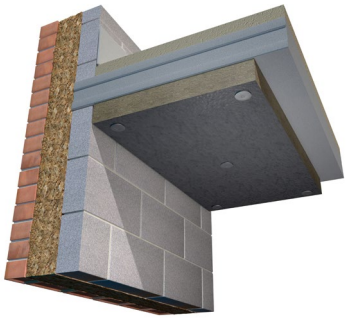
KNAUF INSULATION

FLOORS



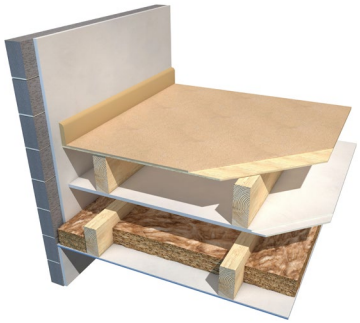
Suspended Timber Ground Floor



Structural Soffit Floors

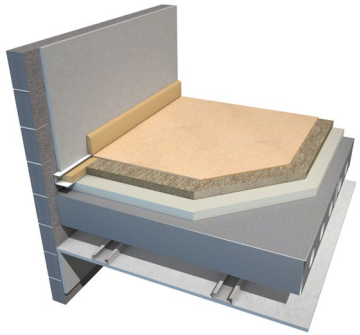
Separating Timber Floor

Internal Floor

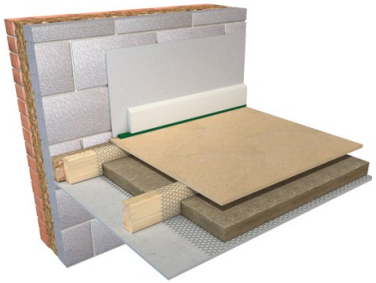


Separating Timber Floor
Upgrade to an existing timber floor with new ceilings

Separating Timber Floor
Upgrade to an existing timber floor with new platform floor



Separating Concrete Floor



Loft Conversion Floor

July 2024

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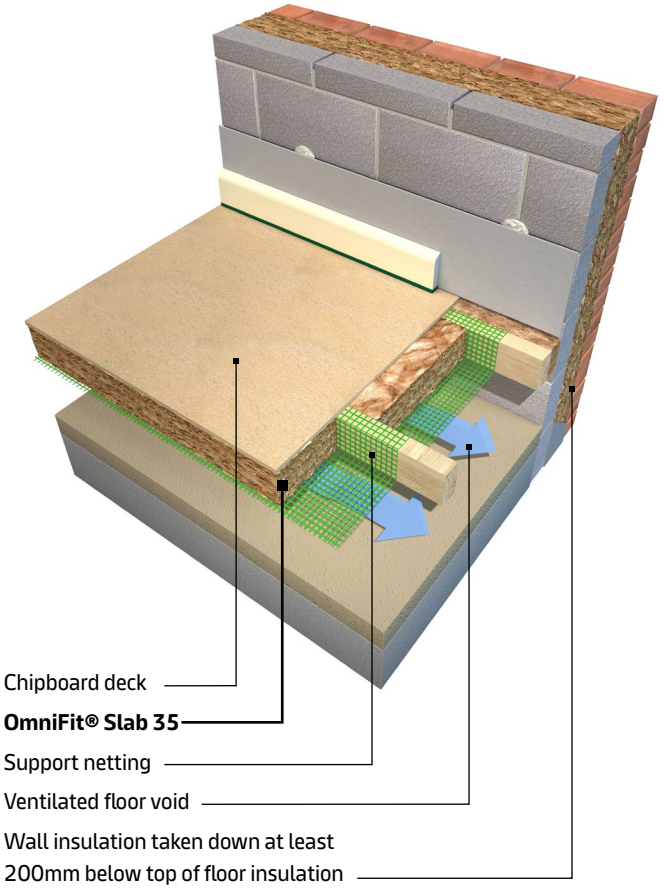
Suspended timber ground floor



Application overview

In a suspended timber ground floor, insulation is required for thermal performance to reduce unwanted heat loss through the floor.

In this application, the mineral wool insulation is installed between the joists and supported on netting (e.g. polypropylene) or timber battens.

Recommended products

OmniFit® Roll 34
from above

OmniFit® Slab 35
from below

Rocksilk® Flexible Slab
from below

Other suitable products

Rocksilk® RS45

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Suspended timber ground floor

Typical U-values

Using OmniFit® Slab 35 between joists

Floor joist thickness (mm)	U-value (W/m²K)							
	Ratio of perimeter to area (p/a) (m²)							
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
250 (100+150mm)	0.10	0.12	0.13	0.13	0.13	0.14	0.14	0.14
200 (2x100mm)	0.11	0.14	0.15	0.15	0.16	0.16	0.16	0.17
150	0.13	0.16	0.18	0.19	0.20	0.20	0.20	0.21
100	0.15	0.20	0.23	0.24	0.26	0.26	0.27	0.28

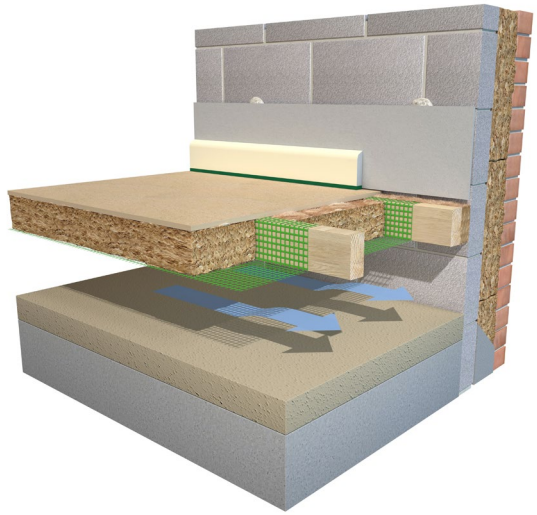
Using Rocksilk® Flexible Slab between joists

Floor joist thickness (mm)	U-value (W/m²K)							
	Ratio of perimeter to area (p/a) (m²)							
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
250 (100+150mm)	0.10	0.12	0.13	0.14	0.15	0.14	0.14	0.14
200 (2x100mm)	0.12	0.14	0.15	0.16	0.16	0.17	0.17	0.17
150	0.13	0.17	0.18	0.20	0.20	0.21	0.21	0.21
100	0.16	0.21	0.23	0.25	0.26	0.27	0.28	0.28

Using OmniFit® Slab 40 between joists

Floor joist thickness (mm)	U-value (W/m²K)							
	Ratio of perimeter to area (p/a) (m²)							
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
250 (100+150mm)	0.11	0.13	0.14	0.14	0.15	0.15	0.15	0.15
200 (2x100mm)	0.12	0.15	0.16	0.17	0.17	0.18	0.18	0.18
150	0.14	0.17	0.19	0.20	0.21	0.22	0.22	0.23
100	0.16	0.21	0.24	0.26	0.27	0.28	0.29	0.30

Note: The U-values have been calculated assuming that the timber joists are 38mm wide at 600mm centres. Floor covering assumed 19mm chipboard.



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Structural soffit floors

Application overview

In a structural soffit floor, insulation is required for thermal, fire safety and acoustic performance to enhance the comfort of the habitable space above the soffit floor.

In this application, the mineral wool insulation can be fixed from below, allowing the floor to be insulated and finished in once process without losing space in the habitable space above.

If aesthetics are an important consideration, a rock mineral wool board can be combined with a wood wool panel or an alternative facing to improve the appearance of the soffit area.

Recommended products

Rocksilk® Soffit Linerboard Standard
Rocksilk® Soffit Linerboard Extra

Heraklith® Tektalan A2 SmartTec

Heraklith® A2 Decorative Panel

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Structural soffit floors

Typical U-values

Using Rocksilk® Soffit Linerboard Standard in a structural soffit floor

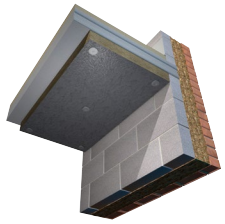
Thickness (mm)	**U-value** (W/m²K)	
	Reinforced Concrete (RC) Floor Slab 150 - 300mm 2.500 (W/mK)	**Precast plank 150mm** 1.300 (W/mK)
295 (220+75)	0.12	0.12
270 (220+50)	0.13	0.13
220	0.15	0.15
185	0.18	0.18
160	0.21	0.20
130	0.25	0.25

Note: Calculated with 50mm Screed finish k=1.150 and 1 steel fixing per slab.

Using Rocksilk® Soffit Linerboard Extra in a structural soffit floor

Thickness (mm)	**U-value** (W/m²K)	
	Reinforced Concrete (RC) Floor Slab 150 - 300mm 2.500 (W/mK)	**Precast plank 150mm** 1.300 (W/mK)
295 (220/6*+**75)	0.12	0.12
270 (220/6*+**50)	0.13	0.13
220/6*	0.15	0.15
185/6*	0.18	0.18
160/6*	0.21	0.20
130/6*	0.25	0.24

*Note: Calculated with 50mm Screed finish k=1.150 and 1 steel fixing per slab. Thermal conductivity of facing board = 0.240 W/mK. * The / 6 is for the cement fibre flat sheet **denotes standard product.*



Rocksilk® Soffit Linerboard

Rocksilk® Soffit Linerboard Extra

Heraklith® Tektalan A2 SmartTec

Using Heraklith® Tektalan A2 SmartTec to a structural soffit Floor

Thickness (mm)	**U-value** (W/m²K)		
	2 fixings: 3.33m². 26.0mm² K=51.9	**4 fixings:** 6.67m². 26.0mm² K=51.9	**5 fixings (Fire Rated)** 8.33m³, 26.0mm² K=51.9
225	0.16	-	0.18
200	0.18	-	0.21
175	0.21	-	0.24
150	0.24	-	0.27
125	0.29	-	0.32
100	0.36	-	0.40
75	-	0.50	0.52
50	-	0.72	0.74

Note: Calculated with 50mm Screed finish K=1.150 & 150mm reinforced concrete 2% Steel K=2.500 (BS12524)

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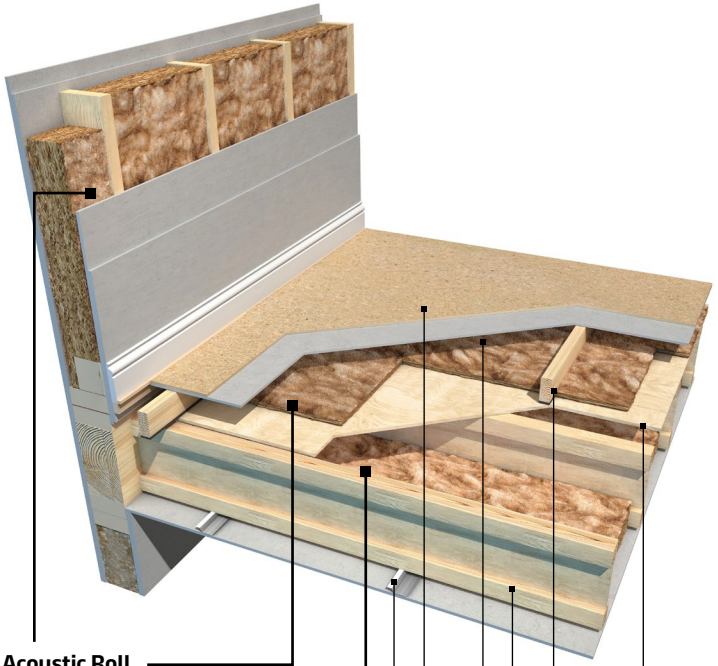
Separating timber floors



Acoustic Roll

100mm Acoustic Roll

Knauf Resilient Bar at 400mm centres

18mm chipboard spot bonded to 19mm Knauf Plank

One layer 19mm Knauf Plank and one layer12.5mm Knauf Soundshield

240mm deep engineered timber I beams

Timber battens with resilient foam base

Sub-deck

Application overview

In a separating timber floor, insulation is required for acoustic performance to reduce unwanted impact sound on the room below.

In this application, multiple layers of acoustic mineral wool insulation are friction fitted between timber batterns and combined with layers of chipboard and floorboards to comply with construction details that are registered in the Robust Details Handbook

If upgrading an existing floor, the existing timber joist floor is overlaid with hardboard and a new independent timber joist ceiling containing absorbent mineral wool is installed below, or it is overlaid with a new floating platform (min 25kg/m^2) on a resilient layer of acoustic insulation.

Recommended products

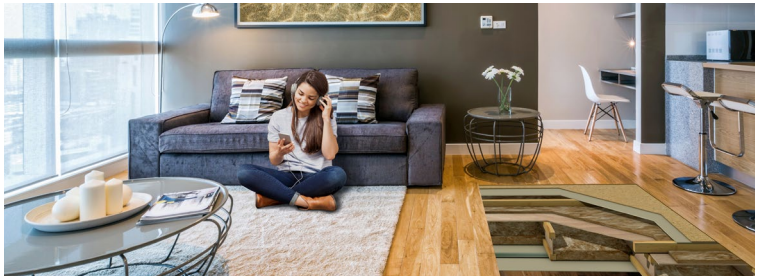
Acoustic Roll

Other suitable products

OmniFit® Roll 40

OmniFit® Slab 35

Rocksilk® Flexible Slab



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Separating timber floors

Robust Details

	Robust Detail Handbook reference	Joist Type	Acoustic Roll	OmniFit® Roll 40	OmniFit® Slab 35	Rocksilk® Flexible Slab
Timber Separating Floors	E-FT-1	Timber I-joists	✓	✓	✓	✓
	E-FT-2	Timber solid joists	✓	✓	✓	✓
	E-FT-3	Timber flange and metal web joists	✓	✓	✓	✓
	E-FT-4	Finnforest SoundBar Systems	✓	✓	✓	✓
	E-FT-5	Timber I-joists	✓	✓	✓	✓
	E-FT-6	Timber flange and metal web joists	✓	✓	✓	✓
	E-FT-7	Timber I-joists	✓	✓	✓	✓
	E-FT-8	Timber solid joists	✓	✓	✓	✓

Why mineral wool?

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Technical Services Team

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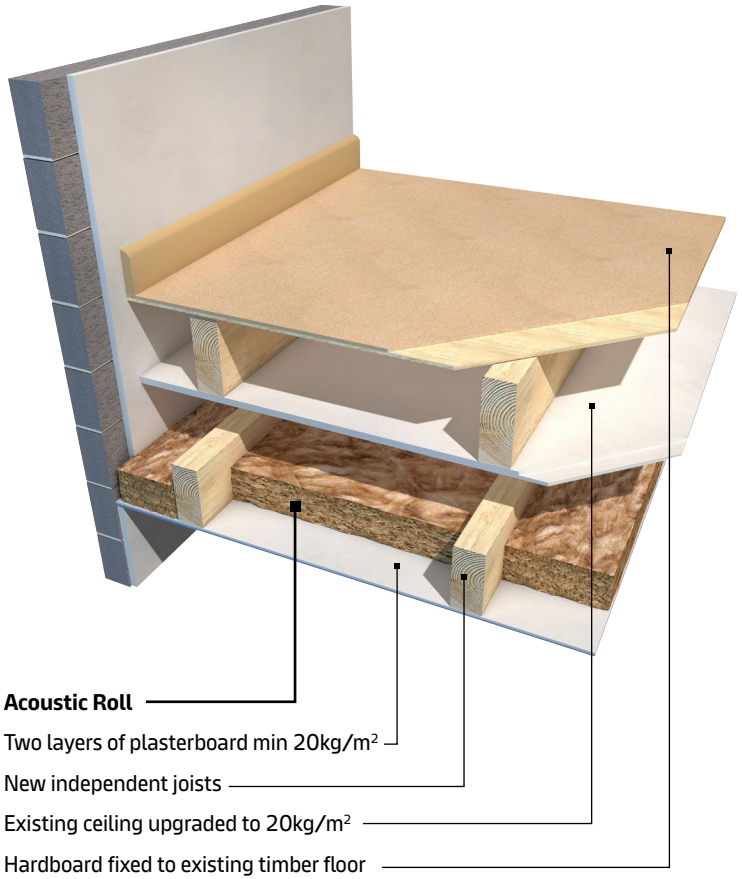
Separating timber floors *Upgrade to an existing timber floor with new ceiling*



Application overview

In a separating timber floor, insulation is required for acoustic performance to reduce unwanted impact sound on the room below.

In this application, multiple layers of acoustic mineral wool insulation are friction fitted between timber batterns and combined with layers of chipboard and floorboards to comply with construction details that are registered in the Robust Details Handbook

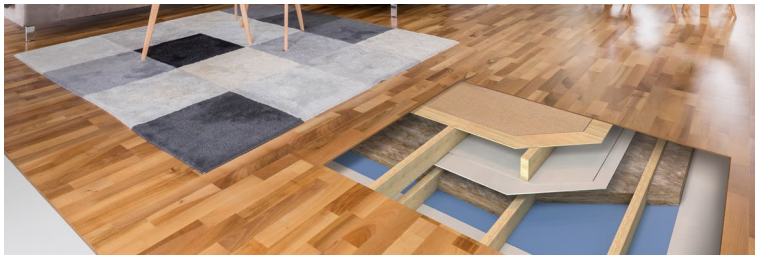
If upgrading an existing floor, the existing timber joist floor is overlaid with hardboard and a new independent timber joist ceiling containing absorbent mineral wool is installed below, or it is overlaid with a new floating platform (min 25kg/m²) on a resilient layer of acoustic insulation.

Recommended products

Acoustic Roll

Other suitable products

OmniFit® Roll 40
OmniFit® Slab 35
Rocksilk® RS45
Rocksilk® Flexible Slab



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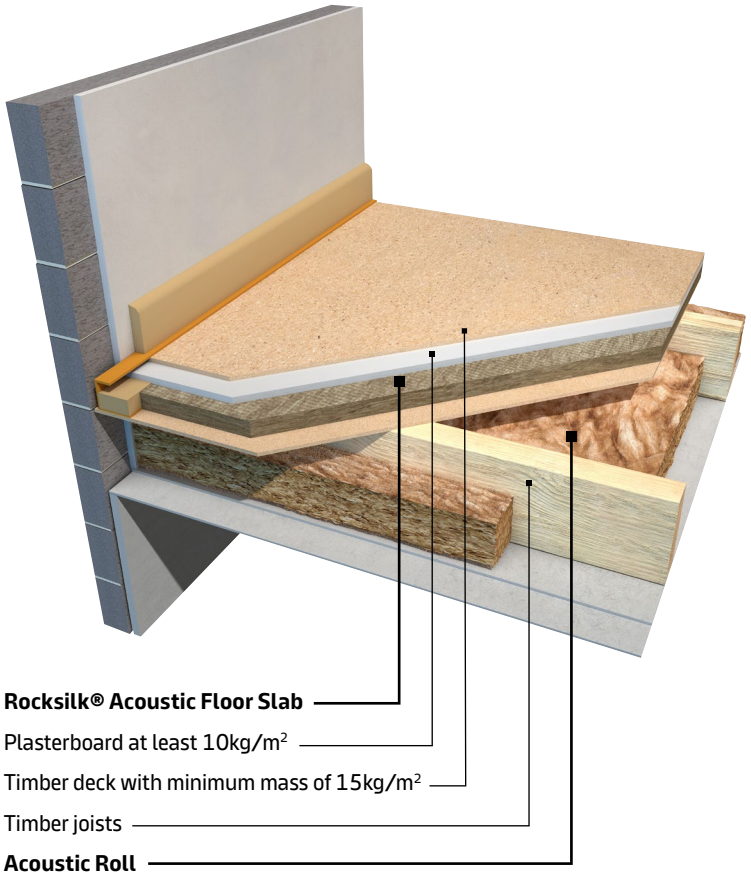
Separating timber floors *Upgrade to an existing timber floor with new platform floor*



Application overview

In a separating timber floor, insulation is required for acoustic performance to reduce unwanted impact sound on the room below.

In this application, multiple layers of acoustic mineral wool insulation are friction fitted between timber batterns and combined with layers of chipboard and floorboards to comply with construction details that are registered in the Robust Details Handbook

If upgrading an existing floor, the existing timber joist floor is overlaid with hardboard and a new independent timber joist ceiling containing absorbent mineral wool is installed below, or it is overlaid with a new floating platform (min 25kg/m²) on a resilient layer of acoustic insulation.

Recommended products

Acoustic Roll

Rocksilk® Acoustic Floor Slab

Other suitable products

OmniFit® Roll 40
OmniFit® Slab 35
Rocksilk® RS45
Rocksilk® Flexible Slab

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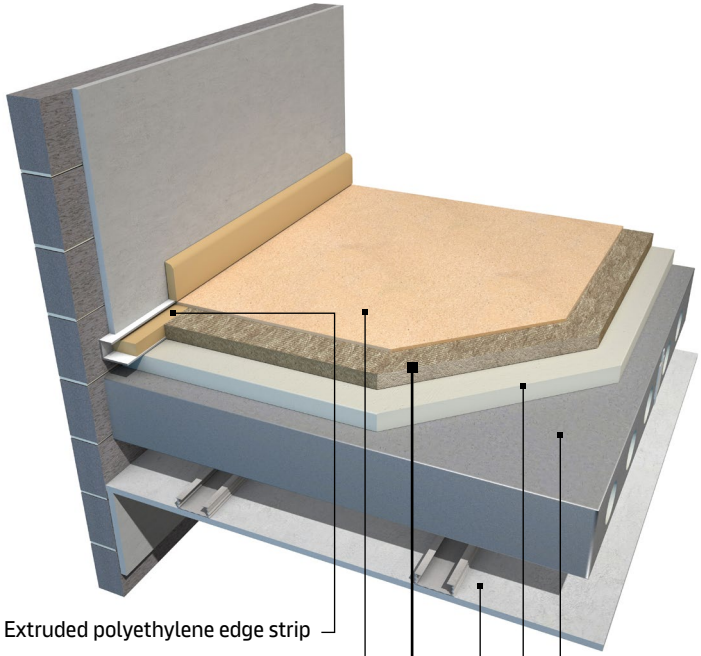
Separating concrete floor



Extruded polyethylene edge strip

18mm chipboard

Rocksilk® Acoustic Floor Slab / Plus

15mm plasterboard supported by Knauf C Form II Ceiling System, minimum 75mm separation

40mm (min) screed directly applied to plank cement/sand or proprietary screed nominal 80 kg/m^2 mass per unit area

Minimum 150mm precast concrete slab (minimum 300kg/m^2 mass)

	Robust Detail Handbook reference	Acoustic Floor Slab Plus
Concrete Floors	E-FC-1, E-FC-2	✓
Steel concrete composite floors	E-FS-1	✓

Application overview

In a separating concrete floor, insulation is required for insulation is required for acoustic performance to reduce unwanted sound on the room below.

In this application, the high-density mineral wool insulation is installed on top of a layer of screen that has been poured onto the precast concrete slab.

There are a wide range of solutions for this application which comply with constructions registered in the Robust Details Handbook.

Recommended product

Rocksilk® Acoustic Floor Slab/Plus

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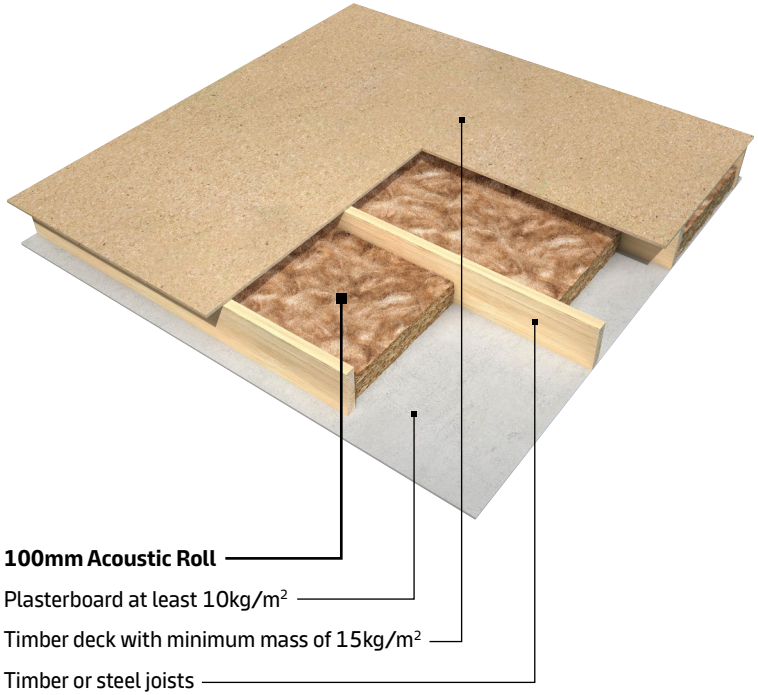
Internal floor



Application overview

In an internal floor, insulation is required for acoustic performance to reduce unwanted impact sound on the room below.

In this application, a minimum thickness of 100mm acoustic mineral wool insulation is friction fitted between timber or steel joists, sandwiched between a layer of plasterboard, and a timber deck.

Recommended products

Acoustic Roll

Other suitable products

OmniFit® Roll 40
OmniFit® Slab 35
Rocksilk® RS45
Rocksilk® Flexible Slab

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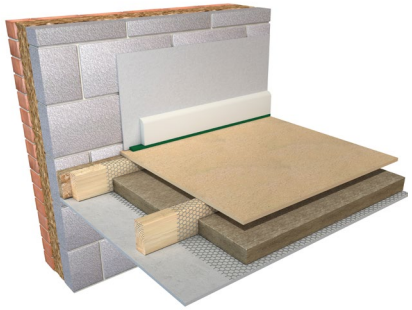
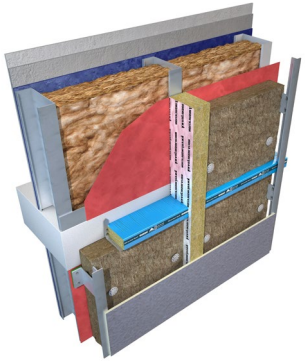
FIRE PROTECTION



Loft Conversion Floor



Cavity Barriers

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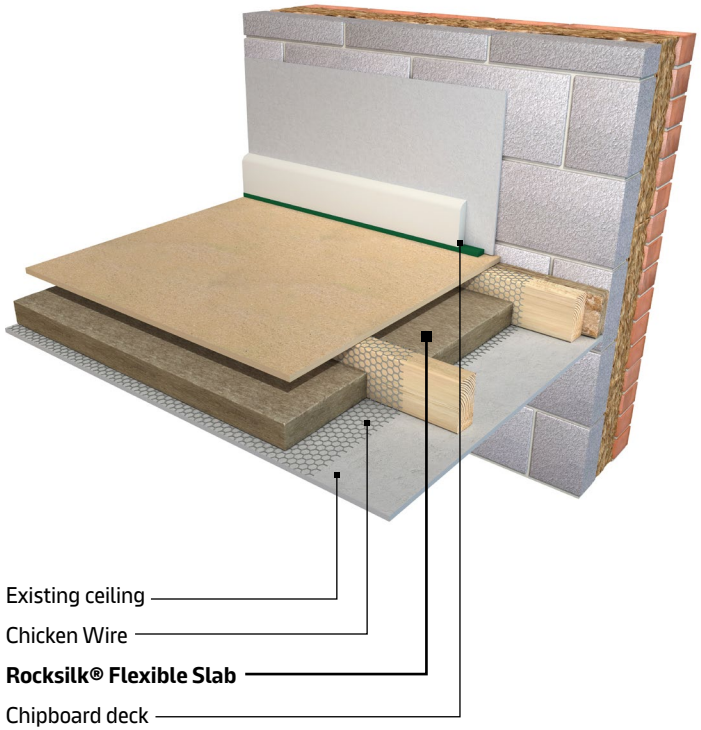
Loft conversion floor



Application overview

In the floor of a loft conversion, insulation is required for fire safety as well as acoustic performance. When the loft of a two-storey dwelling is converted into habitable accommodation, the floor to the new rooms must have a minimum 30 minutes fire resistance over any part of the escape route directly below.

In this application, the mineral wool insulation is fitted onto a bed of chicken wire between timber studs.

Recommended products

Rocksilk® Flexible Slab is tested to provide

60 minutes

fire resistance in loft conversion floors.

Rocksilk® Flexible Slab

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CURED GLASS MINERAL WOOL PRODUCTS

Loft Rolls

FactoryClad Rolls

FrameTherm® Rolls

Rafter Roll

Acoustic Roll

OmniFit® Rolls

DriTherm® Cavity Slabs

Masonry Party Wall Slab

Timber Frame Party Wall Slab

OmniFit® Slabs

KNAUF INSULATION

Loft Rolls 40 and 44

Product description

Loft Rolls are glass mineral wool rolls, designed for insulating cold pitched roofs at ceiling level and offering thermal conductivity between 0.040 W/mK and 0.044 W/mK.

They are non-combustible with the best possible Euroclass A1 reaction to fire classification, and are manufactured using our unique bio-based binder, ECOSE® Technology.

Benefits

- Cost effective solution for cold lofts where the thickness of insulation is unrestricted.
- Available in combi-cut, ready cut and uncut formats giving a wide range of choice to suit specific install requirements (Loft Roll 40 is only available in combi-cut format).
- Manufactured in two different options; long lengths to allow quick and simple installation maximising efficiency, and shorter lengths for ease of handling on-site (Loft Roll 40 is not availble in short length).

Certification, accreditations & industry standards

Solutions

Pitched Roofs
Ceiling Level

NON-COMBUSTIBLE INSULATION

with ECOSE TECHNOLOGY

THERMAL

0.032		0.040		0.044

VAPOUR RESISTIVITY

5.00 MNs/g.m

EUROCLASS REACTION TO FIRE CLASSIFICATION

A1	A2-s1,d0	B	C	D	E	F

GENERIC BRE GREEN GUIDE RATING

A+	A	B	C	D	E

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Loft Rolls 40 and 44

LOFT ROLL 40 (COMBI-CUT)

NON-COMBUSTIBLE INSULATION

Thickness (mm)	Thermal conductivity (W/mK)	Thermal resistance (m^2K/W)	Length (m)	Width (mm)	Area per pack (m^2)	Rolls per pallet	Pallet product code
200	0.040	5.00	4.85	1140 (2x570/3x380)	5.529	24	2404169
150	0.040	3.75	7.53	1140 (2x570/3x380)	8.584	24	2404166
100	0.040	2.50	11.25	1140 (2x570/3x380)	12.825	24	2404167

LOFT ROLL 44 (COMBI-CUT)

NON-COMBUSTIBLE INSULATION

200	0.044	4.50	6.00	1140 (2x570/3x380)	6.840	24	715820
170	0.044	3.85	7.03	1140 (2x570/3x380)	8.014	24	2404156
150	0.044	3.40	8.05	1140 (2x570/3x380)	9.177	24	2404155
100	0.044	2.25	12.18	1140 (2x570/3x380)	13.885	24	2404154

LOFT ROLL 44 (COMBI-CUT) SHORTER LENGTHS

200	0.044	4.50	4.82	1140 (2x570/3x380)	5.501	30	766204
170	0.044	3.85	5.070	1140 (2x570/3x380)	6.498	30	766250
150	0.044	3.40	6.45	1140 (2x570/3x380)	7.353	30	766202
100	0.044	2.25	9.72	1140 (2x570/3x380)	11.087	30	766251

LOFT ROLL 44 (READY-CUT)

200	0.044	4.50	6000	1140	6.840	24	715824
150	0.044	3.40	8.05	2x570	9.177	24	2404163
100	0.044	2.25	12.18	2x570	13.885	24	2404161

LOFT ROLL 44 (UNCUT)

200	0.044	4.50	6.000	1140	6.840	24	743252
150	0.044	3.40	8.050	1140	9.177	24	2438878
100	0.044	2.25	12.180	1140	13.885	24	2438877

All dimensions are nominal.

FactoryClad Rolls 32, 35 and 40

Product description

FactoryClad Rolls are glass mineral wool rolls, designed for use in built-up metal roofs and walls, and offering thermal conductivity between 0.032 W/mK and 0.040 W/mK.

They are non-combustible with the best possible Euroclass A1 reaction to fire classification, and are manufactured using our unique bio-based binder, ECOSE® Technology.

Benefits

- Wide range of thicknesses, up to 300mm (depending on the product).
- High tear strength, for ease of installation and durability.
- Rolls are 1200mm wide for speed of installation.
- Can be used as a sound absorbent lining in conjunction with perforated metal liner sheets to control reverberation of internal sound.

Certification, accreditations & industry standards

Solutions

Built-up Metal Roofs

Built-up Metal Walls

NON-COMBUSTIBLE INSULATION

with ECOSE TECHNOLOGY

THERMAL

0.032		0.035		0.040		0.044

VAPOUR RESISTIVITY

5.00 MNs/g.m

EUROCLASS REACTION TO FIRE CLASSIFICATION

A1	A2-s1,d0	B	C	D	E	F

GENERIC BRE GREEN GUIDE RATING

A+	A	B	C	D	E

Build on us.

FactoryClad Rolls 32, 35 and 40

FACTORYCLAD ROLL 32 (UNCUT)

NON-COMBUSTIBLE INSULATION with ECOSE

Thickness (mm)	Thermal conductivity (W/mK)	Thermal resistance (m^2K/W)	Length (m)	Width (mm)	Area per pack (m^2)	Rolls per pallet	Pallet product code
80	0.032	2.50	5.00	1200	6.000	24	2400379

FACTORYCLAD ROLL 35 (UNCUT)

NON-COMBUSTIBLE INSULATION with ECOSE

220	0.035	6.25	3.00	1200	3.600	24	791350
180	0.035	5.10	3.65	1200	4.380	24	791351
140	0.035	4.00	4.70	1200	5.640	24	791352
100	0.035	2.85	6.60	1200	7.920	24	791354
60	0.035	1.70	11.00	1200	13.200	24	791355

FACTORYCLAD ROLL 40 (UNCUT)

NON-COMBUSTIBLE INSULATION with ECOSE

300	0.040	7.50	3.20	1200	3.840	24	612931
280	0.040	7.00	3.45	1200	4.140	24	612929
260	0.040	6.50	3.70	1200	4.440	24	2439994
240	0.040	6.00	4.70	1200	5.640	24	709932
220	0.040	5.50	4.35	1200	5.220	24	2411649
200	0.040	5.00	4.85	1200	5.820	24	2402003
180	0.040	4.50	6.26	1200	7.512	24	2402002
160	0.040	4.00	7.05	1200	8.460	24	2402001
140	0.040	3.50	8.02	1200	9.624	24	2402000
120	0.040	3.00	9.40	1200	11.280	24	2401999
100	0.040	2.50	11.25	1200	13.500	24	2401998
80	0.040	2.00	14.10	1200	16.920	24	2401997

All dimensions are nominal.

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FrameTherm® Rolls 32, 35 AND 40

Product description

FrameTherm® Rolls are glass mineral wool rolls, designed for use in timber frame applications between studwork, and offering thermal conductivity between 0.032 W/mK and 0.040 W/mK.

They are non-combustible with the best possible Euroclass A1 reaction to fire classification, and are manufactured using our unique bio-based binder, ECOSE® Technology.

Benefits

- Designed to friction fit between timber studs, which prevents air movement and infiltration through or around the insulation, minimising heat loss.
- Rolls are ready-cut into either 2x570mm or 3x380mm to suit commonly used timber stud spacing (2x570mm only for FrameTherm® Roll 40).
- Manufactured from mineral wool which provides the best levels of sound absorption and reduction compared to other mainstream insulants.

Certification, accreditations & industry standards

Solutions

Timber Frame Walls
Built-in insulation between studs with partially filled cavity

Pitched Roofs
Rafter Level

NON-COMBUSTIBLE INSULATION

with ECOSE® TECHNOLOGY

THERMAL

0.032	0.035	0.040	0.044

VAPOUR RESISTIVITY

5.00 MNs/g.m

EUROCLASS REACTION TO FIRE CLASSIFICATION

A1	A2-s1,d0	B	C	D	E	F

GENERIC BRE GREEN GUIDE RATING

A+	A	B	C	D	E

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FrameTherm® Rolls 32, 35 AND 40

FRAMETHERM® ROLL 32 (READY-CUT)

NON-COMBUSTIBLE INSULATION

with ECOSE

Thickness (mm)	Thermal conductivity (W/mK)	Thermal resistance (m^2K/W)	Length (m)	Width (mm)	Area per pack (m^2)	Rolls per pallet	Pallet product code
140	0.032	4.35	2.80	2x570	3.192	24	2435999
90	0.032	2.80	4.50	2x570	5.130	24	2402014
140	0.032	4.35	2.80	3x380	3.192	24	292208
90	0.032	2.80	4.50	3x380	5.130	24	605745

FRAMETHERM® ROLL 35 (READY-CUT)

NON-COMBUSTIBLE INSULATION

with ECOSE

140	0.035	4.00	3.90	2x570	4.446	24	2407395
90	0.035	2.55	6.00	2x570	6.840	24	2407396
140	0.035	4.00	3.90	3x380	4.446	24	605754
90	0.035	2.55	6.00	3x380	6.840	24	605752

FRAMETHERM® ROLL 40 (READY-CUT)

NON-COMBUSTIBLE INSULATION

with ECOSE

140	0.040	3.50	8.02	2x570	9.143	24	498560
90	0.040	2.25	12.50	2x570	14.250	24	498196

All dimensions are nominal.

Rafter Roll 32

Product description

Rafter Roll 32 is a glass mineral wool roll, designed for use in warm roofs for insulating the rafters. It offers the best thermal conductivity of 0.032 W/mK in our range.

Rafter Roll 32 is non-combustible with the best possible Euroclass A1 reaction to fire classification, and is manufactured using our unique bio-based binder, ECOSE® Technology.

Benefits

- Best thermal performance in our range.
- Rolls are 1200mm wide to allow cutting for installation at varying rafter centre dimensions, providing flexibility on-site.
- Manufactured from mineral wool which provides the best levels of sound absorption and reduction compared to other mainstream insulants.

Certification, accreditations & industry standards

Solutionsv

Pitched Roofs
Rafter Level

NON-COMBUSTIBLE INSULATION

with ECOSE TECHNOLOGY

THERMAL

0.032		0.044

VAPOUR RESISTIVITY

5.00 MNs/g.m

EUROCLASS REACTION TO FIRE CLASSIFICATION

A1	A2-s1,d0	B	C	D	E	F

GENERIC BRE GREEN GUIDE RATING

A+	A	B	C	D	E

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Rafter Roll 32

NON-COMBUSTIBLE INSULATION

RAFTER ROLL 32 (UNCUT)

Thickness (mm)	Thermal conductivity (W/mK)	Thermal resistance (m^2K/W)	Length (m)	Width (mm)	Area per pack (m^2)	Rolls per pallet	Pallet product code
100	0.032	3.10	4.00	1200	4.800	24	2402020
75	0.032	2.30	5.25	1200	6.300	24	2402018

All dimensions are nominal.

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Wood wool

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Acoustic Roll

Product description

Acoustic Roll is a glass mineral wool roll, designed for use in internal wall and floor applications, offering sound absorption and noise reduction properties.

It is non-combustible with the best possible Euroclass A1 reaction to fire classification, and is manufactured using our unique bio-based binder, ECOSE® Technology.

Benefits

- Manufactured density in excess of 10kg/m³ to meet the requirements for an absorption layer in approved document E.
- Tested to meet the sound performance standards for type B internal, timber or metal stud, partitions in Approved Document E.
- Designed to fit between studs, reducing the potential for unwanted gaps and maximising sound insulation performance.
- Ready-cut rolls for quick and easy installation.
- Longer rolls for efficient handling, transport and storage.

Certification, accreditations & industry standards

Solutions

Internal Walls

Separating Floors Timber

Separating Floors Upgrade to an existing timber floor with new ceiling

Separating Floors Upgrade to an existing timber floor with platform floor

Internal Floors

NON-COMBUSTIBLE INSULATION

with ECOSE TECHNOLOGY

EUROCLASS REACTION TO FIRE CLASSIFICATION

A1	A2-s1,d0	B	C	D	E	F

VAPOUR RESISTIVITY

5.00 MNs/g.m

GENERIC BRE GREEN GUIDE RATING

A+	A	B	C	D	E

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Acoustic Roll

NON-COMBUSTIBLE INSULATION

with ECOSE

ACOUSTIC ROLL (READY-CUT)

Thickness (mm)	**Length** (m)	**Width** (mm)	**Area per pack** (m^2)	**Rolls per pallet**	**Pallet product code**
100	10.300	2 x 600	12.360	24	715843
100	10.300	3 x 400	12.360	24	715842
75	14.500	2 x 600	17.400	24	715841
63	15.000	2 x 600	18.000	24	603550
50	13.500	2 x 600	16.200	24	715837
25	11.100	4 x 600	26.640	24	715838

All dimensions are nominal.

Building Regulations compliant

Independent laboratory tested for proven use with major plasterboard brands.

✓ Knauf ✓Siniat ✓ British Gypsum

Contact our Technical Services Team for details on 01744 766 666 or technical.uk@knaufinsulation.com

Building Regulations

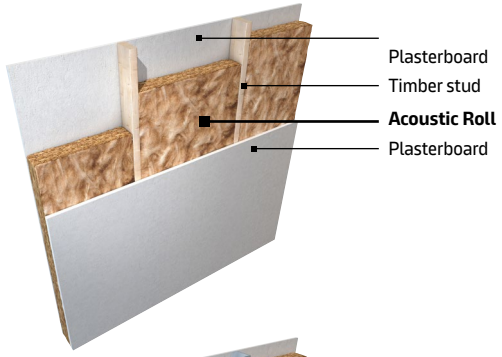
England and Wales: Approved Document E
Northern Ireland: Technical Booklet G

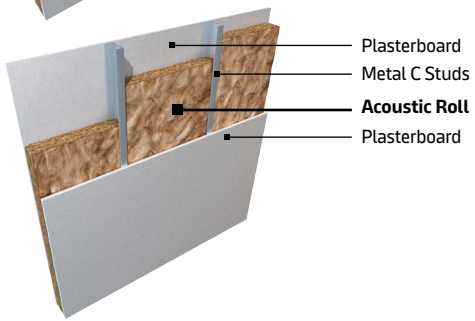
All internal walls between a bedroom or room containing a WC and another room must provide a minimum sound insulation of 40 R_w dB

Building Regulations

Scotland: Section 5

All internal walls between a bedroom or room containing a WC and another room must provide a minimum sound insulation of 43 RW dB





Omnifit® Rolls 34 and 40

Product description

OmniFit® Rolls are glass mineral wool rolls which are designed for use in multiple applications, offering thermal conductivity between 0.034 W/mK and 0.040 W/mK, combined with acoustic performance. They are non-combustible with the best possible Euroclass A1 reaction to fire classification, and are manufactured using our unique bio-based binder, ECOSE® Technology.

Our range of OmniFit® products come with range of sustainability credentials, including lower embodied carbon than alternative low density rock mineral wool products.

Benefits

- Multi-purpose product that can be used to insulate a wide range of applications, reducing the need to purchase and handle multiple products.
- Designed to friction fit between studs, which prevents air movement and infiltration around the edges, minimising heat loss.
- Compression packed with more product on a pallet than alternative rock mineral wool products.
- Exceeds minimum acoustic requirements for Part E of Building Regulations.
- OmniFit® Roll 34 holds an Agrèment certificate by the BBA (under reference number 24/7110) for use as an infill insulation in rainscreen façade systems.

Certification, accreditations & industry standards

Solutions

Pitched Roofs Ceiling Level

Pitched Roofs Rafter Level

Separating Floors Timber

Separating Floors Upgrade to an existing timber floor with new ceiling

Separating Floors Upgrade to an existing timber floor with platform floor

Suspended Timber Ground Floors

Frame Construction With Masonry Outer

Internal Floors

NON-COMBUSTIBLE INSULATION

with ECOSE® TECHNOLOGY

THERMAL

0.032	0.034		0.040		0.044

VAPOUR RESISTIVITY

5.00 MNs/g.m

EUROCLASS REACTION TO FIRE CLASSIFICATION

A1	A2-s1,d0	B	C	D	E	F

GENERIC BRE GREEN GUIDE RATING

A+	A	B	C	D	E

Omnifit® Rolls 34 and 40

NON-COMBUSTIBLE INSULATION

with ECOSE

OMNIFIT® ROLL 34 (UNCUT)

Thickness (mm)	Thermal conductivity (W/mK)	Thermal resistance (m^2K/W)	Length (m)	Width (mm)	Area per pack (m^2)	Rolls per pallet	Pallet product code
220*	0.034	6.45	2.50	1200	3.000	24	416121
180	0.034	5.25	3.00	1200	3.600	24	416113
150	0.034	4.40	3.50	1200	4.200	24	417800
140	0.034	4.10	4.20	1200	5.040	24	474996
100	0.034	2.90	5.20	1200	6.240	24	417796

NON-COMBUSTIBLE INSULATION

with ECOSE

OMNIFIT® ROLL 40 (COMBI-CUT)

200	0.040	5.00	3.40	1200 (2x600 or 3x400)	4.080	40	474509
150	0.040	3.75	4.55	1200 (2x600 or 3x400)	5.460	40	474386
100	0.040	2.50	6.80	1200 (2x600 or 3x400)	8.160	40	474381

*All dimensions are nominal. * Full loads only*
**Note: 220mm is sold under MetStud branding and packaging.*

DriTherm® Cavity Slabs 32, 34 and 37

Product description

DriTherm® Cavity Slabs are water-repellent glass mineral wool slabs, designed for use in external full-fill masonry cavity walls, and offering thermal conductivity between 0.032 W/mK and 0.037 W/mK.

They are non-combustible with the best possible Euroclass A1 reaction to fire classification, and are manufactured using our unique bio-based binder, ECOSE® Technology.

Benefits

- Made with a water-repellent additive to resist moisture ingress.
- Holds an Agrément certificate by the BBA for use in all exposure zones, including those in very severe areas.
- Engineered to adapt to any slight imperfections in the substrate and knit together, eliminating any air gaps and preserving thermal performance for the lifetime of the building.
- Friction fits between wall ties, so there is no need for ancillary products, such as retaining discs or jointing tape.
- Full-fill solution that doesn't require cavity barriers to meet Approved Document B requirements.

Certification, accreditations & industry standards

Solutions

External Masonry Cavity Walls Built-In

NON-COMBUSTIBLE INSULATION

with ECOSE TECHNOLOGY

THERMAL

0.032	0.034	0.037	0.044

VAPOUR RESISTIVITY

5.00 MNs/g.m

EUROCLASS REACTION TO FIRE CLASSIFICATION

A1	A2-s1,d0	B	C	D	E	F

GENERIC BRE GREEN GUIDE RATING

A+	A	B	C	D	E

DriTherm® Cavity Slabs 32, 34 and 37

NON-COMBUSTIBLE INSULATION

with ECOSE Technology

DRITHERM® CAVITY SLAB 32

Thickness (mm)	Thermal conductivity (W/mK)	Thermal resistance (m^2K/W)	Length (mm)	Width (mm)	Slabs per pack	Area per pack (m^2)	Packs per pallet	Pallet product code
150	0.032	4.65	1200	455	4	2.184	30	580216
125	0.032	3.90	1200	455	4	2.184	40	715828
100	0.032	3.10	1200	455	6	3.276	30	715829
85	0.032	2.65	1200	455	5	2.730	45	715830
75	0.032	2.30	1200	455	6	3.276	45	715827

NON-COMBUSTIBLE INSULATION

with ECOSE Technology

DRITHERM® CAVITY SLAB 34

150	0.034	4.40	1200	455	5	2.730	30	715834
125	0.034	3.65	1200	455	6	3.276	30	715836
100	0.034	2.90	1200	455	8	4.368	30	715832
75	0.034	2.20	1200	455	10	5.460	30	715833

NON-COMBUSTIBLE INSULATION

with ECOSE Technology

DRITHERM® CAVITY SLAB 37

150	0.037	4.05	1200	455	8	4.368	25	715835
125	0.037	3.35	1200	455	6	3.276	40	316660
100	0.037	2.70	1200	455	12	6.552	25	715831
85	0.037	2.25	1200	455	8	4.368	45	316656
75	0.037	2.00	1200	455	8	4.368	50	316654
65	0.037	1.75	1200	455	10	5.460	40	316652
50	0.037	1.35	1200	455	12	6.552	30	316650

All dimensions are nominal.

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Build on us.

KNAUF INSULATION

July 2024

Masonry Party Wall Slab

Product description

Masonry Party Wall Slab is a glass mineral wool slab, designed for use in masonry separating party walls, that offers thermal and acoustic performance.

It is non-combustible with the best possible Euroclass A1 reaction to fire classification, and is manufactured using our unique bio-based binder, ECOSE® Technology.

Benefits

- Designed to fully fill the party wall cavity to prevent party wall thermal bypass, contributing towards a zero effective U-value.
- Suitable for use with a range of constructions registered in the Robust Details Handbook reducing the need for on-site acoustic testing.
- Manufactured from mineral wool which provides the best levels of sound absorption and reduction compared to other mainstream insulants.

Certification, accreditations & industry standards

Solutions

Separating (Party) Walls Built-In

NON-COMBUSTIBLE INSULATION

with ECOSE TECHNOLOGY

THERMAL

ZERO EFFECTIVE U-VALUE	0.044

VAPOUR RESISTIVITY

5.00 MNs/g.m

EUROCLASS REACTION TO FIRE CLASSIFICATION

A1	A2-s1,d0	B	C	D	E	F

GENERIC BRE GREEN GUIDE RATING

A+	A	B	C	D	E

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Build on us.

Masonry Party Wall Slab

NON-COMBUSTIBLE INSULATION

with ECOSE Technology

MASONRY PARTY WALL SLAB

Thickness (mm)	Density (kg/m³)	Length (m)	Width (mm)	Slabs per pack	Area per pack (m²)	Packs per pallet	Pallet product code
100	18.00	1200	455	12	6.552	20	2441353
75	18.00	1200	455	16	8.736	20	2441351

All dimensions are nominal.

ROBUST DETAIL SEPARATING WALLS AND PARTY WALL BYPASS SOLUTIONS - MASONRY PARTY WALL SLAB

Robust Detail Wall Type	Minimum Cavity Width (mm)	Block Type	Block Density (kg/m³)	Wall Finish	Parge coat	Zero U-value
E-WM-1	75	Dense	1850 to 2300	Wet plaster	Yes	Yes
E-WM-2	75	Light aggregate	1350 to 1600	Wet plaster	Yes	Yes
E-WM-3	75	Dense	1850 to 2300	Plasterboard (8kg/m²) on dabs	Yes	Yes
E-WM-4	75	Light aggregate	1350 to 1600	Plasterboard (8kg/m²) on dabs	Yes	Yes
E-WM-5	75	Besblock 'Star Performer'	1528	Plasterboard (8kg/m²) on dabs on cement render	Yes	Yes
E-WM-6	75	Aircrete	600 to 800	Plasterboard (8kg/m²) on dabs on cement render	Yes	Yes
E-WM-10	75	Aircrete - thin joint	600 to 800	Plasterboard (8kg/m²) on dabs on cement render	Yes	Yes
E-WM-11	100	Light aggregate (or nominated hollow or cellular blocks)	1350 to 1600	Plasterboard (8kg/m²) on dabs	Yes	Yes
E-WM-12	75	Plasmor Aglite Ultima	1050	Plasterboard (8kg/m²) on dabs	Yes	Yes
E-WM-13	75	Aircrete - thin joint	600 to 800	Plasterboard (8kg/m²) on dabs on cement render	Yes	Yes
E-WM-16	100	Dense	1850 to 2300	Plasterboard (9.8kg/m²) on dabs	Yes	Yes
E-WM-18	100	Dense	1850 to 2300	Wet plaster	Yes	Yes
E-WM-19	100	Dense or light aggregate (or nominated hollow or cellular blocks)	1350 to 1600 or 1850 to 2300	Plasterboard (8kg/m²) on dabs on cement render	Yes	Yes
E-WM-21	100	Light aggregate	1350 to 1600	Wet plaster	Yes	Yes
E-WM-22	100	Light aggregate	1350 to 1600	Plasterboard (10kg/m²) on dabs (No parge coat)	No	Yes
E-WM-25	100	Porotherm	n/a	Plasterboard (8kg/m²) on dabs	Yes	Yes
E-WM-26	100	Besblock	1528	Plasterboard (10kg/m²) on dabs	No	Yes
E-WM-29	75	Porotherm	n/a	Plasterboard (8kg/m²) on dabs	Yes	Yes
E-WM-31	100	H+H Celcon Elements	575	Plasterboard (8kg/m²) on dabs	No	Yes
E-WM-3 2	75	Light aggregate	1350 to 1600	Plasterboard (10kg/m²) on dabs	No	Yes

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Timber Frame Party Wall Slab

Product description

Timber Frame Party Wall Slab is a glass mineral wool slab, designed for use in timber frame party walls, that offers thermal and acoustic performance.

It is non-combustible with the best possible Euroclass A1 reaction to fire classification, and is manufactured using our unique bio-based binder, ECOSE® Technology.

Benefits

- Designed to fully fill the party wall cavity to prevent party wall thermal bypass, contributing towards a zero effective U-value.
- Suitable for use with a range of constructions registered in the Robust Details Handbook reducing the need for on-site acoustic testing.
- Manufactured from mineral wool which provides the best levels of sound absorption and reduction compared to other mainstream insulants.

Certification, accreditations & industry standards

Solutions

Separating (Party) Walls Built-In

NON-COMBUSTIBLE INSULATION

with ECOSE TECHNOLOGY

THERMAL

ZERO EFFECTIVE U-VALUE 0.044

VAPOUR RESISTIVITY

5.00 MNs/g.m

EUROCLASS REACTION TO FIRE CLASSIFICATION

A1	A2-s1,d0	B	C	D	E	F

GENERIC BRE GREEN GUIDE RATING

A+	A	B	C	D	E

Timber Frame Party Wall Slab

NON-COMBUSTIBLE INSULATION

with ECOSE Technology

TIMBER FRAME PARTY WALL SLAB

Thickness (mm)	**Density** (kg/m³)	**Length** (m)	**Width** (mm)	**Slabs** per pack	**Area per pack** (m²)	**Packs per pallet**	**Pallet product code**
85	18.00	1200	600	12	8.640	16	2441340
60	18.00	1200	600	16	11.520	16	2441338

All dimensions are nominal.

ROBUST DETAIL SEPARATING WALLS AND PARTY WALL BYPASS SOLUTIONS - TIMBER FRAME PARTY WALL SLAB

Robust Detail Wall Type	**Minimum Cavity Width** (mm)	**Sheathing**	**Wall Finish**	**External (flanking) wall**	**Zero U-value**
E-WT-1	50	None[1]	2 or more layers of gypsum-based board	Outer leaf masonry min 50mm cavity	Yes
E-WT-2	50	9mm (min) thick board	2 or more layers of gypsum-based board	Outer leaf masonry min 50mm cavity	Yes
E-WT-3	50	None	2 or more layers of gypsum-based board	Outer leaf masonry min 50mm cavity	Yes

[1] *Partial sheathing of the cavity faces of the separating wall for structural reasons is permitted but the cavity width must be 50mm including sheathing*

KNAUF INSULATION

FrameTherm® Slab 32

Product description

FrameTherm® Slab 32 is a glass mineral wool slab, designed for use in timber frame applications between studwork. It offers the best thermal conductivity of 0.032 W/mK in our range.

FrameTherm® Slab 32 is non-combustible with the best possible Euroclass A1 reaction to fire classification, and is manufactured using our unique bio-based binder, ECOSE® Technology.

Benefits

- Best thermal performance in our range.
- Designed to friction fit between timber studs, which prevents air movement and infiltration through or around the insulation, minimising heat loss.
- Slabs are manufactured in 1170x570mm to suit commonly used timber stud spacing.
- Manufactured from mineral wool which provides the best levels of sound absorption and reduction compared to other mainstream insulants.

Certification, accreditations & industry standards

Solutions

Timber Frame Walls
Built-in insulation between studs with partially filled cavity

Pitched Roofs
Rafter Level

NON-COMBUSTIBLE INSULATION

with ECOSE TECHNOLOGY

THERMAL

0.032		0.044

VAPOUR RESISTIVITY

5.00 MNs/g.m

EUROCLASS REACTION TO FIRE CLASSIFICATION

A1	A2-s1,d0	B	C	D	E	F

GENERIC BRE GREEN GUIDE RATING

A+	A	B	C	D	E

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FrameTherm® Slab 32

NON-COMBUSTIBLE INSULATION

with ECOSE

FRAMETHERM® SLAB 32

Thickness (mm)	Thermal conductivity (W/mK)	Thermal resistance (m^2K/W)	Length (mm)	Width (mm)	Slabs per pack	Area per pack (m^2)	Area per pallet (m^2)	Packs per pallet	Pallet product code
140	0.032	4.35	1170	570	4	2.668	42.720	16	2438531

All dimensions are nominal.

Build on us.

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OmniFit® Slab 32 and 35

Product description

OmniFit® Slabs are a range of glass mineral wool slabs designed for use in multiple applications, offering thermal conductivity between 0.032 W/mK and 0.035 W/mK, combined with acoustic performance.

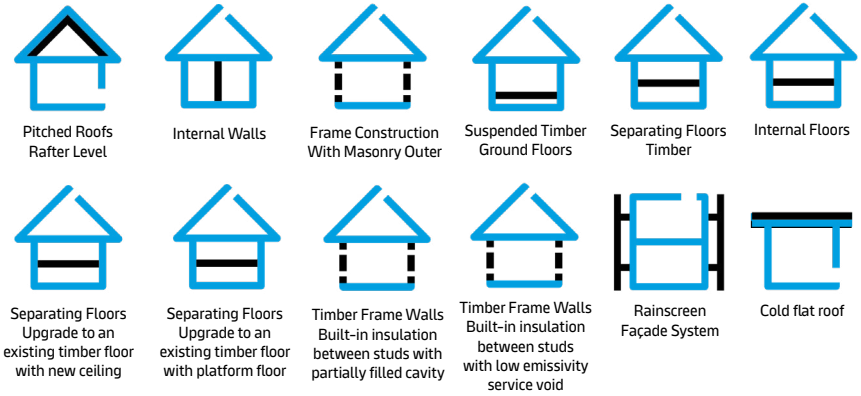
OmniFit® Slabs are non-combustible with the best possible Euroclass A1 reaction to fire classification, and are manufactured using our unique bio-based binder, ECOSE® Technology.

Benefits

- Multi-purpose product that can be used to insulate a wide range of applications, reducing the need to purchase and handle multiple products.
- Designed to friction fit between studs, which prevents air movement and infiltration around the edges, minimising heat loss.
- Compression packed with more product on a pallet than alternative rock mineral wool products.
- OmniFit® Slab 35 holds an Agrèment certificate by the BBA (under reference number 24/7110) for use as an infill insulation in rainscreen façade systems.

Certification, accreditations & industry standards

Solutions



NON-COMBUSTIBLE INSULATION

with ECOSE® TECHNOLOGY

THERMAL

0.032	0.035	0.044

VAPOUR RESISTIVITY

5.00 MNs/g.m

EUROCLASS REACTION TO FIRE CLASSIFICATION

A1	A2-s1,d0	B	C	D	E	F

GENERIC BRE GREEN GUIDE RATING

A+	A	B	C	D	E

Build on us.

OmniFit® Slab 32 and 35

NON-COMBUSTIBLE INSULATION

with ECOSE

OMNIFIT® SLAB 32

Thickness (mm)	Thermal conductivity (W/mK)	Thermal resistance (m^2K/W)	Length (mm)	Width (mm)	Slabs per pack	Area per pack (m^2)	Packs per pallet	Pallet product code
150	0.032	4.65	1200	600	4	2.880	24	787015
140	0.032	4.35	1200	600	4	2.88 0	24	787010
120	0.032	3.75	1200	600	5	3.600	24	787009
100	0.032	3.10	1200	600	6	4.320	24	787013
90	0.032	2.80	1200	600	6	4.320	24	786999

BBA

NON-COMBUSTIBLE INSULATION

with ECOSE

OMNIFIT® SLAB 35 (600MM WIDE)

150	0.035	4.25	1200	600	4	2.880	32	587280
140	0.035	4.00	1200	600	4	2.880	36	474342
100	0.035	2.85	1200	600	6	4.320	32	474340
90	0.035	2.55	1200	600	6	4.320	36	474337
75	0.035	2.10	1200	600	8	5.760	32	587268
70	0.035	2.00	1200	600	8	5.760	32	474334
50	0.035	1.40	1200	600	12	8.640	24	474329

BBA

NON-COMBUSTIBLE INSULATION

with ECOSE

OMNIFIT® SLAB 35 (400MM WIDE)

140	0.035	4.00	1200	400	4	1.920	48	474318
100	0.035	2.85	1200	400	6	2.880	42	474314
50	0.035	1.40	1200	400	12	5.760	36	474293

All dimensions are nominal.

Build on us.

BLOWN GLASS MINERAL WOOL PRODUCTS

Supafil® 34

Supafil® 40

Supafil® Party Wall

Supafil® CarbonPlus

Supafil® Frame

Supafil® 34 and 40

Product description

Supafil® is a range of glass mineral blowing wool products, designed for use in cavities for both new build and refurbishment applications. They must be installed by 'Approved Supafil® Installers' who have been trained to ensure correct procedures are being followed.

Supafil® is non-combustible with the best possible Euroclass A1 reaction to fire classification.

Using Supafil® enables an efficient installation and generates no waste on site.

Benefits

- Holds an Agrément certificate by the BBA for use in all exposure zones, including those in very severe areas, subject to certificate requirements.
- Supafil 34 suitable for use in wider cavities of up to 200mm.*
- Made with a water-repellent additive to resist moisture ingress.
- Installed by `Approved Supafil® Installers', using specific blowing machines, hoses and nozzles as part of a system.
- Can only be used as part of a system using specific blowing machines, hoses and nozzles. A specified drill pattern (which creates injection points ensuring an even fill) must be followed.

Certification, accreditations & industry standards

Solutions

External Masonry Cavity Walls Blown-In (New Build)

External Masonry Cavity Walls Blown-In (Retrofit)

NON-COMBUSTIBLE INSULATION

THERMAL

0.032	0.034	0.040	0.044

VAPOUR RESISTIVITY

5.00 MNs/g.m

EUROCLASS REACTION TO FIRE CLASSIFICATION

A1	A2-s1,d0	B	C	D	E	F

GENERIC BRE GREEN GUIDE RATING

A+	A	B	C	D	E

When treating cavities wider than 200mm please contact our Technical Services Team to review and assess the suitability for installation with the Approved Installer prior to works commencing on site.

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Build on us.

Supafil® 34 and 40

NON-COMBUSTIBLE INSULATION

SUPAFIL® 34

Weight per bag (kg)	Installed density (kg/m³)	Thermal conductivity (W/mK)	Product code
15.50	25	0.034	2441358

All dimensions are nominal. Available via Approved Installers.

Cavity width (mm)	Brick outer leaf/ cavity/ 100mm block inner leaf U-value (W/m²K)				
	Minium bag usage rate (bags per 100m²)	Medium dense block (0.45 W/mK)	High strength aircrete (0.19 W/mK)	Standard aircrete (0.15 W/mK)	Lightweight aircrete (0.11 W/mK)
150	24.19	0.20	0.19	0.18	0.18
125	20.16	0.23	0.22	0.21	0.20
100	16.13	0.27	0.26	0.25	0.24

Note: The U-values have been calculated assuming that all walls are lined with 12.5mm standard plasterboard on dabs with plaster skim on standard blocks with 10mm mortar joints. Wall ties assumed to be stainless steel at 2.5 per m² with a cross-sectional area of 100mm - 12.5mm2, >100 - 150mm - 24mm², >150mm - 60mm². Air gap correction level is zero.

NON-COMBUSTIBLE INSULATION

SUPAFIL® 40

Weight per bag (kg)	Installed density (kg/m³)	Thermal conductivity (W/mK)	Product code
17.60	18	0.040	2409790

All dimensions are nominal. Available via Approved Installers.

Cavity width (mm)	Brick outer leaf/ cavity/ 100mm block inner leaf U-value (W/m²K)				
	Minium bag usage rate (bags per 100m²)	Medium dense block (0.45 W/mK)	High strength aircrete (0.19 W/mK)	Standard aircrete (0.15 W/mK)	Lightweight aircrete (0.11 W/mK)
100	0.33	0.32	0.31	0.28	0.27
85	0.37	0.36	0.35	0.32	0.30
75	0.41	0.39	0.38	0.35	0.32
65	0.45	0.44	0.42	0.38	0.35
50	0.55	0.52	0.50	0.44	0.41

Note: The U-values have been calculated assuming that all walls are lined with 12.5mm standard plasterboard on dabs on standard blocks with 10mm mortar joints. Wall ties assumed to be stainless steel at 2.5 per m² with a cross-sectional area of 100mm - 12.5mm², >100 - 150mm - 24mm², >150mm - 60mm². Air gap correction level is zero.

KNAUF INSULATION

July 2024

Supafil® CarbonPlus

Product description

Supafil® CarbonPlus is a glass mineral blowing wool, developed for retrofit application in narrow (40mm-75mm) external masonry cavity walls.

It offers thermal conductivity of 0.034 W/mK at the installed density of 25kg/m³.

It is non-combustible with the best possible Euroclass A1 reaction to fire classification.

Benefits

- Holds an Agrément certificate by the BBA for use in all exposure zones, including those in very severe areas subject to certificate requirements.
- Suitable for use in narrow cavities of 40-75*mm.
- Made with a water-repellent additive to resist moisture ingress.
- Installed by `Approved Supafil® Installers', using specific blowing machines, hoses and nozzles as part of a system.

Certification, accreditations & industry standards

Solutions

External Masonry Cavity Walls Blown-In (Retrofit)

NON-COMBUSTIBLE INSULATION

THERMAL

0.032	0.034	0.044

VAPOUR RESISTIVITY: 5.00 MNs/g.m

EUROCLASS REACTION TO FIRE CLASSIFICATION

A1	A2-s1,d0	B	C	D	E	F

GENERIC BRE GREEN GUIDE RATING

A+	A	B	C	D	E

When treating cavities wider than 75mm please contact our Technical Services Team to review and assess the suitability for installation with the approved installer prior to works commencing on site.

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Technical Services Team

Build on us.

Supafil® CarbonPlus

NON-COMBUSTIBLE INSULATION

SUPAFIL® CARBONPLUS

Pack Weight (kg)	**Recommended install density** (kg/m³)	**Thermal Conductivity** (W/mK)	**Pack Dimensions** (mm)	**Packs per pallet**	**Pallet product code**
15.5	25	0.034	1200x550x250	28	409307

All dimensions are nominal.
Available via Approved Installers

FOR FULLY FILLED MASONRY CAVITY WALLS - EXISTING - USING SUPAFIL® CARBONPLUS

(Brick outer leaf / cavity / 100mm inner leaf as detailed below)

Cavity width (mm)	**U-value** (W/m²K)			
	Brick (0.56 W/mK)	**Block** (1.13 W/mK)	**Block** (0.51 W/mK)	**Block** (0.34 W/mK)
75	0.35	0.36	0.35	0.34
65	0.39	0.40	0.39	0.37
50	0.47	0.49	0.46	0.45

Note: The U-values have been calculated assuming that all walls are lined with 12.5mm standard plasterboard on dabs on standard blocks with 10mm mortar joints. Wall ties assumed to be stainless steel at 2.5 per m² with a cross-sectional area of 100mm - 12.5mm², >100 - 150mm - 24mm², >150mm - 60mm². Air gap correction level is zero.

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Supafil® Party Wall

Product description

Supafil® Party Wall is a glass mineral blowing wool, developed for use in masonry separating (party) walls. It is designed to be used as part of a full-fill solution, thus preventing party wall thermal bypass and helping to achieve zero effective U-value within SAP.

Supafil® Party Wall is non-combustible with the best possible Euroclass A1 reaction to fire classification.

Benefits

- Holds an Agrément certificate by the BBA under reference number 14/5176.
- Suitable for use with a range of new-build constructions registered in the Robust Details Handbook reducing the need for on-site acoustic testing.
- Its blue colour provides visual identification and assurance that the correct product is being used for the right application.
- Designed to fully fill the party wall cavity to prevent party wall thermal bypass, contributing towards a zero effective U-value.
- Installed by `Approved Supafil® Installers', using specific blowing machines, hoses and nozzles as part of a system.
- Manufactured from mineral wool which provides the best levels of sound absorption and reduction compared to other mainstream insulants.

Certification, accreditations & industry standards

Solutions

Separating (Party) Walls Blown-In

NON-COMBUSTIBLE INSULATION

THERMAL

0.032	0.040	0.044

VAPOUR RESISTIVITY

5.00 MNs/g.m

EUROCLASS REACTION TO FIRE CLASSIFICATION

A1	A2-s1,d0	B	C	D	E	F

GENERIC BRE GREEN GUIDE RATING

A+	A	B	C	D	E

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Build on us.

Supafil® Party Wall

NON-COMBUSTIBLE INSULATION

SUPAFIL® PARTY WALL

Weight per bale (kg)	**Installed density** (kg/m³)	**Pallet product code**
17.6	18	2441359

All dimensions are nominal. Available via approved contractors.

ROBUST DETAIL SEPARATING WALLS AND PARTY WALL BYPASS SOLUTIONS - SUPAFIL® PARTY WALL

Robust Detail Wall Type	**Minimum Cavity Width** (mm)	**Block Type**	**Block Density** (kg/m³)	**Wall Finish**	**Parge coat**	**Zero U-value**
E-WM-1	75	Dense	1850 to 2300	Wet plaster	Yes	Yes
E-WM-2	75	Light aggregate	1350 to 1600	Wet plaster	Yes	Yes
E-WM-3	75	Dense	1850 to 2300	Plasterboard (8kg/m²) on dabs	Yes	Yes
E-WM-4	75	Light aggregate	1350 to 1600	Plasterboard (8kg/m²) on dabs	Yes	Yes
E-WM-5	75	Besblock 'Star Performer'	1528	Plasterboard (8kg/m²) on dabs on cement render	Yes	Yes
E-WM-6	75	Aircrete	600 to 800	Plasterboard (8kg/m²) on dabs on cement render	Yes	Yes
E-WM-10	75	Aircrete - thin joint	600 to 800	Plasterboard (8kg/m²) on dabs on cement render	Yes	Yes
E-WM-11	100	Light aggregate (or nominated hollow or cellular blocks)	1350 to 1600	Plasterboard (8kg/m²) on dabs	Yes	Yes
E-WM-12	75	Plasmor Aglite Ultima	1050	Plasterboard (8kg/m²) on dabs	Yes	Yes
E-WM-13	75	Aircrete - thin joint	600 to 800	Plasterboard (8kg/m²) on dabs on cement render	Yes	Yes
E-WM-16	100	Dense	1850 to 2300	Plasterboard (9.8kg/m²) on dabs	Yes	Yes
E-WM-18	100	Dense	1850 to 2300	Wet plaster	Yes	Yes
E-WM-19	100	Dense or light aggregate (or nominated hollow or cellular blocks)	1350 to 1600 or 1850 to 2300	Plasterboard (8kg/m²) on dabs on cement render	Yes	Yes
E-WM-21	100	Light aggregate	1350 to 1600	Wet plaster	Yes	Yes
E-WM-22	100	Light aggregate	1350 to 1600	Plasterboard (10kg/m²) on dabs (No parge coat)	No	Yes
E-WM-25	100	Porotherm	n/a	Plasterboard (8kg/m²) on dabs	Yes	Yes
E-WM-26	100	Besblock	1528	Plasterboard (10kg/m²) on dabs	No	Yes
E-WM-29	75	Porotherm	n/a	Plasterboard (8kg/m²) on dabs	Yes	Yes
E-WM-31	100	H+H Celcon Elements	575	Plasterboard (8kg/m²) on dabs	No	Yes

Supafil® Frame

Product description

Supafil® Frame is a glass mineral blowing wool, designed for use in either on-site or off-site frame construction, that offers a range of thermal performance options (depending on its install density in a required application) and consistent coverage.

Supafil® Frame is non-combustible with the best possible Euroclass A1 reaction to fire classification.

Benefits

- A versatile product that can be used to insulate a variety of timber and steel frame applications.
- Suitable to fill voids around pipes, wiring, other services and fittings, ensuring a complete fill maximising thermal and acoustic performance.
- Supafil® Frame can be used in closed cavity applications (in which ventilation is not required) or in combination with Supafil® Veil as an alternative.
- Installed by `Approved Supafil® Installers', using specific blowing machines, hoses and nozzles as part of a system.

Certification, accreditations & industry standards

Solutions

Timber Frame Walls - Blown-In

Pitched Roofs Rafter Level

NON-COMBUSTIBLE INSULATION

THERMAL

0.032	0.033 - 0.038	0.044

VAPOUR RESISTIVITY

5.00 MNs/g.m

EUROCLASS REACTION TO FIRE CLASSIFICATION

A1	A2-s1,d0	B	C	D	E	F

GENERIC BRE GREEN GUIDE RATING

A+	A	B	C	D	E

* When treating cavities wider than 75mm please contact our Technical Services Team to review and assess the suitability for installation with the approved installer prior to works commencing on site.

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Technical Services Team

Build on us.

Supafil® Frame

NON-COMBUSTIBLE INSULATION

SUPAFIL® FRAME

Weight per bag (kg)	**Installed density** (kg/m³)	**Thermal conductivity** (W/mK)	**Pallet product code**
15.5	19-35	0.033-0.038 (i)	2436637

All dimensions are nominal. Available via Approved Installers.
(i) Thermal conductivity varies with installed density and application as follows:

Thermal Performance Chart

Installed density (kg/m³)	**Application Angle Range** (degree)	**Thermal conductivity** (W/mK)
35	0 - 90	0.033
30	0 - 90	0.033
26	0 - 90	0.034
19	0 - 25	0.038

Using Supafil® Frame between timber studs

Stud thickness (mm)	**Vapour permeable membrane**	**U-value** (W/m²K)	
		Standard clay brick outer leaf (0.77W/mK)	**Tile / timber clad outer leaf**
200	Standard	0.20	0.22
140	Standard	0.27	0.29
200	Low E	0.17	0.21
140	Low E	0.23	0.28

Low Emissivity membrane used in the above calculations = Protect TF200 Thermo. U-values calculated assuming Supafil® Frame installed density of 30kg/m³ and having thermal conductivity of 0.033W/mK.

Our Supafil® Frame System offers an innovative installation solution which combines Supafil® Frame, machine and panel to achieve consistent quality and fast installation times.

Understanding that every system is tailor-made, we can work with you to recommend the best insulation solution for your system.

Visit knaufinsulation.co.uk/offsite-solutions for further information

Build on us.

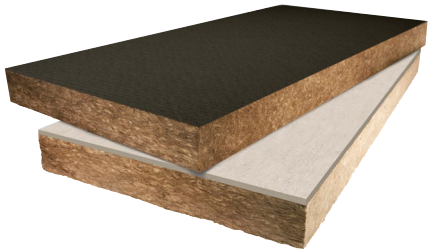
ROCK MINERAL WOOL PRODUCTS

Rocksilk® RainScreen Slabs

Rocksilk® Building Slabs

Rocksilk® Flexible Slab

Rocksilk® Acoustic Floor Slabs



Rocksilk® Soffit Linerboards

Rocksilk® EWI Slab

Rocksilk® Flat Roof Slabs

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Rocksilk® RainScreen Slabs

July 2024

Product description

Rocksilk® RainScreen Slabs are rock mineral wool slabs with an Agrément certificate by the BBA, designed for use as sheathing insulation in rainscreen façade systems on any building of any height. They are non-combustible and are manufactured using our unique bio-based binder, ECOSE® Technology.

Rocksilk® RainScreen Slabs are available either unfaced or faced with a black tissue facing that provides exposure protection to the insulation during construction.

Benefits

- Made with a water-repellent additive to resist moisture ingress.
- Holds an Agrément certificate by the BBA (certificate 19/5609) for use with the broadest range of build-ups in the widest range of thicknesses on the market (excludes BGV).
- Slabs are engineered to adapt to minor imperfections in the substrates.
- Supported by 3D U-value calculation service (BS EN 10211 compliant) to accurately ensure the façade performs as specified.
- Holds a CCPI Verification Mark (certificate number 000600063/0426) for the entire product set.

Certification, accreditations & industry standards

Generic BRE Green Guide Rating A+

*not BGV

Solutions

Rainscreen Façade System

Timber Frame Walls Built-in insulation between studs with partially filled cavity

Frame Construction With Masonry Outer

NON-COMBUSTIBLE INSULATION

with ECOSE® TECHNOLOGY

THERMAL

0.032	**0.034**	0.044

VAPOUR RESISTIVITY

5.00 MNs/g.m

EUROCLASS REACTION TO FIRE CLASSIFICATION

A1	A2-s1,d0	B	C	D	E	F

WIND LOAD

3.6kPa / (76m/s)

GENERIC BRE GREEN GUIDE RATING

A+	A	B	C	D	E

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Build on us.

Rocksilk® RainScreen Slabs 600mm

NON-COMBUSTIBLE INSULATION

with ECOSE Technology

ROCKSILK® RAINSCREEN SLAB 600mm

Thickness (mm)	Thermal conductivity (W/mK)	Thermal resistance (m^2K/W)	Length (mm)	Width (mm)	Pieces per pack	Packs per pallet	Area per pack (m^2)	Area per pallet (m^2)	Pallet product code
250	0.034	7.35	1200	600	2	10	1.440	14.400	656411
240	0.034	7.05	1200	600	2	10	1.440	14.400	656410
230	0.034	6.75	1200	600	2	12	1.440	17.280	656409
220	0.034	6.45	1200	600	2	12	1.440	17.280	656408
210	0.034	6.15	1200	600	2	12	1.440	17.280	640933
200	0.034	5.85	1200	600	2	12	1.440	17.280	640930
190	0.034	5.55	1200	600	2	12	1.440	17.280	652477
180	0.034	5.25	1200	600	3	10	2.160	21.600	640927
170	0.034	5.00	1200	600	3	10	2.160	21.600	651506
165	0.034	4.85	1200	600	3	10	2.160	21.600	658742
160	0.034	4.70	1200	600	3	10	2.160	21.600	651512
155	0.034	4.55	1200	600	3	12	2.160	25.920	658741
150	0.034	4.40	1200	600	3	12	2.160	25.920	640921
140	0.034	4.10	1200	600	3	12	2.160	25.920	651513
130	0.034	3.80	1200	600	3	12	2.160	25.920	651499
125	0.034	3.65	1200	600	4	10	2.880	28.800	658740
120	0.034	3.50	1200	600	4	10	2.880	28.800	640916
110	0.034	3.20	1200	600	4	12	2.880	34.560	650811
100	0.034	2.90	1200	600	4	12	2.880	34.560	640914
90	0.034	2.60	1200	600	5	12	3.600	43.200	650810
80	0.034	2.35	1200	600	5	12	3.600	43.200	650809
75	0.034	2.2	1200	600	6	12	4.320	51.840	640911
70	0.034	2.05	1200	600	6	12	4.320	51.840	650808
60	0.034	1.75	1200	600	7	12	5.040	60.480	650807
50	0.034	1.45	1200	600	8	12	5.760	69.120	640909
150 BGV*	0.034	4.40	1200	600	3	12	2.160	25.920	640959
120 BGV*	0.034	3.50	1200	600	4	10	2.880	28.800	640949
100 BGV*	0.034	2.90	1200	600	4	12	2.880	34.560	640935

*Standard thickness. All dimensions are nominal. * Black Glass Veil facing.*

Rocksilk® RainScreen Slabs 455mm

NON-COMBUSTIBLE INSULATION

with ECOSE Technology

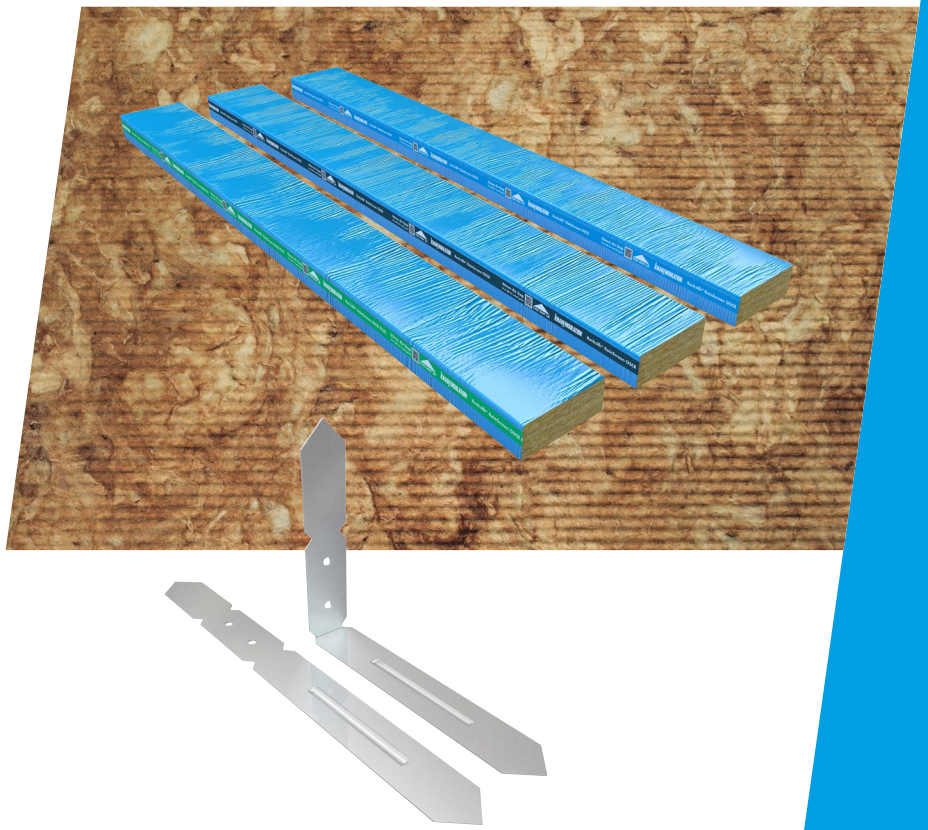
ROCKSILK® RAINSCREEN SLAB 455mm

Thickness (mm)	Thermal conductivity (W/mK)	Thermal resistance (m^2K/W)	Length (mm)	Width (mm)	Pieces per pack	Packs per pallet	Area per pack (m^2)	Area per pallet (m^2)	Pallet product code
220	0.034	6.45	1200	455	2	15	1.092	16.380	756635
210	0.034	6.15	1200	455	2	15	1.092	16.380	756633
200	0.034	5.85	1200	455	2	15	1.092	16.380	756631
150	0.034	4.40	1200	455	3	15	1.638	24.570	756630
140	0.034	4.20	1200	455	3	15	1.638	24.570	756629
110	0.034	3.20	1200	455	4	15	2.184	32.760	756628
100	0.034	2.90	1200	455	4	15	2.184	32.760	756627
90	0.034	2.60	1200	455	5	15	2.730	40.950	756626
80	0.034	2.35	1200	455	5	15	2.730	40.950	756625
75	0.034	2.20	1200	455	6	15	3.276	49.140	756503
60	0.034	1.75	1200	455	7	15	3.822	57.330	756528
50	0.034	1.45	1200	455	8	15	4.368	65.520	756500

*Standard thickness. All dimensions are nominal. * Black Glass Veil facing.*

KNAUF INSULATION

Rocksilk® RainScreen OSCBs



Product description

Rocksilk® RainScreen OSCBs are horizontal cavity barriers made from rock mineral wool with a reactive intumescent strip, for use in ventilated cavities up to 450mm.

they form part of a system with Rocksilk® RainScreen Slabs and Rocksilk® RainScreen Slab Fixings which provides fire resistance for up to 120 minutes insulation and 120 minutes integrity (EI120).

Benefits

- Form part of tested systems providing fire resistance for up to 120 minutes insulation and 120 minutes integrity (EI120).
- Fixing bracket included as standard.
- Reactive intumescent strip expands in the event of a fire to fill the residual cavity
- Suitable for horizontal applications with a cladding outer leaf.
- Holds a third party certificate by KIWA (certificate IFCC 1939).

Certification, accreditations & industry standards

MADE IN BRITAIN

Solutions

Rainscreen Façade System

Fire performance

Product	Cavity widths (mm)	Fire performance (mins)	
		Integrity (E)	Insulation (I)
Rocksilk® RainScreen OSCB25	100-450	90	90
Rocksilk® RainScreen OSCB25 Plus	100-450	120	120
Rocksilk® RainScreen OSCB44	100-450	120	90

Build on us.

Rocksilk® RainScreen OSCBs

ROCKSILK® RAINSCREEN OSCBs

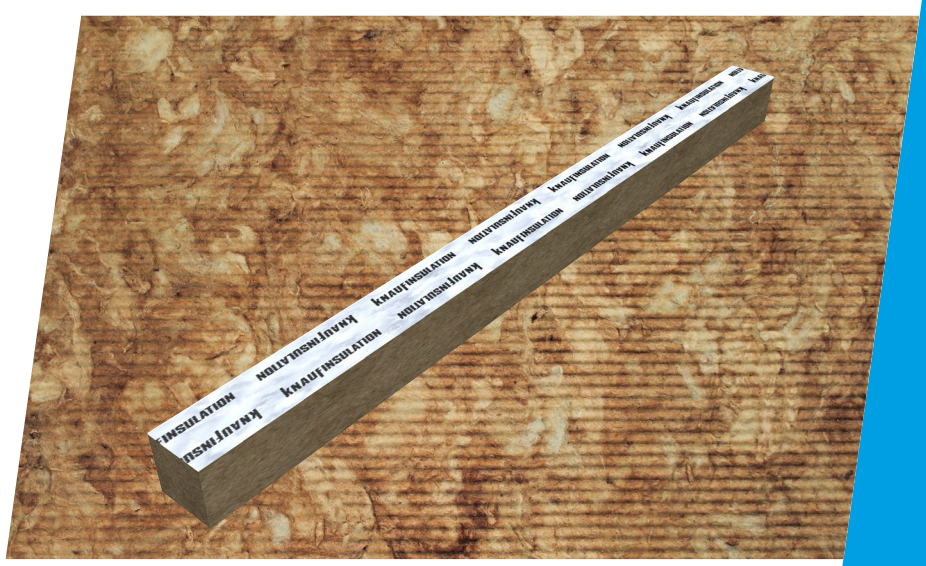
Product Name	Cavity widths (mm)	Length (mm)	Depth (mm)	Pieces per pack	Packs per pallet	Integrity (mins)	Insulation (mins)	Product weight (kg)	Box weight (kg)	Pallet weight (kg)	Product code
Rocksilk® RainScreen OSCB25	100-125	1200	100	14	8	60	60	1.65	23.14	203.12	834165
	126-150	1200	100	14	8	60	60	1.90	26.64	231.12	834166
	151-175	1200	100	12	8	60	60	2.18	26.12	226.96	834167
	176-200	1200	100	9	8	60	60	2.48	22.34	196.72	834168
	201-225	1200	100	9	8	60	60	2.73	24.59	214.72	834169
	226-250	1200	100	6	8	60	60	3.09	18.56	166.48	834170
	251-275	1200	100	6	8	60	60	3.09	18.56	166.48	834171
	276-300	1200	100	6	8	60	60	3.59	21.56	190.48	834172
	301-325	1200	100	6	8	60	60	3.59	21.56	190.48	834173
	326-350	1200	100	5	8	60	60	5.16	25.80	224.40	834174
	351-375	1200	100	5	8	60	60	5.16	25.80	224.40	834175
	376-400	1200	100	5	8	60	60	5.16	25.80	224.40	834176
	401-425	1200	100	5	8	60	60	5.16	25.80	224.40	834177
	426-450	1200	100	5	8	60	60	5.16	25.80	224.40	834178
Rocksilk® RainScreen OSCB25 Plus	100-125	1200	100	14	8	120	60	1.65	23.14	203.12	834179
	126-150	1200	100	14	8	120	60	1.90	26.64	231.12	834180
	151-175	1200	100	12	8	120	60	2.18	26.12	226.96	834181
	176-200	1200	100	9	8	120	60	2.48	22.34	196.72	834182
	201-225	1200	100	9	8	120	60	2.73	24.59	214.72	834183
	226-250	1200	100	6	8	120	60	3.09	18.56	166.48	834184
	251-275	1200	100	6	8	120	60	3.09	18.56	166.48	834185
	276-300	1200	100	6	8	120	60	3.59	21.56	190.48	834186
	301-325	1200	100	6	8	120	60	3.59	21.56	190.48	834187
	326-350	1200	100	5	8	120	60	5.16	25.80	224.40	834188
	351-375	1200	100	5	8	120	60	5.16	25.80	224.40	834189
	376-400	1200	100	5	8	120	60	5.16	25.80	224.40	834190
	401-425	1200	100	5	8	120	60	5.16	25.80	224.40	834191
	426-450	1200	100	5	8	120	60	5.16	25.80	224.40	834192

Rocksilk® RainScreen OSCBs

ROCKSILK® RAINSCREEN OSCBs

Product Name	Cavity widths (mm)	Length (mm)	Depth (mm)	Pieces per pack	Packs per pallet	Integrity (mins)	Insulation (mins)	Product weight (kg)	Box weight (kg)	Pallet weight (kg)	Product code
Rocksilk® RainScreen OSCB44	100-125	1200	100	14	8	60	60	1.65	23.14	203.12	834193
	126-150	1200	100	14	8	60	60	1.90	26.64	231.12	834194
	151-175	1200	100	12	8	60	60	2.18	26.12	226.96	834195
	176-200	1200	100	9	8	60	60	2.48	22.34	196.72	834196
	201-225	1200	100	9	8	60	60	2.73	24.59	214.72	834197
	226-250	1200	100	6	8	60	60	3.09	18.56	166.48	834198
	251-275	1200	100	6	8	60	60	3.09	18.56	166.48	834199
	276-300	1200	100	6	8	60	60	3.59	21.56	190.48	834200
	301-325	1200	100	6	8	60	60	3.59	21.56	190.48	834201
	326-350	1200	100	5	8	60	60	5.16	25.80	224.40	834202
	351-375	1200	100	5	8	60	60	5.16	25.80	224.40	834203
	376-400	1200	100	5	8	60	60	5.16	25.80	224.40	834204
	401-425	1200	100	5	8	60	60	5.16	25.80	224.40	834205
	426-450	1200	100	5	8	60	60	5.16	25.80	224.40	834206
Rocksilk® RainScreen OSCB Fixing Brackets	≤274	n/a	n/a	10	n/a	n/a	n/a	0.015	n/a	n/a	834109
	275-450	n/a	n/a	10	n/a	n/a	n/a	0.025	n/a	n/a	834108

Rocksilk® RainScreen FFCB



Product description

Rocksilk® RainScreen FFCB is a patented cavity barrier manufactured from rock mineral wool, that is designed to be face-fixed to Rocksilk® RainScreen Slab as the masonry façade is constructed.

It is part of our rainscreen cavity system with Rocksilk® RainScreen Slabs that provide fire resistance for up to 90 minutes integrity and insulation (EI90).

It is non-combustible with the best possible Euroclass A1 reaction to fire classification, and is manufactured using our unique bio-based binder, ECOSE® Technology.

Benefits

- Part of our tested rainscreen cavity system providing fire resistance for up to 90 minutes insulation and integrity.
- Is installed after Rocksilk® RainScreen Slabs are in place, meaning that the slabs do not need to be cut away, reducing waste and increasing efficiency on-site.
- Barrier thickness does not change no matter the thickness of Rocksilk® RainScreen Slab, ties can be cut to suit.
- Foil-faced to ensure correct orientation of barrier.
- Suitable for vertical and horizontal applications.

Certification, accreditations & industry standards

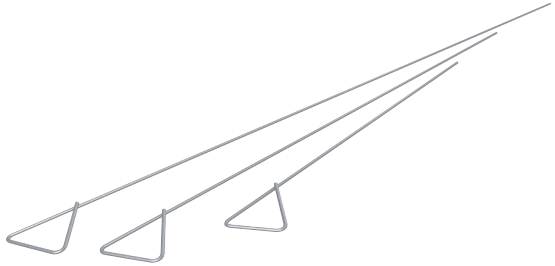
Solutions

Rainscreen Façade System

Frame Construction With Masonry Outer

Frame Construction With Masonry Outer

Timber Frame Walls Built-in insulation between studs with partially filled cavity



NON-COMBUSTIBLE INSULATION

with ECOSE® TECHNOLOGY

EUROCLASS REACTION TO FIRE CLASSIFICATION

A1	A2-s1,d0	B	C	D	E	F

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Rocksilk® RainScreen FFCB

ROCKSILK® RAINSCREEN FFCB

Length (mm)	**Width** (mm)	**Thickness** (mm)	**Tie Length** (mm)	**Quantity per box**	**Ties per box**	**Product code**
1200	52	100	200	28	84	794378
1200	52	100	300	28	84	795371
1200	52	100	400	28	84	795419
1200	52	200	200	14	42	795616
1200	52	200	300	14	42	795614
1200	52	200	400	14	42	795613
1200	102	200	300	6	18	795615
1200	102	200	400	6	18	795617
1200	600	100	n/a	6	n/a	801370
1200	600	200	n/a	3	n/a	801372

ROCKSILK® RAINSCREEN FFCB TIE

Length (mm)	**Width** (mm)	**Thickness** (mm)	**Tie Length** (mm)	**Quantity per box**	**Ties per box**	**Product code**
n/a	n/a	n/a	200	n/a	100	795618
n/a	n/a	n/a	300	n/a	100	795619
n/a	n/a	n/a	400	n/a	100	795620

All dimensions are nominal

FIRE PERFORMANCE

Residual Cavity Width (mm)	**Orientation**	**Classification**		**Rocksilk® RainScreen Slab thickness** (mm)	**Rocksilk® RainScreen FFCB depth** (mm)
		Integrity (E)	**Insulation** (I)		
Max. 50	Vertical & Horizontal	60	30	Min. 50	Min. 100
Max. 50	Vertical & Horizontal	60	60	50	Min. 100
Max. 110	Vertical & Horizontal	90	90	Min. 100	Min. 200

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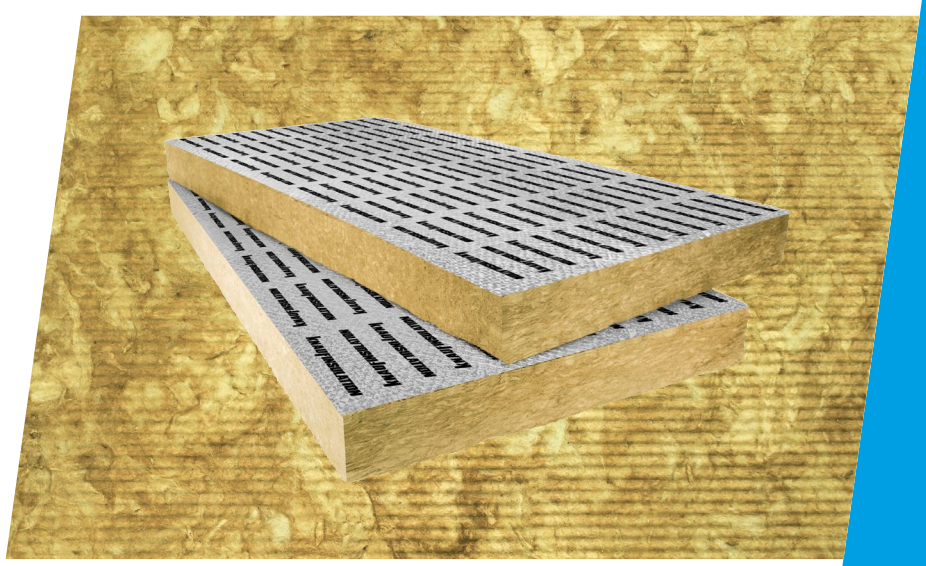
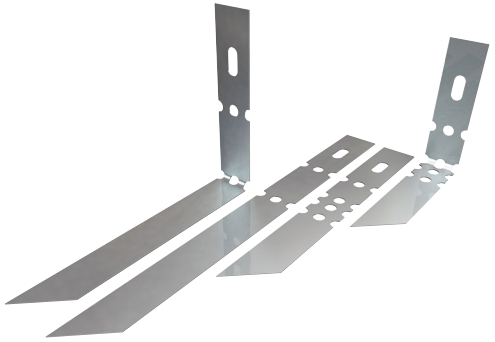
Rocksilk® RainScreen FireStop Slab





Product description

Rocksilk® RainScreen FireStop Slab is a cavity barrier manufactured from rock mineral wool, suitable for use as a vertical cavity barrier in buildings with a ventilated cavity, and vertically and horizontally in buildings with masonry façades.

It is part of a tested system with Rocksilk® RainScreen Slabs that provides fire resistance for up to 180 minutes integrity and 45 minutes insulation (E180 I45).

Benefits

- Forms part of a tested system providing fire resistance for up to 180 minutes insulation and integrity.
- Fixing bracket included as standard.
- Foil-faced on both sides for simple installation.
- Available in full slab to cut on site or factory finished cut to size.
- Holds a third party certificate by KIWA (certificate IFCC 1940).

Certification, accreditations & industry standards

MADE IN BRITAIN

Solutions

Rainscreen Façade System

Timber Frame Walls Built-in insulation between studs with partially filled cavity

Frame Construction With Masonry Outer

Masonry Cavity Walls Partially filled

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Rocksilk® RainScreen FireStop Slab

ROCKSILK® RAINSCREEN FIRESTOP SLAB

Product Name	Max cavity width (mm)	Product width (mm)	Dimensions (mm)	Pieces per pack	Packs per pallet	Pack weight (kg)	Pallet weight (kg)	Product code
Rocksilk® RainScreen FireStop Slab	450	600	100x600x1200	n/a	40	n/a	355.60	829620
	50	55	55x100x1200	48	10	38.40	402.00	834133
	60	65	65x100x1200	40	10	38.00	398.00	834134
	70	75	75x100x1200	40	10	44.00	458.00	834135
	80	85	85x100x1200	30	10	37.20	390.00	834136
	90	95	95x100x1200	24	10	33.36	351.60	834137
	100	105	105x100x1200	24	10	36.96	387.60	834138
	110	115	115x100x1200	24	10	40.32	421.20	834139
	120	125	125x100x1200	18	10	32.94	347.40	834140
	130	135	135x100x1200	18	10	35.64	374.40	834141
	140	145	145x100x1200	18	10	38.16	399.60	834142
	150	155	155x100x1200	18	10	40.86	426.60	834143
	160	165	165x100x1200	12	12	28.92	365.04	834144
	170	175	175x100x1200	12	12	30.72	386.64	834145
	180	185	185x100x1200	12	12	32.52	408.24	834146
	190	195	195x100x1200	12	10	34.20	360.00	834147
	200	205	205x100x1200	12	10	36.00	378.00	834148
	210	215	215x100x1200	12	10	37.80	396.00	834149
	220	225	225x100x1200	12	8	39.48	333.84	834150
	230	235	235x100x1200	12	8	41.28	348.24	834151
	240	245	245x100x1200	10	8	35.90	305.20	834152
	250	255	255x100x1200	10	8	37.30	316.40	834153
	260	265	265x100x1200	8	10	31.04	328.40	834154
	270	275	275x100x1200	8	10	32.16	339.60	834155
	280	285	285x100x1200	8	10	33.36	351.60	834156
	290	295	295x100x1200	8	10	34.56	363.60	834157
	300	305	305x100x1200	8	10	35.68	374.80	834158

Rocksilk® RainScreen FireStop Slab

ROCKSILK® RAINSCREEN FIRESTOP SLAB

Product Name	Max cavity width (mm)	Product width (mm)	Dimensions (mm)	Pieces per pack	Packs per pallet	Pack weight (kg)	Pallet weight (kg)	Product code
Rocksilk® RainScreen FireStop Slab	325	330	330x100x1200	6	10	28.98	307.8	834159
	350	355	355x100x1200	6	10	31.14	329.4	834160
	375	380	380x100x1200	6	10	33.36	351.6	834161
	400	405	405x100x1200	4	10	23.72	255.2	834162
	425	430	430x100x1200	4	10	25.16	269.6	834163
	450	455	455x100x1200	4	10	26.64	284.4	834164
Rocksilk® RainScreen FireStop Slab Fixing Bracket	160	n/a	200x25x1	10	n/a	n/a	n/a	834111
	450	n/a	275x5x1	10	n/a	n/a	n/a	834110

FIRE PERFORMANCE

	Substrates	Cavity widths (mm)	Fire performance (mins)	
			Integrity (E)	Insulation (I)
Vertical	CP Board	50-450mm	120	45
	Masonry	50-300mm	180	45
Horizontal	CP Board	50-450mm	120	45
	Masonry	50-300mm	180	45

KNAUF INSULATION

Rocksilk® Building Slabs

Product description

Rocksilk® Building Slabs are rock mineral wool slabs manufactured in a range of densities, designed for use in multiple applications or fabrication where density or mechanical characteristics are critical for thermal, fire safety or acoustic performance.

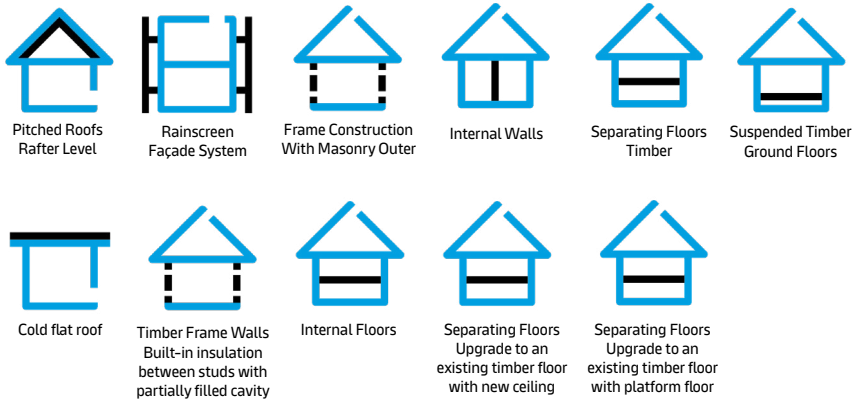
They are non-combustible with the best possible Euroclass A1 reaction to fire classification, and are manufactured using our unique bio-based binder, ECOSE® Technology.

Benefits

- Single slab can be used for multiple applications.
- Can be manufactured with a factory applied foil or tissue facing, offering solutions for a wide variety of applications.
- Manufactured from mineral wool which provides higher levels of sound absorption and reduction than other mainstream insulants.
- Manufactured from rock mineral wool which has a melting temperature of over 1000°C to provide longer periods of fire resistance than other mainstream insulants.

Certification, accreditations & industry standards

Solutions



NON-COMBUSTIBLE INSULATION

with ECOSE® TECHNOLOGY

THERMAL

0.032	0.034 – 0.035	0.044

VAPOUR RESISTIVITY

5.00 MNs/g.m

EUROCLASS REACTION TO FIRE CLASSIFICATION

A1	A2-s1,d0	B	C	D	E	F

GENERIC BRE GREEN GUIDE RATING

A+	A	B	C	D	E

ROCKSILK® RS45, RS60, RS80 A+ ROCKSILK® RS100 A ROCKSILK® RS140 B

Build on us.

Rocksilk® Building Slabs

NON-COMBUSTIBLE INSULATION

with ECOSE Technology

ROCKSILK® BUILDING SLAB

	Thickness (mm)	Thermal conductivity (W/mK)	Thermal resistance (m^2K/W)	Length (mm)	Width (mm)	Pieces per pack	Area per pack (m^2)	Packs per pallet	Pallet product code
ROCKSILK® RS45	150	0.035	4.25	1200	600	3	2.160	12	531096
	100	0.035	2.85	1200	600	5	3.600	12	2411339
	75	0.035	2.10	1200	600	6	4.320	12	2411328
	60	0.035	1.70	1200	600	8	5.760	12	2411425
	50	0.035	1.40	1200	600	10	7.200	12	2411327
	40	0.035	1.10	1200	600	12	8.640	12	2411326
	30	0.035	0.85	1200	600	16	11.520	12	2411424
	25	0.035	0.70	1200	600	20	14.400	12	2411325
ROCKSILK® RS60	100	0.034	2.90	1200	600	4	2.880	12	2411331
	75	0.034	2.20	1200	600	6	4.320	12	2411330
	60	0.034	1.75	1200	600	7	5.040	12	2411433
	50	0.034	1.45	1200	600	9	6.480	12	2411329
	40	0.034	1.15	1200	600	12	8.640	12	2411432
	25	0.034	0.70	1200	600	18	12.960	12	2411430
ROCKSILK® RS80	100	0.034	2.90	1200	600	3	2.160	16	2411332
	75	0.034	2.20	1200	600	4	2.880	16	2411437
	50	0.034	1.45	1200	600	6	4.320	16	2411435
ROCKSILK® RS100	100	0.034	2.90	1200	600	3	2.160	16	2411334
	75	0.034	2.20	1200	600	4	2.880	16	2411333
	50	0.034	1.45	1200	600	6	4.320	16	2411441
	40	0.034	1.15	1200	600	7	5.040	16	2411440
	30	0.034	0.85	1200	600	10	7.200	16	2411439
	25	0.034	0.70	1200	600	12	8.640	16	2411438
ROCKSILK® RS100 WHITE TISSUE FACING	30	0.034	0.85	1200	600	10	7.200	16	528143
ROCKSILK® RS140	100	0.034	2.90	1200	600	2	1.440	12	2432553
	75	0.034	2.20	1200	600	3	2.160	10	2411447
	50	0.034	1.45	1200	600	4	2.880	12	2411446
	40	0.034	1.15	1200	600	5	3.600	12	2411445
	30	0.034	0.85	1200	600	7	5.040	10	2411444

All dimensions are nominal.

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KNAUF INSULATION

Rocksilk® Flexible Slab

Product description

Rocksilk® Flexible Slab is a rock mineral wool slab, designed for use in multiple thermal and acoustic applications as well as the fire protection of a loft conversion floor.

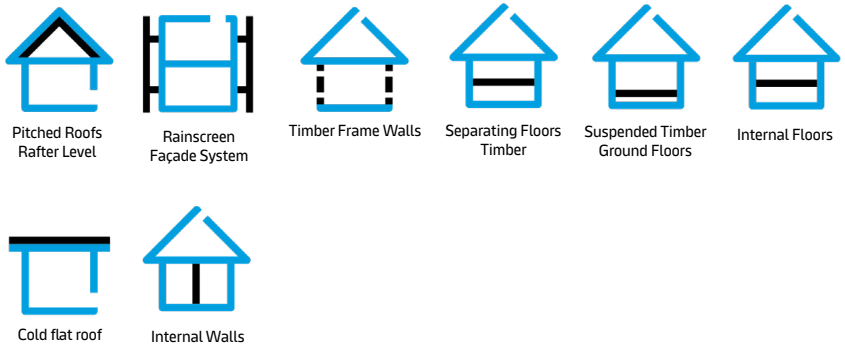
It is non-combustible with the best possible Euroclass A1 reaction to fire classification, and is manufactured using our unique bio-based binder, ECOSE® Technology.

Benefits

- Single slab can be used for multiple applications.
- Tested to achieve up to 60 minutes fire resistance when used in the floor of a loft conversion.
- Engineered to adapt to minor imperfections in the substrates and friction fits between studs, joists and rafters.
- Enables existing ceilings to be retained on a loft upgrade whilst meeting building regulations.
- Manufactured from mineral wool which provides the best levels of sound absorption and reduction compared to other mainstream insulants.

Certification, accreditations & industry standards

Solutions



NON-COMBUSTIBLE INSULATION

with ECOSE® TECHNOLOGY

THERMAL

0.032	0.035 - 0.037	0.044

VAPOUR RESISTIVITY

5.00 MNs/g.m

EUROCLASS REACTION TO FIRE CLASSIFICATION

A1	A2-s1,d0	B	C	D	E	F

GENERIC BRE GREEN GUIDE RATING

A+	A	B	C	D	E

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Rocksilk® Flexible Slab

NON-COMBUSTIBLE INSULATION

with ECOSE Technology

ROCKSILK® FLEXIBLE SLAB

Thickness (mm)	Thermal conductivity (W/mK)	Thermal resistance (m^2K/W)	Length (mm)	Width (mm)	Pieces per pack	Area per pack (m^2)	Packs per pallet	Pallet product code
140	0.035	4.00	1200	600	3	2.160	12	2411335
100	0.037	2.70	1200	600	6	4.320	12	457994
90	0.037	2.40	1200	600	6	4.320	12	457997
70	0.037	1.85	1200	600	8	5.760	12	2411408
60	0.037	1.60	1200	600	10	7.200	12	457996
50	0.037	1.35	1200	600	12	8.640	12	457995
40	0.037	1.05	1200	600	14	10.080	12	531594

All dimensions are nominal.

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Rocksilk® Acoustic Floor Slabs

Product description

Rocksilk® Acoustic Floor Slab and Rocksilk® Acoustic Floor Slab Plus are rock mineral wool slabs, designed to meet the acoustic requirements for use in floating floors.

They are non-combustible with the best possible Euroclass A1 reaction to fire classification, and are manufactured using our unique bio-based binder, ECOSE® Technology.

Benefits

- Rocksilk® Acoustic Floor Slab Plus is suitable for applications where higher load-bearing is required.
- Suitable for use with a range of constructions registered in the Robust Details Handbook eliminating the need for on-site acoustic testing.
- Engineered to adapt to minor imperfections in the substrates.
- Manufactured from mineral wool which provides the best levels of sound absorption and reduction compared to other mainstream insulants to reduce the sound transfer between storeys.

Certification, accreditations & industry standards

Solutions

Separating Concrete Floor

NON-COMBUSTIBLE INSULATION

with ECOSE TECHNOLOGY

EUROCLASS REACTION TO FIRE CLASSIFICATION

A1	A2-s1,d0	B	C	D	E	F

VAPOUR RESISTIVITY

5.00 MNs/g.m

GENERIC BRE GREEN GUIDE RATING

A+	A	B	C	D	E

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Blown glass mineral wool
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Wood wool

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Rocksilk® Acoustic Floor Slabs

NON-COMBUSTIBLE INSULATION

with ECOSE Technology

ROCKSILK® ACOUSTIC FLOOR SLAB

Thickness (mm)	Length (mm)	Width (mm)	Pieces per pack	Area per pack (m^2)	Packs per pallet	Pallet product code
25	1000	600	12	7.200	16	606070

ROCKSILK® ACOUSTIC FLOOR SLAB PLUS

50	1000	600	4	2.400	24	606068
25	1000	600	8	4.800	24	606069

All dimensions are nominal.

Build on us.

KNAUF INSULATION

July 2024

Rocksilk® Soffit Linerboards

Product description

Rocksilk® Soffit Linerboard Standard and Extra are rock mineral wool slabs, designed to insulate structural soffits in applications such as car parks.

They are non-combustible with the best possible Euroclass A1 reaction to fire classification, and are manufactured using our unique bio-based binder, ECOSE® Technology.

Benefits

- Rocksilk® Soffit Linerboard Extra is impact-resistant due to it's cementitious facing board, making it ideal for semi-exposed environments.
- Provide a solution to upgrade thermal performance of existing floors without reducing floor height.
- Can be installed without the need to access areas above the floor.
- Manufactured from mineral wool which provides the best levels of sound absorption and reduction compared to other mainstream insulants to reduce the sound transfer between storeys.
- Available with optional fixings which match the colour of Rocksilk® Soffit Linerboard Standard and Extra.

Certification, accreditations & industry standards

Solutions

Structural Soffit Floors

Rocksilk® Soffit Linerboard Standard (unfaced)

NON-COMBUSTIBLE INSULATION

with ECOSE® TECHNOLOGY

THERMAL

0.032	**0.034**	0.044

VAPOUR RESISTIVITY

5.00 MNs/g.m

EUROCLASS REACTION TO FIRE CLASSIFICATION

A1	A2-s1,d0	B	C	D	E	F

VAPOUR RESISTIVITY FIBRE CEMENT FLAT SHEET

200 MNs/g.m

GENERIC BRE GREEN GUIDE RATING

A+	**A**	B	C	D	E

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Wood wool

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Build on us.

Rocksilk® Soffit Linerboards

NON-COMBUSTIBLE INSULATION

with ECOSE Technology

ROCKSILK® SOFFIT LINERBOARD EXTRA

Thickness (mm)	Thermal conductivity (W/mK)	Thermal resistance (m^2K/W)	Length (mm)	Width (mm)	Slabs per pallet	Area per pack (m^2)	Pallet product code
220/6*	0.034 / 0.24	6.45	1200	600	10	7.200	682465
185/6*	0.034 / 0.24	5.45	1200	600	12	8.640	682466
160/6*	0.034 / 0.24	4.70	1200	600	12	8.640	682455
130/6*	0.034 / 0.24	3.80	1200	600	18	12.960	682453

ROCKSILK® SOFFIT LINERBOARD STANDARD

220	0.034	6.45	1200	600	20	14.400	469973
185	0.034	5.40	1200	600	28	20.160	672812
160	0.034	4.70	1200	600	32	23.040	675216
130	0.034	3.80	1200	600	40	28.800	675217

ROCKSILK® SOFFIT LINERBOARD STANDARD (UNFACED)

75	0.034	2.20	1200	600	4	2.800	673084
50	0.034	1.45	1200	600	6	4.320	673083

All dimensions are nominal.

Bespoke Sizes

Rocksilk® Soffit Linerboard is available in bespoke dimensions to suit specific thermal and aesthetic requirements in thicknesses from 50 to 270mm.

Build on us.

Rocksilk® Soffit Linerboard Fixings

Product description

Rocksilk® Soffit Linerboard Fixings are designed for installing Rocksilk® Soffit Linerboard Standard and Extra onto reinforced concrete or composite steel ceilings.

The tube washers and metal retaining discs are available in black and off-white to match the colour of the facings on Rocksilk® Soffit Linerboard Standard and Extra.

Benefits

- Available in black or off white to match the colour of Rocksilk® Soffit Linerboard Standard and Extra.
- Suitable for concrete, timber or steel decks below 0.7mm thick.
- Tube washer design creates less thermal bridging, allowing lower u-values than alternative fixing methods.

Certification, accreditations & industry standards

Solutions

Structural Soffit Floors

Build on us.

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Rocksilk® Soffit Linerboard Fixings

July 2024

ROCKSILK® SOFFIT LINERBOARD CONCRETE SCREWS

Length (mm)	**Pack Quantity**	**Nominal Diameter**	**Product Code**
75mm	100	6.1mm	728762
85mm	100	6.1mm	728761
100mm	100	6.1mm	728760
175mm	100	6.1mm	728767
200mm	100	6.1mm	728768
225mm	100	6.1mm	728769
250mm	100	6.1mm	728770
275mm	100	6.1mm	728774

PERFORMANCE

Material	Steel SAE1022 case hardened
Head type	Multiple layer organic
Coating	Oval, TX25 recess
Drilling capacity	Up to 0.7mm S275 steel
Pull-out strength	Concrete C25/30 – 1.98kN Concrete C25/40 – 2.24kN

ROCKSILK® SOFFIT LINERBOARD TUBE WASHERS

Length (mm)	**Pack Quantity**	**Tube Diameter**	**Product Code**
100mm White	800	13.6mm	728754
125mm White	700	13.6mm	728755
150mm White	600	13.6mm	728756
200mm White	500	13.6mm	728759
100mm Black	800	13.6mm	728712
125mm Black	700	13.6mm	728751
150mm Black	600	13.6mm	728752
200mm Black	500	13.6mm	728753

PERFORMANCE

Material	Polypropylene
Pull over value	1.55kN
Head size	75mm

ROCKSILK® SOFFIT LINERBOARD PRESSURE PLATES

Colour	**Pack Quantity**	**Product Code**
White	100	728765
Black	100	728763

PERFORMANCE

Material	Galvanised Steel
Hole size	6.5mm
Head size	70mm

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Build on us.

Rocksilk® EWI Slabs

Product description

Rocksilk® EWI Slabs are rock mineral wool slabs designed for use in external wall insulation systems.

Slabs can be either adhered and mechanically fixed or just mechanically-fixed to the substrate. The reaction to fire performance of the product removes the need for fire barriers, giving simple, quick and economical insulation for External Wall Insulation systems.

They are non-combustible with the best possible Euroclass A1 reaction to fire classification.

Benefits

- No fire breaks required.
- Rocksilk® EWI Slab Plus is available as a denser, compressively stronger slab.
- Suitable for use with both silcone and mineral render systems providing design flexibility.
- Suitable for applications where higher load-bearing is required.
- Manufactured from mineral wool which provides the best levels of sound absorption and reduction compared to other mainstream insulants.

Certification, accreditations & industry standards

EPD® THE INTERNATIONAL EPD® SYSTEM

Generic BRE Green Guide Rating B-C

MADE IN BRITAIN

Solutions

External Wall Insulation

NON-COMBUSTIBLE INSULATION

THERMAL

0.032		0.036		0.038		0.044

EUROCLASS REACTION TO FIRE CLASSIFICATION

A1	A2-s1,d0	B	C	D	E	F

GENERIC BRE GREEN GUIDE RATING

A+	A	B	C	D	E

ROCKSILK® EWI SLAB PLUS ROCKSILK® EWI SLAB

Build on us.

Rocksilk® EWI Slabs

NON-COMBUSTIBLE INSULATION

ROCKSILK® EWI SLAB

Thickness (mm)	Thermal conductivity (W/mK)	Thermal resistance (m^2K/W)	Tensile Strength (kPa)	Compressive Strength (kPa)	Length (mm)	Width (mm)	Pieces per pallet	Area per pallet (m^2)	Pallet product code
270	0.036	7.50	10	30	1200	600	8	5.760	595566
250	0.036	6.90	10	30	1200	600	10	7.200	519396
230	0.036	6.35	10	30	1200	600	10	7.200	402600
200	0.036	5.55	10	30	1200	600	12	8.640	271494
170	0.036	4.70	10	30	1200	600	14	10.080	271277
150	0.036	4.15	10	30	1200	600	16	11.520	271270
120	0.036	3.30	10	30	1200	600	24	17.280	271217
100	0.036	2.75	10	30	1200	600	24	17.280	264383
90	0.036	2.50	10	30	1200	600	40	28.800	264382
60	0.036	1.65	10	30	1200	600	40	28.800	266166

All dimensions are nominal. Available via approved contractors.

NON-COMBUSTIBLE INSULATION

ROCKSILK® EWI SLAB PLUS

Thickness (mm)	Thermal conductivity (W/mK)	Thermal resistance (m^2K/W)	Tensile Strength (kPa)	Compressive Strength (kPa)	Length (mm)	Width (mm)	Pieces per pallet	Area per pallet (m^2)	Pallet product code
200	0.038	5.25	15	50	1200	600	12	8.640	2414726
140	0.038	3.65	15	50	1200	600	16	11.520	2411252
100	0.038	2.65	15	50	1200	600	24	17.280	2404581

All dimensions are nominal. Available via approved contractors.

Build on us.

KNAUF INSULATION

July 2024

Rocksilk® Flat Roof Slabs

Product description

Rocksilk® Flat Roof Slab is a rock mineral wool slab with an Agrément certificate by the BBA, designed for use in flat roof build-ups onto all types of roof deck using all types of mechanically-fixed membranes.

Rocksilk® Flat Roof Slab Extra has a higher mechanical performance, designed to take increased loads. They are non-combustible with the best possible Euroclass A1 reaction to fire classification, and are manufactured using our Krimpact® Technology.

Benefits

- Holds an Agrément certificate by the BBA (certificate 08/4526) for use in multiple build-ups.
- Compatible with a wide range of mechanically-fixed single-ply membranes.
- Manufactured from mineral wool which provides the best levels of sound absorption and reduction compared to other mainstream insulants to reduce the drumming effects of rainfall.
- Manufactured using Knauf Insulation's Krimpact® Technology giving improved compressive strength and durability.
- Manufactured with a water-repellent additive to resist moisture ingress.

Certification, accreditations & industry standards

CE EUCEB EPD THE INTERNATIONAL EPD® SYSTEM Generic BRE Green Guide Rating B-C MADE IN BRITAIN BBA APPROVAL INSPECTION TESTING CERTIFICATION *not Extra FM APPROVED *not Extra

Solutions

Warm flat roof

NON-COMBUSTIBLE INSULATION

THERMAL

0.032	0.039 - 0.040	0.044

VAPOUR RESISTIVITY: 5.00 MNs/g.m

EUROCLASS REACTION TO FIRE CLASSIFICATION

A1	A2-s1,d0	B	C	D	E	F

GENERIC BRE GREEN GUIDE RATING

A+	A	B	C	D	E

ROCKSILK® FLAT ROOF SLAB

ROCKSILK® FLAT ROOF SLAB EXTRA

COMPRESSIVE STRENGTH: 70 kPa & 90 kPa

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Wood wool

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Rocksilk® Flat Roof Slabs

NON-COMBUSTIBLE INSULATION

ROCKSILK® FLAT ROOF SLAB

Thickness (mm)	**Thermal conductivity** (W/mK)	**Thermal resistance** (m^2K/W)	**Compressive Strength** (kPa)	**Length** (mm)	**Width** (mm)	**Area per pallet** (m^2)	**Pieces per pack**	**Pallet product code**
180	0.039	4.60	70	1200	1000	16.800	14	606059
160	0.039	4.10	70	1200	1000	16.800	14	691052
145	0.039	3.70	70	1200	1000	19.200	16	606057
120	0.039	3.05	70	1200	1000	24.000	20	606055
105	0.039	2.65	70	1200	1000	28.800	24	686424
100	0.039	2.55	70	1200	1000	28.800	24	606052
80	0.039	2.05	70	1200	1000	36.000	30	691296

NON-COMBUSTIBLE INSULATION

ROCKSILK® FLAT ROOF SLAB EXTRA

Thickness (mm)	**Thermal conductivity** (W/mK)	**Thermal resistance** (m^2K/W)	**Compressive Strength** (kPa)	**Length** (mm)	**Width** (mm)	**Area per pallet** (m^2)	**Pieces per pack**	**Pallet product code**
150	0.040	3.75	90	1200	1000	19.200	16	606067
125	0.040	3.10	90	1200	1000	24.000	20	606065
105	0.040	2.60	90	1200	1000	28.800	24	606064
95	0.040	2.35	90	1200	1000	28.800	24	606061

All dimensions are nominal

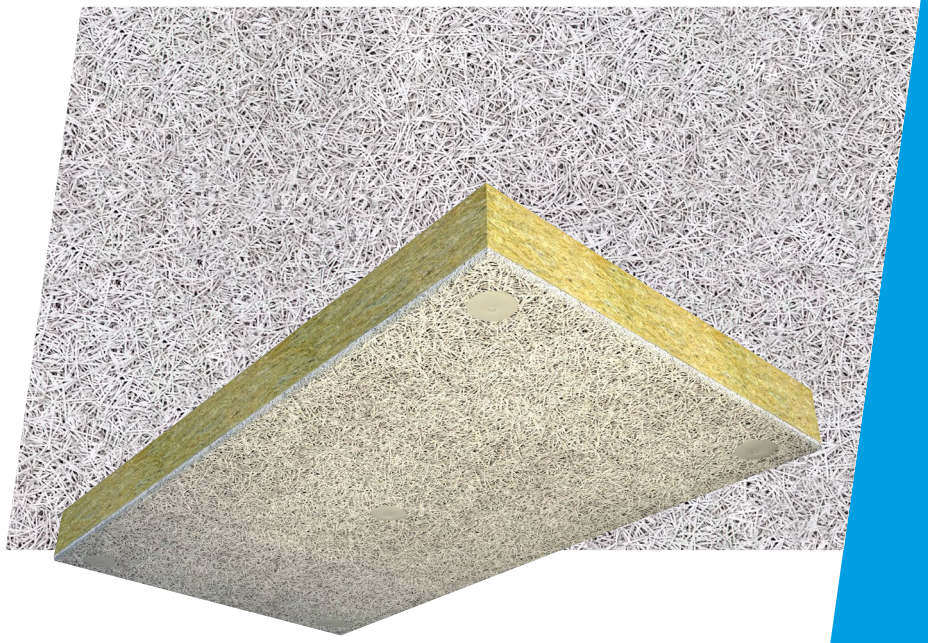
WOOD WOOL PRODUCTS

Heraklith® Tektalan A2 SmartTec

Heraklith® A2 Decorative Panel

Heraklith® Fixings

Heraklith® Tektalan A2 SmartTec



Product description

Heraklith® Tektalan A2 SmartTec is a cement-bonded wood wool panel combined with a rock mineral wool insulation slab, used for the thermal & acoustic performance and the decorative finish of structural soffits.

It is non-combustible with a Euroclass A2-s1, d0 reaction to fire classification and can provide a fire resistance of up to 180 minutes to concrete floors.

Benefits

- Available as standard in nature tone, or in any RAL colour upon request.
- Aesthetically pleasing; finished with bevelled edges.
- Manufactured from mineral wool which provides the best levels of sound absorption and reduction compared to other mainstream insulants.
- Quick installation on site as only 2 fixings required per panel (where the overall thickness is greater than 100mm)*
- Can be used as an alternative solution in structural soffits.

** If fire resistance is required, 5 fixings need to be used.*

Certification, accreditations & industry standards

CE EPD® THE INTERNATIONAL EPD® SYSTEM

Solutions

Structural Soffit Floors

Internal Walls

NON-COMBUSTIBLE INSULATION

THERMAL

0.035	0.095
Mineral Wool	Wood Wool

SOUND ABSORPTION

Alpha w: max 1.00

EUROCLASS REACTION TO FIRE CLASSIFICATION

A1	A2-s1,d0	B	C	D	E	F

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KNAUF INSULATION

Heraklith® Tektalan A2 SmartTec

NON-COMBUSTIBLE INSULATION

HERAKLITH® TEKTALAN A2 SMARTTEC

Thickness (mm)	**Composition** mm (HW/SW)	R_D (m^2K/W)	**Weight** (kg/m^2)	**Length** (mm)	**Width** (mm)	**Panels per pallet**	**Pallet** (m^2)
225	10/215	6.40	28.50	1000	600	5	3.00
200	10/190	5.65	25.00	1000	600	5	3.00
175	10/165	4.95	22.50	1000	600	6	3.60
150	10/140	4.20	20.00	1000	600	7	4.20
125	10/115	3.45	17.50	1000	600	8	4.80
100	10/90	2.75	16.00	1000	600	11	6.60
75	10/65	2.00	13.00	1000	600	14	8.40
50	10/40	1.25	11.50	1000	600	22	13.20

SOUND ABSORPTION COEFFICIENT*

Panel type	**Frequency** (Hz)	**125**	**250**	**500**	**1000**	**2000**	**4000**	**Alpha w**	**NRC ****	**Absorption Class**
Heraklith® Tektalan A2 SmartTec [2mm], 50mm	αs (1/1 octave)	0.20	0.70	1.00	1.00	0.80	0.60	**0.80**	0.90	0.89
Heraklith® Tektalan A2 SmartTec [1mm], 50mm	αs (1/1 octave)	0.25	0.75	1.00	1.00	0.95	0.80	**0.95**	0.95	0.94

Options	
Fibre Width	1.0mm
Colour	Any colour

Sound absorption tests have been executed in accordance with the norm ISO 11654/ ASTM-C423
** Mounted directly to concrete*
*** Noise Reduction Coefficient*

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Heraklith® A2 Decorative Panel

Product description

Heraklith® A2 Decorative Panel is a cement-bonded wood wool panel, specifically developed for the acoustic performance and decorative finish of walls and ceilings.

It is non-combustible with a Euroclass A2-s1,d0 reaction to fire classification, and can provide a fire resistance of up to 60 minutes when installed in a richter grid ceiling system or clad onto concrete soffits.

Benefits

- Available as standard in nature tone, or in any RAL colour upon request.
- Aesthetically pleasing; finished with bevelled edges.
- Provides thermal, fire safety and acoustic performance.
- Fixings available to match.

Certification, accreditations & industry standards

CE EPD® THE INTERNATIONAL EPD® SYSTEM

Solutions

Structural Soffit Floors

Internal Walls

NON-COMBUSTIBLE INSULATION

THERMAL

0.095

SOUND ABSORPTION

Alpha w: max 0.90

EUROCLASS REACTION TO FIRE CLASSIFICATION

A1	A2-s1,d0	B	C	D	E	F

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Heraklith® A2 Decorative Panel

NON-COMBUSTIBLE INSULATION

HERAKLITH® A2 DECORATIVE PANEL

Thickness (mm)	R_D (m^2K/W)	**Weight** (kg/m^2)	**Length** (mm)	**Width** (mm)	**Panels per pallet**	**Pallet** (m^2)
25	0.30	17.50	1200	600	40	28.80

SOUND ABSORPTION COEFFICIENT

Panel type	**Frequency** (Hz)	**125**	**250**	**500**	**1000**	**2000**	**4000**	**Alpha w**	**NRC***	**Absoption Class**
1. Concrete 2. Heraklith® A2 Decorative Panel [2mm], 25mm	αs (1/1 octave)	0.06	0.13	0.27	0.63	0.91	0.66	**0.35**	0.50	0.50
1. Concrete 2. Cavity, 175mm 3. Heraklith® A2 Decorative Panel [2mm], 25mm	αs (1/1 octave)	0.21	0.56	0.65	0.52	0.65	0.82	**0.60**	0.60	0.59
1. Concrete 2. Cavity, 135mm 3. Heraklith® A2 Decorative Panel, 40mm 4. Heraklith® [2mm], 25mm	αs (1/1 octave)	0.44	0.87	0.27	0.90	0.84	0.95	**0.90**	0.85	0.88

Sound absorption tests have been executed in accordance with ISO 11654/ ASTM-C423
** Noise Reduction Coefficient*

Heraklith® Fixings

Product description

Heraklith® DDS Plus Concrete Screws are suited for securing wood wool panels directly into pre-cast concrete. They have a patented wood wool texture on the head of the screw, designed to provide a neat decorative finish once installed.

Made of corrosion resistant steel, the screws provide a fire-resistant solution for concrete soffits when combined with Heraklith® products.

Benefits

- Made of corrosion-resistant steel, the screws provide a fire-resistant solution for concrete soffits when combined with Heraklith® products.
- Simple installation: pre-drill and screw in.
- Minimal anchorage depth for easy fixing.
- Plastic screw head with wood wool texture for decorative finish.
- Available in any RAL colour upon request to match panel colour.

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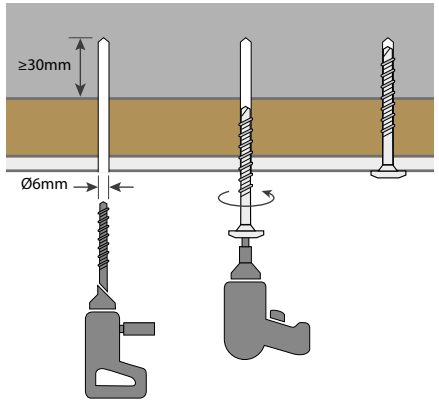
Heraklith® Fixings

HERAKLITH® DDS PLUS CONCRETE SCREW

Corrosion category	C3
Tensile strength concrete C20/25	0.5kN
Screw diameter	7.3mm
Head diameter	26mm
Drilled hole diameter	6mm
Drilled hole depth	30mm
Anchoring depth in concrete	25mm
Screw drive	Torx T30
Recommended anchoring material	Concrete (2000-2600 kg/m³)



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July 2024

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