

Creating Intelligent Environments

Insulation Solutions Guide



Has anyone ever put more thought into insulation?

Intelligent Environments
Superglass



Our world has changed.

The way we live is affecting our planet more than ever, and the buildings we construct need to address this – now.



It's time to think carefully about our future. All our futures. What we do today will have an immeasurable impact on tomorrow. And if we do the right thing, we'll all benefit. As will the next generation.

Superglass may be a brand with 40 years behind it, but our thinking is light years ahead. We create intelligent insulation solutions that enable comfortable living and working environments. And that protect our global environment by saving energy and using recycled glass.

A global leader

We may still be based in Scotland, but we're part of global leader in roofing, waterproofing and insulation TN International – a business with over 6500 people, 51 manufacturing plants and offices in 79 countries, dedicated to researching and investing in new energy saving solutions to improve the lives of millions of people worldwide.

So while insulation is what we make, what we contribute makes an important difference to our planet.



The smartest way to use energy...

... is to not use it at all.

That's the underlying principle behind Superglass thinking. It drives everything we do – from creating new ways of insulating to helping house builders make best use of resources.



Smarter thinking from Superglass

We've long been innovators – bringing new ideas, products and thinking to the construction industry.

We were first to introduce Multi-Roll to the market in the early 1990s, for example – the first glass mineral wool product with perforations so installers could choose their required width – and more recently, developed blown solutions to meet the huge surge in demand for retrofit cavity wall and loft insulation.



Has anyone ever put more thought into insulation?

In terms of safeguarding the future of our planet, Superglass is in a unique position.



Our science can save energy. Our ideas can improve buildings. Our innovations can make a difference – and by choosing Superglass, so will you.

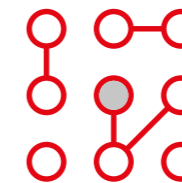
Our glass mineral wool is made from up to 84% recycled glass, reducing waste disposal and saving valuable resources that would otherwise go to landfill.

It has excellent thermal and acoustic performance, meeting every regulation easily including fire protection with a reaction to Fire Classification A1. It's also extremely easy and efficient to install, making it supremely cost-effective too. And it's breathable, reducing the risk of condensation in the building – plus you can always rely on it to consistently match its stated performance levels.

Helping you create Intelligent Environments

Most of all though, it allows us to optimise living and working environments, and make energy more affordable – while saving house builders time and money, so they can build more homes faster to meet today's demand and tomorrow's energy needs.

We call them Intelligent Environments and they're made possible by our latest generation insulation products, using our innovative new approach to glass chemistry: THINKTECH, smarter technology for every home.



THINKTECH



The fire safety benefits of Superglass Insulation

In any building, fire safety is of paramount importance. It's crucial that architects, specifiers and installers know how the insulation they put into a building will behave in the event of a fire. And even more important that occupants can be sure their building has the best safety measures built in from the outset.

Superglass provides reassurance of being truly fire safe – and it's been thoroughly tested to prove the levels of fire protection it offers.

No insulation has a higher fire rating than Superglass
All Superglass products have a Euroclass A1 fire classification – the highest possible rating – so are classed as some of the safest materials on the market. Our insulation is made from waste glass, an inert, inorganic and non-combustible

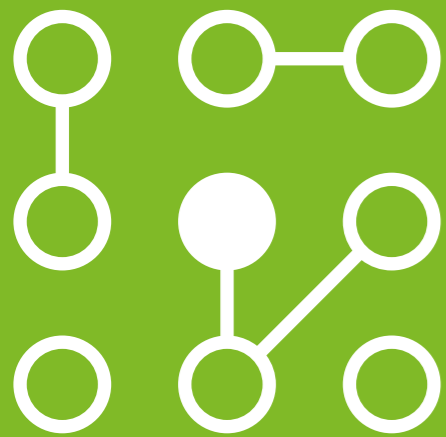
material. This can help protect buildings against fire by not supporting the spread of flames therefore helping to protect the building, thus limiting damage and protecting its occupants.

Tested for total reassurance

Superglass insulation has undergone the strictest independent testing to BS EN 13501-1 Reaction to Fire standards. This follows the industry-standard Euroclass system, which classifies the reaction to fire of a building material with ratings of A1, A2, B, C, D, E and F. A1 and A2 ratings mean a material does not burn or contribute to the spread of flames or emit any significant levels of toxic smoke in a fire, while materials rated B to F are combustible.

The smart thinking behind the new generation Superglass.

Every Superglass product now contains THINKTECH.
But THINKTECH isn't just some clever new ingredient.
It's a whole new approach that's improved every aspect of our insulation.



THINKTECH



THINKTECH takes recycled glass and improved fibre technology and combines them with advanced glass chemistry expertise to produce our best-performing insulation ever.

Our latest generation products look better, smell better, feel better, compress further and recover faster – thanks to new state of the art furnace and advanced processing equipment.

Perfect with renewable energy systems

THINKTECH recognises that insulation is just part of the environmental equation too.

However many homes are built with the latest ultra-efficient renewable energy technologies, those expensive systems are of little value if the energy they produce simply escapes into the atmosphere.

That's where Superglass and THINKTECH come in, wrapping the building envelope to maximise energy efficiency and minimise carbon emissions and household bills.



Together with a Zero Ozone Depletion Potential (ODP), this has all enabled Superglass products to easily achieve a Generic BRE Green Guide rating of A+.



Superglass is a member of the Supply Chain Sustainability School, an industry led organisation at the forefront of sustainability, strategy and best practice.



No. 000371 & 000372

Verifications from BRE Global provide end users and specifiers with the confidence that environmental claims made relevant to Superglass Blown and Cured insulation products are credible, through a process of independent assessment and validation of evidence put forward in respect of products, service, or practice.

Supporting you as well as our planet.

THINKTECH is just part of our total commitment to energy preservation.

But we're equally committed to giving you the support you need, whatever your role and wherever you use our products.



We're renowned for the highest levels of customer support and service, and proud of our close relationships throughout the supply chain – especially with specifiers.

Our free specification service combines the skills of our external Specification team with our dedicated in-house Technical team to provide U-Value calculations and Dew Point analysis. We also offer industry-leading Building Information Modelling (BIM) and Standard Assessment Procedure (SAP) guidance, with all our BIM objects downloadable from BIMstore.co.uk or directly from our website.

Whatever you need

Our team will help you find the best solution for your application. And if that requires a bespoke product, they can design and produce it to your exact requirements.

The Superglass Technical Team can help with:

- U-Value calculations, with dedicated on line calculation tool. To access our free on line U-Value calculator visit www.superglass.co.uk/u-value-calculation
- Condensation risk analysis
- Building Regulations compliance
- Application and installation guidance
- Environmental and sustainability credentials

Call them today on **0808 1645 134** or email **Technical-uk@tn-i.com**



Superglass products now available on NBS Source. NBS Source is a brand-new platform that brings together the NBS BIM Library, NBS Plus and Product Selector.

NBS Source aims to help you find everything you need to make a decision in one place – product properties, certifications, associated literature, specification clauses and digital objects. With NBS Source, you will be able to add the Superglass products data straight into your NBS specification or design model in the click of a button.



Our products, bespoke or standard, carry all the accreditations you'd expect them to, including Declaration of Performance (DOPs), the reassurance of British Board of Agrément Certification (BBA) and UKCA and CE Mark certification, while for separating walls our Robust Detail solutions provide a simple and reliable route to compliance with the necessary Building Regulations.



Europe's most advanced manufacturing plant

A result of one of the biggest investments in the insulation industry in recent times, our manufacturing plant in Stirling is a leading example of 21st century manufacturing.

But Superglass is more... At the heart of our technology is a commitment to protecting the environment.

For example, we manufacture all our glass wool insulation products from post-consumer waste, which would otherwise be diverted to landfill.

Our aqueous waste and fibre waste are both recycled to prevent going to sewer or landfill; advances in our melting process mean we use less energy in production; and our products are compress-packed to around one-ninth of their original volume, reducing transport costs and the amount of packaging.



The right insulation in the right place.

Whatever the structure, whatever you're looking to achieve, Superglass has the product you need. Our Teamworks ethos means we'll work closely with you, using our expertise to make sure you also get the most effective solution for your building.



Product applications:



External walls

(See Pages 16 – 27)

Superglass has a wide range of glass wool insulation products to suit different types of wall constructions – masonry, timber frame and metal clad.



Party & Separating walls

(See Pages 28 – 33)

Whether of timber frame or masonry construction, you'll find insulation options ideal for meeting the relevant regulations – and we also offer Robust Details solutions designed to make doing that even simpler.



Internal partition walls

(See Pages 34 – 37)

Internal partitions can follow a variety of construction methods: including metal stud or simple timber stud partitions. At Superglass, you'll find insulation options to suit each.



Roofs

(See Pages 36 – 43)

Roof constructions can vary enormously, as can the materials used. From simple loft insulation to options for timber frame, warm roof applications and metal clad roofs. Our range can meet every requirement.



Floors

(See Pages 44 – 47)

Insulating floors correctly is crucial, not just from the perspective of keeping heat in but also to limit sound intrusion. Whether the floor is a simple suspended timber design for ground floors or an internal floor, Superglass can provide the ideal insulation.



Metal Clad Buildings

(See Pages 48 – 49)



External masonry walls.

Built in solutions.

Glass mineral wool.

The perfect solution for external masonry walls.

In domestic dwellings built after 1920, it is highly likely that the external walls are made of two masonry layers with a cavity in between. Cavity wall insulation fills that gap, keeping the warmth in to save energy.

To assist in Buildings Regulation compliance, our recommended masonry cavity wall solution is fully filling the cavity with Superglass insulation.

This not only provides the best U-Value to wall width ratio, but also make good economic sense. Even with dense concrete

blocks it is possible to achieve very high thermal performance in a manageable wall width.

The systems shown on the following pages do not require cavity fire barriers*, and full fill systems can be installed in all types of buildings, as detailed in their British Board of Agrément (BBA) Certificates. With formal guarantees against liquid water penetration and a long history of use, they offer peace of mind for the specifier, builder and client alike.

About a third of all the heat lost in an uninsulated home escapes through the walls, as heat will always flow from a warm area to a cold one. In winter, the colder it is outside, the faster heat from your home will escape into the surrounding air.



Our technical team will help you find **the best solution** for your application, call **0808 1645 134**.

Superwall Cavity Wall Batts.

Full Fill Built-In solutions.

Superglass Superwall products are British Board of Agrément (BBA) approved, non-combustible and water repellent glass mineral wool insulation cavity wall batts. These flexible batts are supplied at 455mm wide to allow easy installation between standard vertical wall tie spacings and minimum on-site cutting and waste.

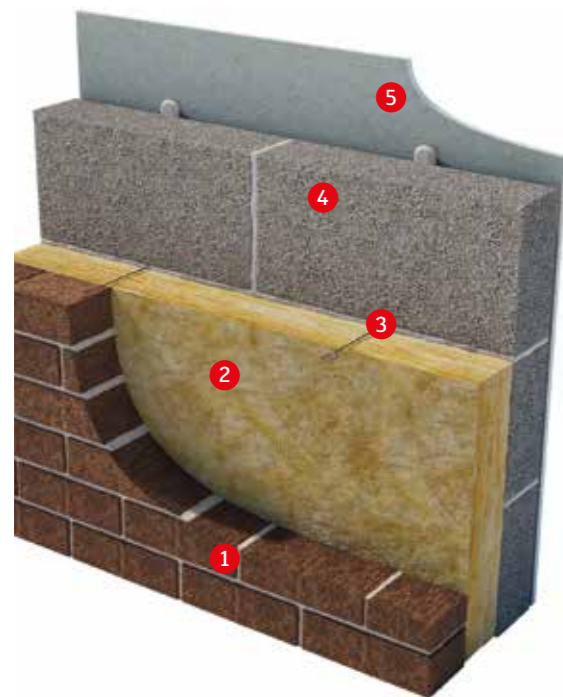
Application

Superwall is designed to provide thermal insulation in full fill external masonry cavity walls up to 25m in height. Superwall is BBA approved for use in all UK exposure zones (subject to conditions detailed in the BBA Certificate and NHBC Standards).

Note: can also be used in partial-fill applications. For more information contact the Superglass Technical Team.

Water Resistance

Constructions incorporating the product and built in accordance with the Standards listed in section 4.4 of BBA Certificates 89/2231, will resist the transfer of precipitation to the inner leaf and satisfy the national Building Regulations.



Typical Application

External masonry cavity wall - Full fill

- 1 Outer leaf - brick or block
- 2 Superglass Superwall
- 3 Wall ties
- 4 Inner leaf - Block
- 5 Plasterboard on dabs

Thermal Insulation

Superglass Superwall for external cavity walls

The tables on the adjacent page show typical U-Values when combining different Superwall products with a variety of commonly used inner and outer leaves.





Superglass Products	Thermal conductivity
Superwall 32	0.032 W/mK
Superwall 34	0.034 W/mK
Superwall 36	0.036 W/mK

Typical U-Values (W/m²K) achieved when fully filling the wall cavity with Superglass Superwall cavity wall batts.

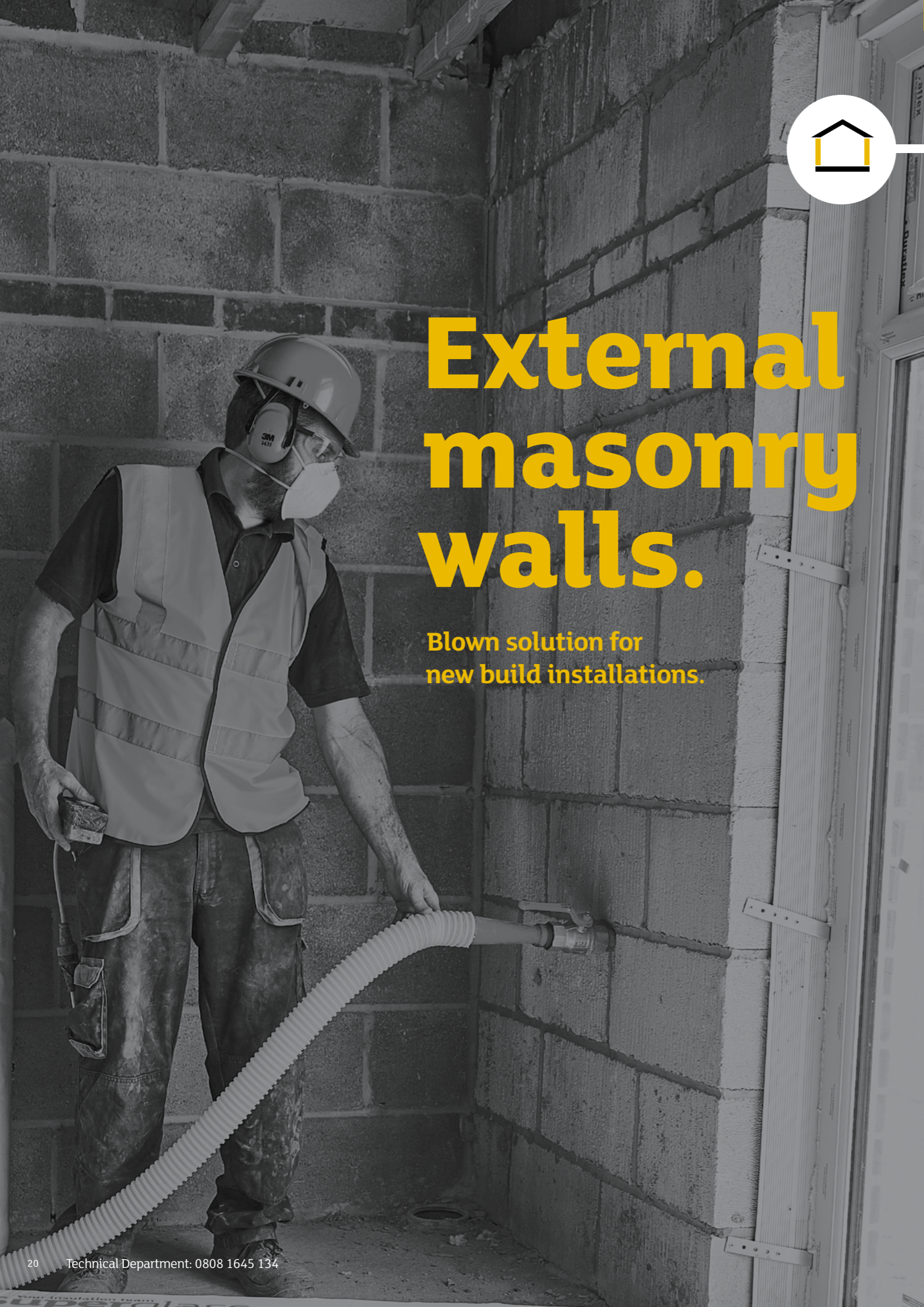
Brick and block construction

Cavity width and insulation thickness	Outer Leaf Bricks	102.5mm	102.5mm	102.5mm Brick	102.5mm
	100mm Superwall 36	0.30	0.29	0.26	0.25
	100mm Superwall 34	0.28	0.27	0.25	0.24
	100mm Superwall 32	0.27	0.26	0.24	0.23
	125mm Superwall 36	0.25	0.24	0.22	0.21
	125mm Superwall 34	0.24	0.23	0.21	0.20
	125mm Superwall 32	0.22	0.22	0.20	0.19
	150mm Superwall 36	0.21	0.21	0.19	0.19
	150mm Superwall 34	0.20	0.20	0.18	0.18
	150mm Superwall 32	0.19	0.19	0.17	0.17
Inner Leaf Blocks	100mm Dense Aggregate (1.13W/mK)	100mm Medium Dense (0.45W/mK)	100mm Standard Aircrete (0.15W/mK)	100mm Lightweight Aircrete (0.11W/mK)	
Plaster Dabs	15mm	15mm	15mm	15mm	
Plasterboard	12.5mm Standard (0.19W/mK)	12.5mm Standard (0.19W/mK)	12.5mm Standard (0.19W/mK)	12.5mm Standard (0.19W/mK)	

Block and block construction

Cavity width and insulation thickness	Render	20mm Sand & Cement	20mm Sand & Cement	20mm Sand & Cement	20mm Sand & Cement
	Outer Leaf Blocks	100mm Dense Aggregate (1.21W/mK)	100mm Medium Dense (1.21W/mK)	100mm Standard Aircrete (1.21W/mK)	100mm Lightweight Aircrete (1.21W/mK)
	100mm Superwall 36	0.30	0.29	0.26	0.25
	100mm Superwall 34	0.29	0.28	0.25	0.24
	100mm Superwall 32	0.27	0.26	0.24	0.23
	125mm Superwall 36	0.25	0.24	0.22	0.21
	125mm Superwall 34	0.24	0.23	0.21	0.21
	125mm Superwall 32	0.22	0.22	0.20	0.20
	150mm Superwall 36	0.21	0.21	0.19	0.19
	150mm Superwall 34	0.20	0.20	0.18	0.18
150mm Superwall 32	0.19	0.19	0.18	0.17	
Inner Leaf Blocks	100mm Dense Aggregate (1.13W/mK)	100mm Medium Dense (0.45W/mK)	100mm Standard Aircrete (0.15W/mK)	100mm Lightweight Aircrete (0.11W/mK)	
Plaster Dabs	15mm	15mm	15mm	15mm	
Plasterboard	12.5mm Standard (0.19W/mK)	12.5mm Standard (0.19W/mK)	12.5mm Standard (0.19W/mK)	12.5mm Standard (0.19W/mK)	

For any U-value calculations for alternative construction build-ups and written calculations, please email Technical-uk@tn-i.com



External masonry walls.

Blown solution for new build installations.

Superwhite 34.

Blown Cavity Wall Insulation. For a smarter way to build.

Superglass Superwhite 34 is more than just superior glass mineral wool blown cavity wall insulation. It's a whole new way of working.

This product has been designed specifically for new build masonry cavity walls, using our 20 years' experience in the retro-fit blown insulation industry.

The solution has been meticulously tested and is fully BBA certified making it much easier to comply with current Building Regulations for new build dwellings. It is also backed by a 10 year guarantee.

Installed internally after the walls are built, Superwhite 34 will help make the most of the on-site team's skills. The Superwhite 34 full fill solution is proven to give a superior thermal performance whilst facilitating a highly efficient build process. It also minimises potential weather delays and reduces on-site waste.

We also recommend Superwhite 34 for party walls*, giving the added advantage of just one product and one installation process on-site, which means less room for error, less management needed and a superior level of insulation throughout.

*A Superwhite 34 Party Wall Robust Details solution is currently being developed.

Superwhite 34 has a thermal conductivity of 0.034W/mK which is the lowest thermal performance for blown glass mineral wool insulation for masonry cavity walls in the UK. It's also declared to Lambda 90/90, so you can be sure it delivers all the thermal performance you need.



Our technical team will help you find **the best solution** for your application, call **0808 1645 134**.

Superwhite 34 Blown Cavity Insulation.

Full Fill Blown solution.

Application

Superglass Superwhite 34 is designed to provide thermal insulation for new-build masonry cavity walls with a minimum cavity width of 90mm and up to 12m in height. It can be installed in buildings of 12m – 25m in height subject to a satisfactory inspection of the wall construction and installation approval by Superglass Insulation. The product is BBA approved for all UK exposure zones (subject to conditions detailed in the BBA Certificate and NHBC Standards).

Water Resistance

When the product is properly installed in accordance with BBA Certificate 14/5086 Product Sheet 2, it will resist any water transfer across the cavity to the inner leaf.

Installation

Superglass Superwhite 34 is installed after the walls are built, from inside the building. It's installed quickly and easily in any weather using existing machinery by a national network of Superglass and BBA approved contractors.

Contact the Superglass Technical Services on **0808 1645 134** or technical-uk@tn-i.com for your nearest approved installer.

Thermal Insulation

Superglass Superwhite 34 for external masonry cavity walls

Tested to provide high levels of thermal performance when installed during the construction of new build masonry cavity walls. The tables on the adjacent page show typical U-Values when combining Superwhite 34 with a variety of commonly used inner and outer leaves.





Superglass Products	Thermal conductivity
Superwhite 34	0.034 W/mK

Typical U-Values (W/m²K) achieved when fully filling the cavity wall with Superwhite 34.

Brick and block construction

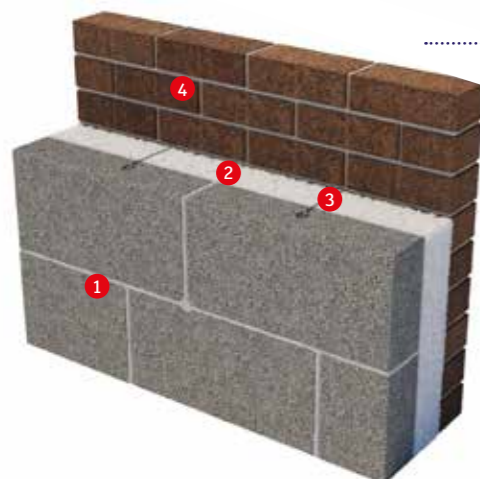
Outer Leaf Bricks	102.5mm	102.5mm	102.5mm	102.5mm
100mm of Superwhite 34	0.28	0.27	0.25	0.24
125mm of Superwhite 34	0.24	0.23	0.21	0.20
150mm of Superwhite 34	0.20	0.20	0.18	0.18
200mm of Superwhite 34	0.15	0.15	0.14	0.14
Inner Leaf Blocks	100mm Dense Aggregate (1.13W/mK)	100mm Medium Dense (0.45W/mK)	100mm Standard Aircrete (0.15W/mK)	100mm Lightweight Aircrete (0.11W/mK)
Plaster Dabs	15mm	15mm	15mm	15mm
Plasterboard	12.5mm Standard (0.19W/mK)	12.5mm Standard (0.19W/mK)	12.5mm Standard (0.19W/mK)	12.5mm Standard (0.19W/mK)

Block and block construction

Render	20mm Sand & Cement	20mm Sand & Cement	20mm Sand & Cement	20mm Sand & Cement
Outer Leaf Blocks	100mm Dense Aggregate (1.21W/mK)	100mm Medium Dense (1.21W/mK)	100mm Standard Aircrete (1.21W/mK)	100mm Lightweight Aircrete (1.21W/mK)
100mm of Superwhite 34	0.29	0.28	0.25	0.24
125mm of Superwhite 34	0.24	0.23	0.21	0.21
150mm of Superwhite 34	0.20	0.20	0.18	0.18
200mm of Superwhite 34	0.16	0.15	0.14	0.14
Inner Leaf Blocks	100mm Dense Aggregate (1.13W/mK)	100mm Medium Dense (0.45W/mK)	100mm Standard Aircrete (0.15W/mK)	100mm Lightweight Aircrete (0.11W/mK)
Plaster Dabs	15mm	15mm	15mm	15mm
Plasterboard	12.5mm Standard (0.19W/mK)	12.5mm Standard (0.19W/mK)	12.5mm Standard (0.19W/mK)	12.5mm Standard (0.19W/mK)

Typical Application

External masonry cavity wall - Full fill



- 1 Inner leaf - Block
- 2 Superglass Superwhite 34
- 3 Wall ties
- 4 Outer leaf - Brick or Block

For any U-value calculations for alternative construction build-ups and written calculations, please email Technical-uk@tn-i.com

External timber frame walls.



Superglass Timber & Rafter Insulation.

Superior thermal performance in timber frame walls.

Today's modern timber frame structures are precision-engineered, strong and durable, comprising of a build method which relies on timber frame as a basic means of structural support; carrying the loads imposed by the floors and roofs, before transmitting them to the foundations.

Timber frame currently accounts for around 25% of new homes in the UK and over 80% of all new homes built in Scotland use this method. Around 75% of self-builders use timber frame construction as their primary build method. This build type is utilised by every sector of the construction industry and is very popular for hotels and student accommodation. As with all forms of structural timber, timber frame has superb environmental credentials, as well as being quick and easy to construct.

In addition to providing installers with a flexible, time efficient insulation solution, Superglass timber frame products deliver superior levels of thermal and acoustic performance time after time. This makes Superglass insulation the natural partner for this growing method of construction.

Thermal Insulation



Superglass Timber & Rafter Rolls/Batts for timber frame walls

Superglass Timber & Rafter Roll/Batts are lightweight, non-combustible glass mineral wool insulation products. The flexible rolls and batts are manufactured to allow easy installation between common stud spacings and minimum on-site cutting and waste. The products are self-supporting by friction fitting between timber studs, which helps to eliminate air gaps.



Superglass Products	Thermal conductivity
Timber & Rafter Roll or Batt 32	0.032 W/mK
Timber & Rafter Roll or Batt 35	0.035 W/mK
Timber & Rafter Roll or Batt 40	0.040 W/mK

Our technical team will help you find **the best solution** for your application, call **0808 1645 134**.

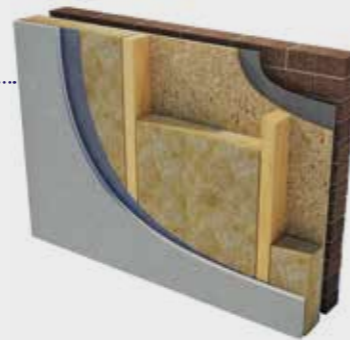


Superglass are members of the Structural Timber Association, the UK's foremost timber organisation, leading the industry on quality, health & safety, education and technical knowledge.

Typical U-Values for timber frame wall applications.

Standard Breather Membrane

- 102.5mm brick
- 50mm unvented cavity (0.18m²K/W)
- Standard breather membrane
- 9mm OSB
- **Timber studs (600mm centres) with Superglass Timber & Rafter Roll or Batt**
- Standard vapour control layer (VCL)
- 12.5mm standard plasterboard (0.19W/mK)

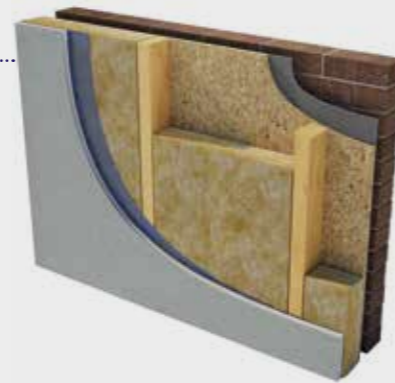


Insulation and stud thickness (mm)	Superglass insulation	U-Value Achieved (W/m ² K)
140	Timber & Rafter Roll or Batt 32	0.27
140	Timber & Rafter Roll or Batt 35	0.28
140	Timber & Rafter Roll or Batt 40	0.30

Bridging Factor for timber studs 15%.

Reflective Breather Membrane and Reflective Vapour Control Layer (VCL)

- 102.5mm Brick
- 50mm Unvented low-e cavity (0.77m²K/W)
- Reflective Breather Membrane
- 9mm OSB
- Superglass Insulation between timber studs
- Reflective Vapour Control Layer (VCL)
- 25mm Unvented low-e cavity between timber battens (0.78m²K/W)
- 12.5mm Standard Plasterboard (0.19W/mK)



Insulation and stud thickness (mm)	Superglass insulation	U-Value Achieved (W/m ² K)
140	Superglass Timber & Rafter Roll or Batt 32	0.19
140	Superglass Timber & Rafter Roll or Batt 35	0.20
140	Superglass Timber & Rafter Roll or Batt 40	0.21
90	Superglass Timber & Rafter Roll or Batt 32	0.25
90	Superglass Timber & Rafter Roll or Batt 35	0.26
90	Superglass Timber & Rafter Roll or Batt 40	0.27

Bridging Factor for timber studs 15%.

Superglass Timber and Rafter insulation is well suited for use in timber frame buildings with its quick and easy fitting, dimensional stability and its ability to adjust to small movements of the construction during the lifetime of the building.



For any U-value calculations for alternative construction build-ups and written calculations, please email Technical-uk@tn-i.com



Masonry party & separating walls.

Built-In solutions.

Superglass Party Wall Insulation.

Achieving the correct levels of acoustic performance between adjoining dwellings.

Superglass Party Wall Roll is designed to provide thermal and acoustic insulation and help provide a zero U-Value within masonry party or separating walls as described within Approved Document L1A (England & Wales) and Technical Handbook Section 6 (Scotland).

Party Wall Roll may be used as a component in a number of Robust Details Solutions including proprietary systems E-WM-22, E-WM-23 & E-WM-27 (England & Wales) and V-WM-27 (Scotland). It may also be used in party wall systems which require on-site pre-completion (England & Wales) or post-completion (Scotland) acoustic testing.

Party Wall function

While the division between adjoining properties has always been assumed to be an area of neutral heat loss, in that no transfer would take place between spaces at similar temperatures, research confirms that cavity party walls are subject to significant energy leakage.

Fortunately Superglass Party Wall Insulation is not only a very good thermal insulant, but also offers excellent acoustic benefits.

Superglass Party Wall Insulation is not only a very good thermal insulant, but also offers excellent acoustic benefits.



Acoustic Insulation
Thermal Insulation

Superglass Party Wall Roll for masonry party walls

Superglass Party Wall Roll is a lightweight, non-combustible glass mineral wool insulation roll. The flexible roll is cut at 3x455mm widths to fit between standard wall tie spacings and to allow easy installation and minimum on-site cutting and waste.

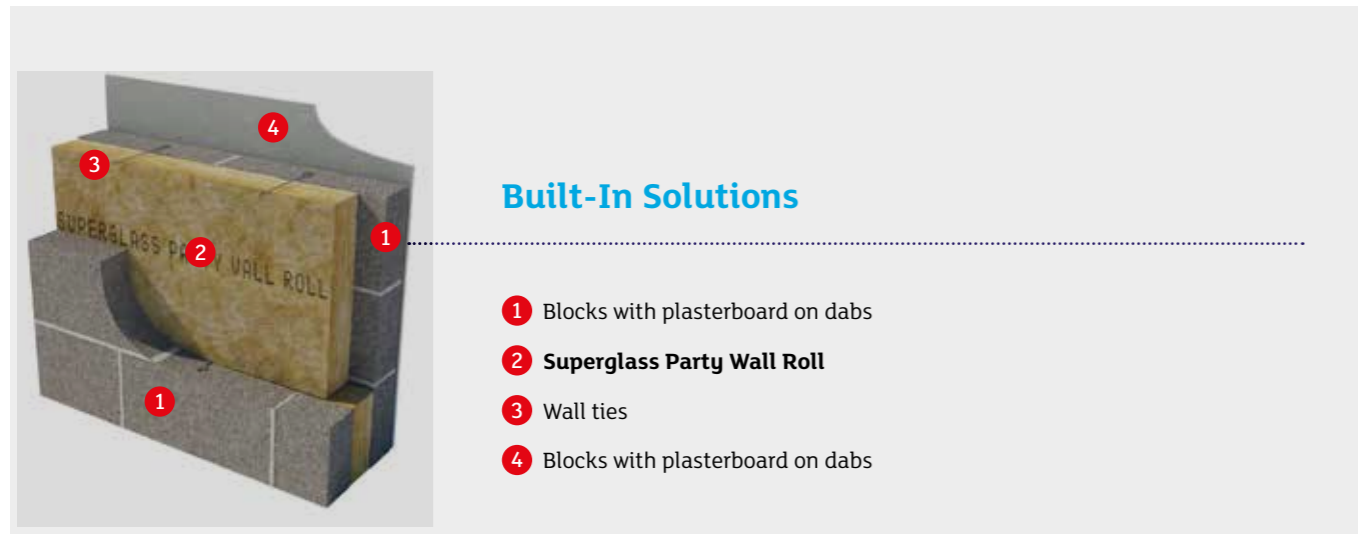


Superglass Products	Thermal conductivity	Minimum density
Party Wall Roll	0.036 W/mK	18kg/m ³

Our technical team will help you find **the best solution** for your application, call **0808 1645 134**.

Superglass Party Wall Roll.

For masonry party & separating walls.



Superglass Party Wall Roll can be used in the following Robust Details approved solutions:

Robust Details Solutions - England, Wales & Northern Ireland				
Robust Detail	Minimum Cavity Width (mm)	Block Type & Density (kg/m ³)	Parge Coat Required	Wall Finish
E-WM-1	75	Dense Aggregate - 1850 to 2300	No	Wet Plaster
E-WM-2	75	Lightweight Aggregate - 1350 to 1600	No	Wet Plaster
E-WM-3	75	Dense Aggregate - 1850 to 2300	Yes	Render and gypsum-based board on dabs
E-WM-4	75	Lightweight Aggregate - 1350 to 1600	Yes	Render and gypsum-based board on dabs
E-WM-5	75	Besblock 'Star Performer' - 1528	Yes	Render and gypsum-based board on dabs
E-WM-6	75	Aircrete - 600 to 800	Yes	Render and gypsum-based board on dabs
E-WM-10	75	Aircrete - Thin Joint System - 600 to 800	Yes	Render and gypsum-based board on dabs
E-WM-11	100	Lightweight Aggregate - 1350 to 1600	Yes	Render and gypsum-based board on dabs
E-WM-12	75	Plasmor 'Aglite Ultima' - 1050	Yes	Render and gypsum-based board on dabs
E-WM-13	75	Aircrete - Thin Joint Untied System - 600 to 800	Yes	Render and gypsum-based board on dabs
E-WM-16	100	Dense Aggregate - 1850 to 2300	Yes	Render and gypsum-based board on dabs
E-WM-18	100	Dense Aggregate - 1850 to 2300	No	Wet Plaster
E-WM-19	100	Dense or Lightweight Aggregate - 1350 to 1600 or 1850 to 2300	Yes	Render and gypsum-based board on dabs
E-WM-21	100	Lightweight Aggregate - 1350 to 1600	No	Wet Plaster
E-WM-22	100	Lightweight Aggregate - 1350 to 1600 or Plasmor 'Aglite Ultima' - 1050	No	Gypsum-based board on dabs
E-WM-23	100	Aircrete - Standard and Thin Joint - 600 to 800	No	Gypsum-based board on dabs
E-WM-25	100	Porotherm - Thin Joint - n/a	Yes	Ecoparge gypsum-based board on dabs
E-WM-26	100	Besblock 'Star Performer' - 1528	No	Gypsum-based board on dabs
E-WM-27	75	Lightweight Aggregate - 1350 to 1600	No	Gypsum-based board on dabs
E-WM-29	75	Porotherm - Thin Joint - n/a	Yes	Ecoparge gypsum-based board on dabs
E-WM-31	100	H+H Celcon Elements - thin joint - 575	No	Gypsum-based board on dabs
E-WM-34	100	Plasmor 'Aglite Ultima' - 1050	No	Gypsum-based board on dabs

robustdetails

Robust Details Limited was formed in December 2003 in response to the housebuilding industry's request for an alternative to pre-completion sound testing, as a means of satisfying the sound insulation requirements of the Building Regulations.

As Superglass insulation products have been specifically referenced in the approved Robust Details Handbook, they can be installed with the confidence that the chosen build method will satisfy current Building Regulations.

Benefits of Robust Details® Solutions*

- Party Wall Thermal Bypass - full fill solution to aid zero U-Value compliance.
- No requirement for pre/post-completion acoustic testing.
- Provides one insulation technique on-site when used in conjunction with Superglass cavity wall insulation.

Recommended Robust Details® Solutions*

Robust Detail E-WM-22

- Block density:** 1350 to 1600 kg/m³ or Plasmor Aglite Ultima 1050kg/m³
- Cavity width:** 100mm (min)
- Block thickness:** 100mm (min), each leaf
- Wall finish:** Gypsum based board mounted on dabs (nominal 10kg/m²)
- Wall Ties:** Approved Document E 'Tie type A'
- Insulation:** Superglass Party Wall Roll
- External flanking wall:** Masonry (both leaves) with 50mm (min) cavity - fully filled or partially filled with Superglass Cavity Wall Insulation.

Robust Detail E-WM-23

- Block density:** 600 to 800kg/m³
- Cavity width:** 100mm (min)
- Block thickness:** 100mm (min), each leaf
- Wall finish:** Gypsum based board mounted on dabs (nominal 8kg/m²)
- Wall Ties:** Approved Document E 'Tie type A'
- Insulation:** Superglass Party Wall Roll
- External flanking wall:** Masonry (both leaves) with 50mm (min) cavity - fully filled or partially filled with Superglass Cavity Wall Insulation.

Robust Detail E-WM-27

- Block density:** 1350 to 1600 kg/m³
- Cavity width:** 75mm (min)
- Block thickness:** 100mm (min), each leaf
- Wall finish:** Gypsum based board mounted on dabs (nominal 8kg/m²)
- Wall Ties:** Approved Document E 'Tie type A'
- Insulation:** Superglass Party Wall Roll
- External flanking wall:** Masonry (both leaves) with 50mm (min) cavity - fully filled or partially filled with Superglass Cavity Wall Insulation.

Please note: The requirements of the Robust Details Handbook should be strictly followed.

*E-WM-23 & E-WM-27



Timber frame party & separating walls.

Superglass Timber Frame Party Wall Insulation.

Designed to provide thermal and acoustic performance between dwellings.

The primary function of a timber frame party or separating walls is to provide structural strength to a building, whilst other functions of the walls are to provide acoustic, thermal and fire separation.

The timber frame walls comprise of two timber frames which are sheathed and insulated with Superglass insulation. Superglass TF Party Wall Roll is used as part of a full fill solution to achieve a zero U-Value when used in conjunction with effective edge sealing.

One way of meeting current Building Regulations is to build towards a Robust Details approved solution.

Superglass TF Party Wall Roll is designed to provide thermal and acoustic insulation and to help provide a zero U-Value within timber frame party or separating walls as described within Approved Document L1A (England & Wales) and Technical Handbook Section 6 (Scotland) respectively.

TF Party Wall Roll was tested under current regulatory standards as part of a timber frame party wall. The acoustic performance of the structure was 56dB under Technical Handbook Section 5 (Scotland) and 45dB under Approved Document E (England & Wales).



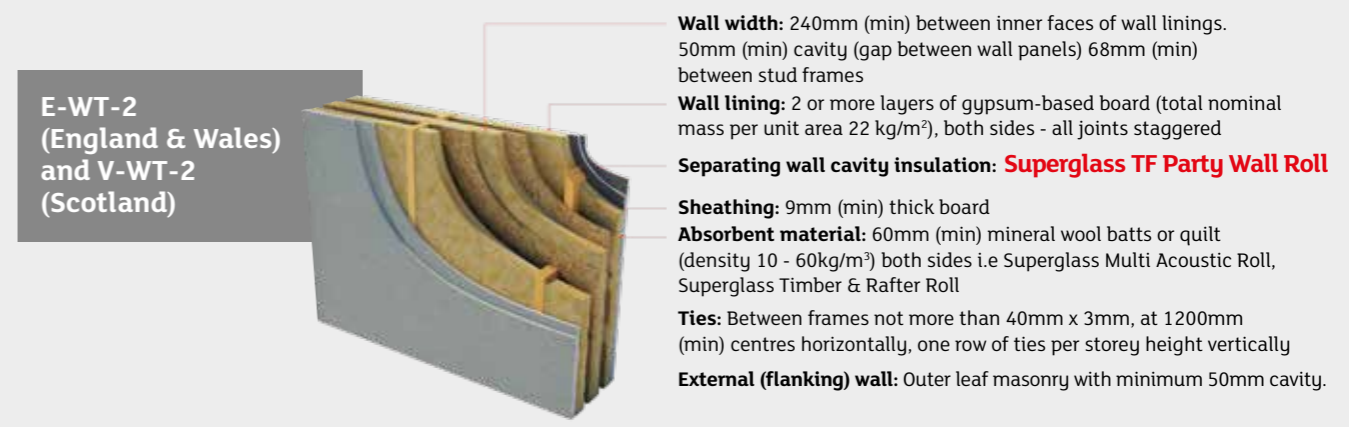
Superglass TF Party Wall Roll for timber frame party walls

Superglass TF Party Wall Roll are a lightweight, non-combustible glass mineral wool insulation products. The flexible rolls and slabs are manufactured to allow easy installation and minimum on-site cutting and waste.



Superglass Products	Thermal conductivity	Minimum density
TF Party Wall Roll	0.036 W/mK	18kg/m ³

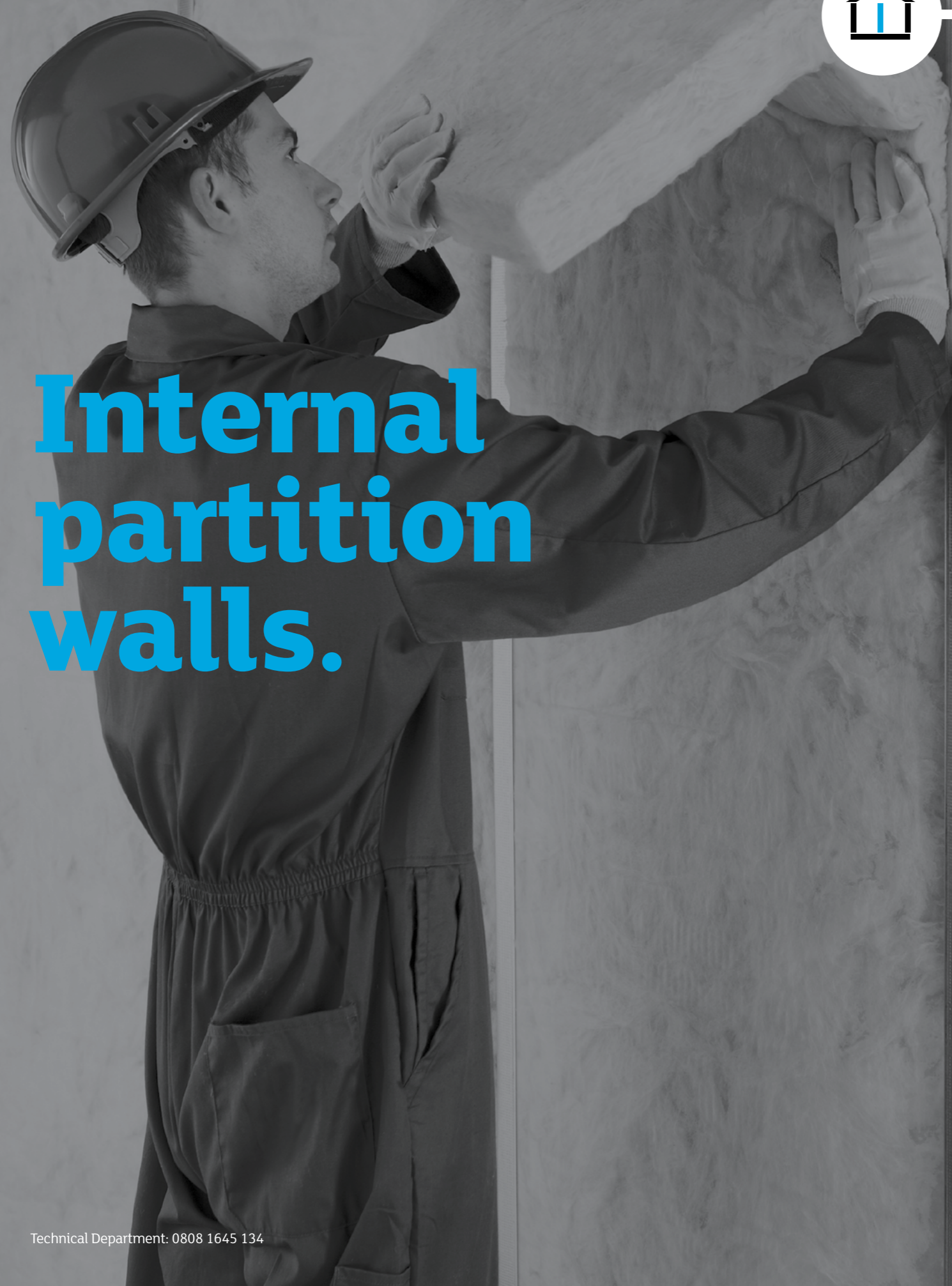
Recommended Robust Details® Solutions



Please note: The requirements of the Robust Details Handbook should be strictly followed.

Our technical team will help you find **the best solution** for your application, call **0808 1645 134**.

Internal partition walls.



Superglass Acoustic Insulation.

Achieving optimum comfort between internal rooms.

Internal partition walls are those that separate rooms within a building.

Superglass acoustic insulation significantly reduces the passage of sound, enhancing both comfort and privacy. Furthermore, the flexible nature of the rolls and slabs allows for precise installation between studs and in a wide variety of partition types.

Acoustic Insulation



Superglass acoustic insulation for internal walls

Multi Purpose Acoustic Slab is a lightweight, non-combustible glass mineral wool insulation slab. The slab is manufactured to allow easy installation between common stud spacings, and minimum on-site cutting and waste.

Superglass Products	Nominal density
Multi Purpose Acoustic Slab	22kg/m ³



Multi Acoustic Roll is a lightweight, non-combustible glass mineral wool insulation roll. The flexible roll is perforated at 2x600mm and 3x400mm widths to allow easy installation.

Superglass Products	Minimum density
Multi Acoustic Roll	10kg/m ³



Acoustic Partiti Roll (APR) is a lightweight, non-combustible glass mineral wool insulation roll. The flexible roll is manufactured to allow easy installation between common stud spacings, and minimum on-site cutting and waste.

Superglass Products	Nominal density
25mm APR	18kg/m ³
50mm APR	16kg/m ³



Our technical team will help you find **the best solution** for your application, call **0808 1645 134**.

Acoustic performance achieved in internal partitions using typical construction methods.

Superglass acoustic insulation helps to deliver superior levels of sound performance for the comfort of a building's occupants. Our tested solutions for metal and timber stud partitions can assist in meeting the requirements of current Building Regulations.

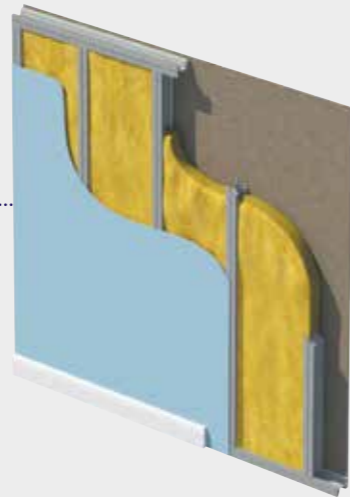
Metal C Stud Partitions (Double layer plasterboard)



Up to **50dB** (Rw)

Stud Type	Stud Spacing	Plasterboard	Superglass Insulation	Insulation Thickness	Sound Reduction	Test Report Number
48mm Metal C Stud	600mm	2 x 12.5mm Standard	Acoustic Partition Roll (APR)	25mm	47 dB (Rw)	BTC 18741A
70mm Metal C Stud	600mm	2 x 12.5mm Standard	Acoustic Partition Roll (APR)	25mm	49 dB (Rw)	BTC 18760A
70mm Metal C Stud	600mm	2 x 12.5mm Standard	Acoustic Partition Roll (APR)	50mm	50 dB (Rw)	BTC 18761A

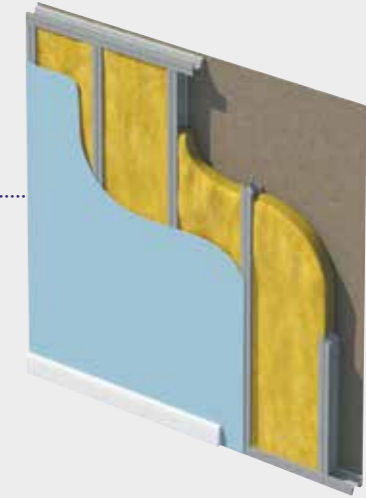
Metal C Stud Partitions (Single layer plasterboard)



Up to **44dB** (Rw)

Stud Type	Stud Spacing	Plasterboard	Superglass Insulation	Insulation Thickness	Sound Reduction	Test Report Number
48mm Metal C Stud	600mm	12.5mm Standard	Acoustic Partition Roll (APR)	25mm	40 dB (Rw)	BTC 18741A
48mm Metal C Stud	600mm	12.5mm Standard	Acoustic Partition Roll (APR)	50mm	42 dB (Rw)	BTC 18757A
48mm Metal C Stud	600mm	12.5mm Standard	Multi Purpose Acoustic Slab	50mm	43 dB (Rw)	BTC 18758A
70mm Metal C Stud	600mm	12.5mm Standard	Acoustic Partition Roll (APR)	25mm	42 dB (Rw)	BTC 18760A
70mm Metal C Stud	600mm	12.5mm Standard	Acoustic Partition Roll (APR)	50mm	44 dB (Rw)	BTC 18761A

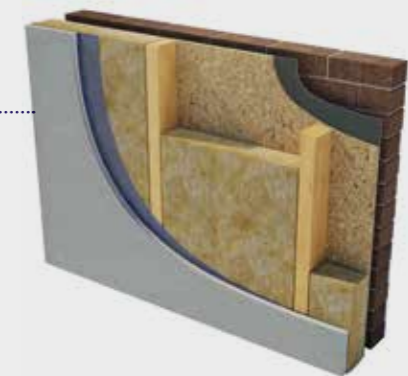
GypWall RAPID dB Plus Partitions



42dB (Rw)

Stud Type	Stud Spacing	Plasterboard	Superglass Insulation	Insulation Thickness	Sound Reduction	Test Report Number
43mm AcouStud RAPID	450mm	15mm BG SoundBloc RAPID	Acoustic Partition Roll (APR)	25mm	42 dB (Rw)	BTC 18759A

Timber Stud Partitions



40dB (Rw)

Stud Type	Stud Spacing	Plasterboard	Superglass Insulation	Insulation Thickness	Sound Reduction	Test Report Number
89mm x 38mm Timber	600mm	15mm Standard	Multi Acoustic Roll	80mm	40 dB (Rw)	BTC 17062A

Please note: A copy of the test reports can be obtained from the Superglass Technical Department, email: Technical-uk@tn-i.com

Lofts.

Solutions for new or retrofit installations.



Superglass Loft Insulation.

Traditional cold roof solutions offering installation flexibility and high thermal performance.

As much as a third of the heat from a typical house could be escaping through the roof. Superglass loft insulation works by preventing that heat loss.

Typically, homeowners can cut their energy bill by up to 20% through effectively insulating the loft space.

- Loft insulation is located between and cross-laid over the joists in the loft
- The recommended minimum depth for new build installations is 270mm
- Superglass Loft Insulation can help lower heating bills, wear and tear on the boiler and reduce global warming and climate change

Typical energy savings*

Loft Insulation (0 to 270mm)	Detached house	Semi detached house	Mid terrace house	Detached bungalow
Fuel bill savings (£/year)	£315	£135	£125	£195
Carbon dioxide savings (kgCO ₂ /year)	1300kg	510kg	530kg	830kg

*Source - Energy Saving Trust Estimates based insulating a gas-heated home with a totally uninsulated loft (0mm) with 270mm of loft insulation. Figures are based on fuel prices as of June 2021.

Our technical team will help you find **the best solution** for your application, call **0808 1645 134**.

Thermal Insulation



Superglass Loft Insulation for cold roof applications

Multi-Roll 40 & 44 are lightweight, non-combustible glass mineral wool insulation products, designed to provide thermal insulation in lofts. The rolls may be split to allow the user the choice of any of the commonly required widths. The products are strong, flexible and resilient.



Superglass Products	Thermal conductivity
Multi-Roll 40	0.040 W/mK
Multi-Roll 44	0.044 W/mK

Traditional built-in method:

Superglass Multi-roll 40 & 44



Typical U-Values achieved in cold roofs using Superglass Multi-Roll

	Multi-Roll 44							
U-Value (W/m ² K)	0.18	0.15	0.14	0.13	0.10	0.09	0.09	0.08
Insulation (mm) cross-laid over timber joists	100	150	170	200	300 (150+150)	340 (170+170)	350 (150+200)	400 (200+200)
Insulation (mm) between timber joists	150	150	150	150	150	150	150	150
	12.5mm Plasterboard (0.19W/mK)							

	Multi-Roll 40 (0.040W/mK)					
U-Value (W/m ² K)	0.17	0.14	0.12	0.09	0.08	0.08
Insulation (mm) cross-laid over timber joists	100	150	200	300 (150+150)	350 (150+200)	400 (200+200)
Insulation (mm) between timber joists	150	150	150	150	150	150
	12.5mm Plasterboard (0.19W/mK)					

Calculated using 600mm timber joist centres (9% bridging) and loft hatch with 50mm insulation

Alternative method:

Superglass Superwhite 42 – Loft Blown Wool

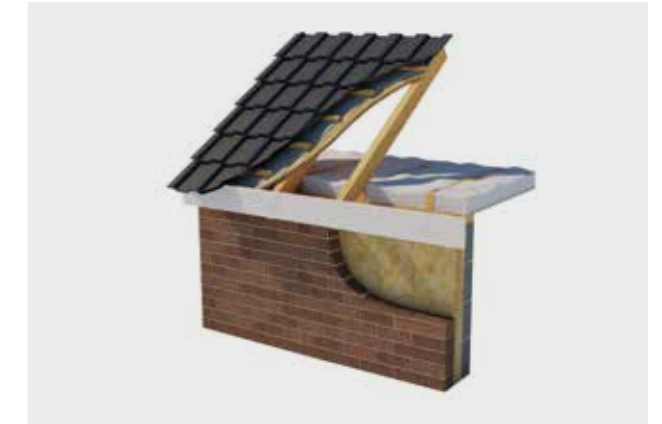
Superglass Superwhite 42 is a glass mineral wool blown loft insulation with a water repellent additive to enhance its resistance to moisture. Superwhite 42 has a declared Lambda 90/90 value of 0.042W/mK

Application

Superglass Superwhite 42 is designed specifically to provide thermal insulation in new or existing loft/cold roof spaces of up to 500mm. Blowing the insulation can be a better solution particularly in hard to treat lofts, where conventional rolls can't be easily installed.

Installation

Most mineral wool blowing machines can be used to install Superwhite 42 under the supervision of a professional company.



Settlement Class

Superglass Superwhite 42 has undergone settlement testing in accordance with BS EN 14064-1: 2010 and given a settlement class of S1.

Typical U-Values achieved in cold roofs using Superglass Superwhite 42

	Superwhite Loft Blown Wool (0.042W/mK)					
U-Value (W/m ² K)	0.17	0.14	0.14	0.12	0.11	0.10
Insulation (mm) over timber joists	100	150	170	200	250	300
Insulation (mm) between timber joists	150	150	150	150	150	150
	12.5mm Plasterboard (0.19W/mK)					

Calculated using 600mm timber joist centres (9% bridging) and loft hatch with 50mm insulation

Pitched roofs.



Superglass Timber and Rafter Insulation.

Achieving high levels of thermal insulation between rafters.

A warm roof is when the insulation is installed into the rafters below the roof line. This allows for the maximum utilisation of the roof space.

A "Room in a Roof" will have access to the roof space provided by stairs and allows the homeowner to increase the amount of habitable space that is available in their dwelling. The room will typically have sloping roofs, dwarf walls and possibly a dormer window.



Thermal Insulation



Superglass Timber & Rafter Insulation for pitched roofs

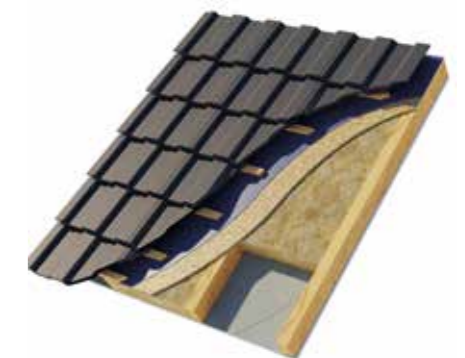
Superglass Timber & Rafter Rolls / Batts are lightweight, non-combustible glass mineral wool insulation products. The flexible rolls and batts are manufactured to allow easy installation between common stud spacings, and minimum on-site cutting and waste. The products are supported by friction fitting between timber studs which helps to eliminate air gaps.



Superglass Products	Thermal Conductivity
Timber & Rafter Roll or Batt 32	0.032 W/mK
Timber & Rafter Roll or Batt 35	0.035 W/mK

U-Values achieved using Superglass Timber and Rafter insulation

- Roof tiles
- Well vented cavity between timber battens and counter battens
- Breather Membrane
- 9mm OSB
- Timber joists (600mm centres) with Superglass Timber & Rafter Roll or Batt
- Standard Vapour Control Layer (VCL)
- 12.5mm Standard Plasterboard



Insulation and joist thickness (mm)	Superglass insulation	U-Value Achieved (W/m²K)
230 (140+90mm)	Timber & Rafter Roll or Batt 32	0.16
230 (140+90mm)	Timber & Rafter Roll or Batt 35	0.17
230 (140+90mm)	Timber & Rafter Roll or Batt 40	0.19
140	Timber & Rafter Roll or Batt 32	0.25
140	Timber & Rafter Roll or Batt 35	0.27
140	Timber & Rafter Roll or Batt 40	0.29



Superglass Insulation for suspended timber ground floors.

Typically a suspended timber floor consists of timber flooring attached to timber joists which are then suspended above the building's foundations.

Superglass insulation is ideal for easy installation and minimising heat loss. This is achieved by friction fitting the insulation between the timber joists.

Typical Application

- 1 Chipboard flooring
- 2 Timber joists (400mm centres) with Superglass insulation
- 3 Foundations
- 4 External masonry wall



Floors.

Thermal Insulation

Superglass Insulation for suspended timber ground floors



Superglass Products	Thermal conductivity
Multi-Roll 40	0.040 W/mK
Multi-Roll 44	0.044 W/mK

Typical U-Values achieved (W/m²K)

Insulation and joist depth (mm)	P/A Ratio (exposed internal perimeter divided by floor area)							
	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80
100mm Multi-Roll 44	0.17	0.23	0.26	0.28	0.30	0.31	0.32	0.33
100mm Multi-Roll 40	0.17	0.22	0.25	0.27	0.29	0.3	0.3	0.31
150mm Multi-Roll 44	0.15	0.19	0.21	0.22	0.23	0.24	0.25	0.25
150mm Multi-Roll 40	0.14	0.18	0.2	0.21	0.22	0.23	0.23	0.24
200mm Multi-Roll 44	0.13	0.16	0.18	0.18	0.19	0.20	0.20	0.20
200mm Multi-Roll 40	0.12	0.15	0.17	0.18	0.18	0.19	0.19	0.19
250mm (100+150) Multi-Roll 44	0.11	0.14	0.15	0.16	0.16	0.17	0.17	0.17
250mm (100+150) Multi-Roll 40	0.11	0.13	0.14	0.15	0.15	0.16	0.16	0.16

Calculated using 11% bridging for timber joists.

Superglass Insulation for internal floors.

Aside from internal floors being able to support the different loads of a building, there are also regulations defining their performance in terms of fire resistance and, in England and Wales, requirements in terms of sound insulation too. Even where formal regulations do not exist, it would be reasonable to expect that an internal floor should provide good acoustic separation between storeys.

While thermal performance is not specifically regulated, the increasing focus being placed on the energy efficiency of an

entire building means that it makes good sense to maintain optimum temperatures in different rooms.

Internal floors are generally either timber or metal construction, and there are effective Superglass products for both applications.

Timber floors are typically constructed using either timber or metal joists. In each case, the installation of Superglass insulation in the void between the beams will provide improved acoustic performance, while also delivering significant benefits in terms of thermal performance without increasing floor depth.

- 1 T & G Flooring
- 2 Plasterboard below timber joists
- 3 Timber joists with Superglass insulation



Superglass acoustic insulation for Internal floors

Multi Purpose Acoustic Slab is a lightweight, non-combustible glass mineral wool insulation slab. The slab is manufactured to allow easy installation between common stud spacings, and minimum on-site cutting and waste.

Superglass Products	Nominal density
Multi Purpose Acoustic Slab	22kg/m ³



Multi Acoustic Roll is a lightweight, non-combustible glass mineral wool insulation roll. The flexible roll is perforated at 2x600mm and 3x400mm widths to allow easy installation.

Superglass Products	Minimum density
Multi Acoustic Roll	10kg/m ³



Acoustic Partition Roll (APR) is a lightweight, non-combustible glass mineral wool insulation roll. The flexible roll is manufactured to allow easy installation between common stud spacings, and minimum on-site cutting and waste.

Superglass Products	Nominal density
25mm APR	18kg/m ³
50mm APR	16kg/m ³



External metal clad roofs & walls.



Superglass Cladding Insulation.

Achieves high levels of thermal insulation in metal clad roofs and walls.

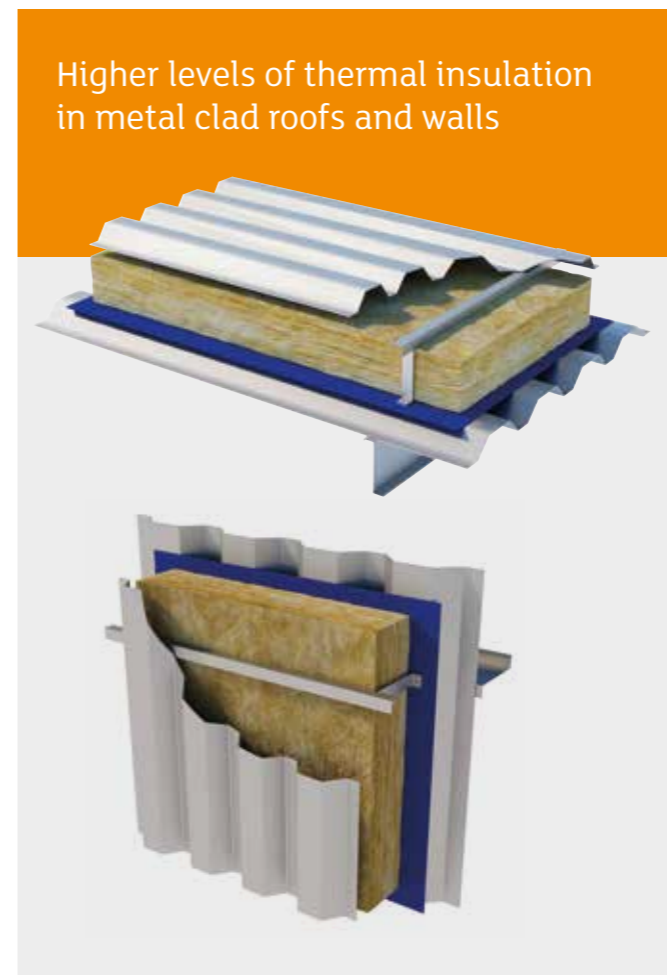
Metal cladding systems provide an efficient, attractive and reliable solution to the building envelope.

Over the years, these systems have evolved from the single skin metal cladding often associated with agricultural buildings to highly developed systems used in industrial, retail and leisure applications.

However, as with all construction components, the ability of the building envelope to satisfy its functional requirements

is dependent on its correct specification and installation and, equally as important, on its interaction with the other elements of the building envelope and structure.

As well as offering a highly cost effective solution, Superglass Cladding Mat provides excellent acoustic and thermal performance when installed in the roofs and walls for these applications.



Higher levels of thermal insulation in metal clad roofs and walls

Thermal Insulation 

Superglass Cladding Mat for metal clad roofs & walls

Superglass Cladding Mat is designed to provide thermal and acoustic insulation in the walls and roofs of profiled metal clad and portable buildings. The product is a resilient, lightweight and non-combustible glass mineral wool insulation roll with exceptional durability and high tear strength. The roll is manufactured to allow quick installation and minimum on-site cutting and waste.



Superglass Products	Thermal conductivity
Cladding Mat 32	0.032 W/mK
Cladding Mat 35	0.035 W/mK
Cladding Mat 37	0.037 W/mK
Cladding Mat 40	0.040 W/mK

Our technical team will help you find **the best solution** for your application, call **0808 1645 134**.

Notes

Notes

www.superglass.co.uk

Intelligent Environments
Superglass

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