Superglass Loft Insulation
Best Practice Guide

May 2024

1. Introduction

This guide highlights best practice in the storage, handling, and installation of Superglass loft insulation products in a cold pitched roof at ceiling level, with the ultimate aim of improving building envelope performance, efficiency and health and safety.

2. Product

Superglass' loft insulation products are non-combustible, glass mineral wool insulation rolls. The rolls are supplied partially perforated or pre-cut providing the flexibility to be used between common joists spacings and as uncut as a full width roll as layers over the joists, reducing the need for on-site cutting and waste.

3. Performance

3.1 Fire Classification

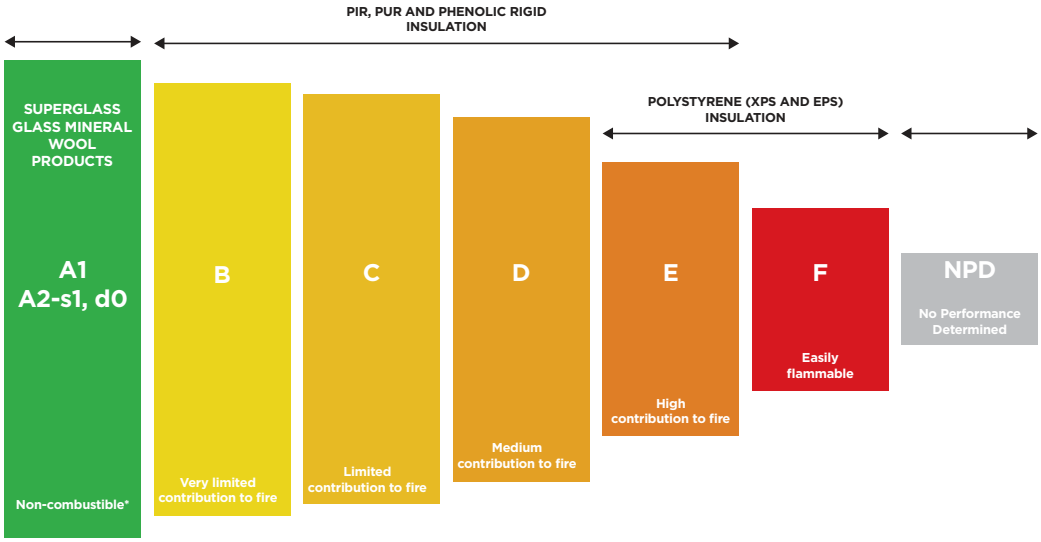
All Superglass loft insulation products are deemed non-combustible with a fire classification of Euroclass A1 (the highest possible rating) when tested to BS EN 13501-1 Reaction to Fire.

What does non-combustible mean?
Non-combustible means that a material is resistant to combustion, as determined by an appropriate test procedure.

Reaction to Fire
This is the measurement of how a material or system will contribute to 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 13501-1 of the construction products and building elements.

All Superglass Insulation products have been given a classification of Euroclass A1.

According to British Standard BS EN 13501-1: Fire classification of construction products and building elements, "Euroclass A1 products will not contribute to any stage of the fire including the fully developed fire."



*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)

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.

3.2 Thermal Performance

In terms of thermal performance, Superglass loft insulation products offers a range of declared thermal conductivities (lambda (λ) value) for the designer to select from depending on the specific u-value requirements.

Superglass Contract Mat 44 – 0.044W/mK

Superglass Handy Pack 44 – 0.044W/mK

Superglass Multi Contract Mat 44 – 0.044W/mK

Superglass Multi-Roll 40 – 0.040W/mK

Superglass Multi-Roll 44 – 0.044W/mK

Visit https://www.superglass.co.uk/u-value-calculation/ to carry out u-value calculations using our free online u-value calculator.

4. Product Specification

Contract Mat 44

Thickness (mm)	Length (m)	Width (mm)	Pack Area (m^2)	Packs per pallet	Thermal Conductivity (W/mK)	Thermal Resistance (m^2K/W)	Product Code
100	10.10	2x570	11.514	24	0.044	2.25	2144305
150	6.65	2x570	7.581	24	0.044	3.40	2144306
170	5.80	2x570	6.612	24	0.044	3.85	2144307
200	4.85	2x570	5.529	24	0.044	4.50	2144304

Please note that all dimensions are nominal.

Handy Pack 44

Thickness (mm)	Length (m)	Width (mm)	Pack Area (m^2)	Packs per pallet	Thermal Conductivity (W/mK)	Thermal Resistance (m^2K/W)	Product Code
100	7.00	1140/2x570/3x380	7.980	30	0.044	2.25	2144312

Please note that all dimensions are nominal.

Multi Contract Mat 44

Thickness (mm)	Length (m)	Width (mm)	Pack Area (m^2)	Packs per pallet	Thermal Conductivity (W/mK)	Thermal Resistance (m^2K/W)	Product Code
100	10.10	1140/2x570/3x380	11.514	24	0.044	2.25	2144326
150	6.65	1140/2x570/3x380	7.581	24	0.044	3.40	2144325
170	5.80	1140/2x570/3x380	6.612	24	0.044	3.85	2144324
200	4.85	1140/2x570/3x380	5.529	24	0.044	4.50	2144323

Please note that all dimensions are nominal.

Multi-Roll 40

Thickness (mm)	Length (m)	Width (mm)	Pack Area (m^2)	Packs per pallet	Thermal Conductivity (W/mK)	Thermal Resistance (m^2K/W)	Product Code
100	9.75	1200/2x600/3x400	11.700	24	0.040	2.50	2144425
150	6.30	1160/2x580/3x386	7.308	24	0.040	3.75	2144424
170	5.00	1160/2x580/3x386	5.800	24	0.040	3.85	2144422
200	4.60	1160/2x580/3x386	5.336	24	0.040	5.00	2144423

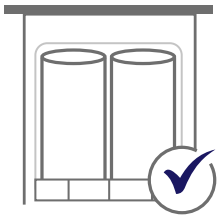
Please note that all dimensions are nominal.

Multi-Roll 44

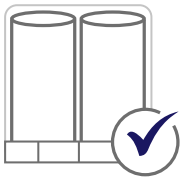
Thickness (mm)	Length (m)	Width (mm)	Pack Area (m^2)	Thermal Conductivity (W/mK)	Thermal Resistance (m^2K/W)	Product Code
100	10.10	1200/2x600/3x400	12.120	0.044	2.25	2144311
150	6.65	1160/2x580/3x386	7.714	0.044	3.40	2144310
170	5.80	1160/2x580/3x386	6.728	0.044	3.85	2144309
200	4.85	1160/2x580/3x386	5.626	0.044	4.50	2144308

Please note that all dimensions are nominal.

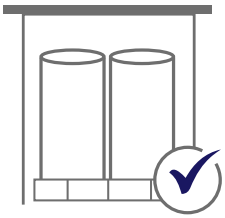
5. Storage



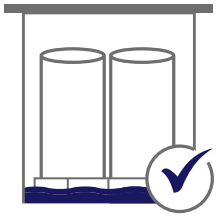
Keep the product covered and fully wrapped on a pallet until required.



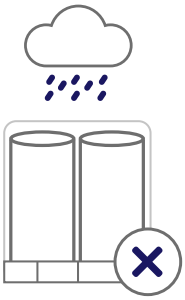
A wrapped pallet with its hood free from damage, can be left outside when space inside is not available, for short periods only.



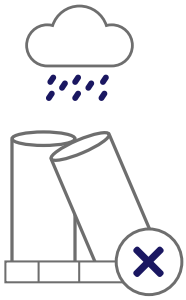
Once the plastic hood has been removed keep all of the product inside and off the ground away from the elements.



Product should be kept elevated on a pallet at all times to avoid sitting in water.



Product can become wet and damaged when exposed to the elements for long periods of time.



Loose product is extremely likely to have water damage when left in the rain rendering your stock unfit for sale.

Please note we do not recommend that Superglass pallets are double stacked.

6. Health & Safety

"The mechanical effect of fibres in contact with skin may cause temporary itching"

Cover exposed skin. When working in unventilated areas wear disposable face mask.

Clean area using vacuum equipment.

Waste should be disposed of according to local regulations.

Rinse in cold water before washing.

Ventilate working area if possible.

Wear goggles when working overhead.

Please refer to product Material Safety Datasheet (MSDS) for more information.

7. Ventilation and control of condensation

The following information is to be used as a guide only, reference should always be made to British Standard BS 5250: 2021.

The standard BS 5250: 2021 Management of moisture in buildings, gives detailed advice on the ventilation and control of condensation in a cold pitched roof.

A major factor for the ventilation requirements in a cold roof is the type of roof tile underlay installed in the pitched section. BS 5250:2021 provides guidance on the two types of roof tile underlays.

7.1 - Type HR Underlay (high vapour resistance)

These are the more traditional bitumen or polythene based products that have a water vapour resistance greater than 0.25MNs/g. An HR underlay provides high vapour resistance on the cold side of the thermal insulation, preventing the diffusion of water vapour from the loft space.

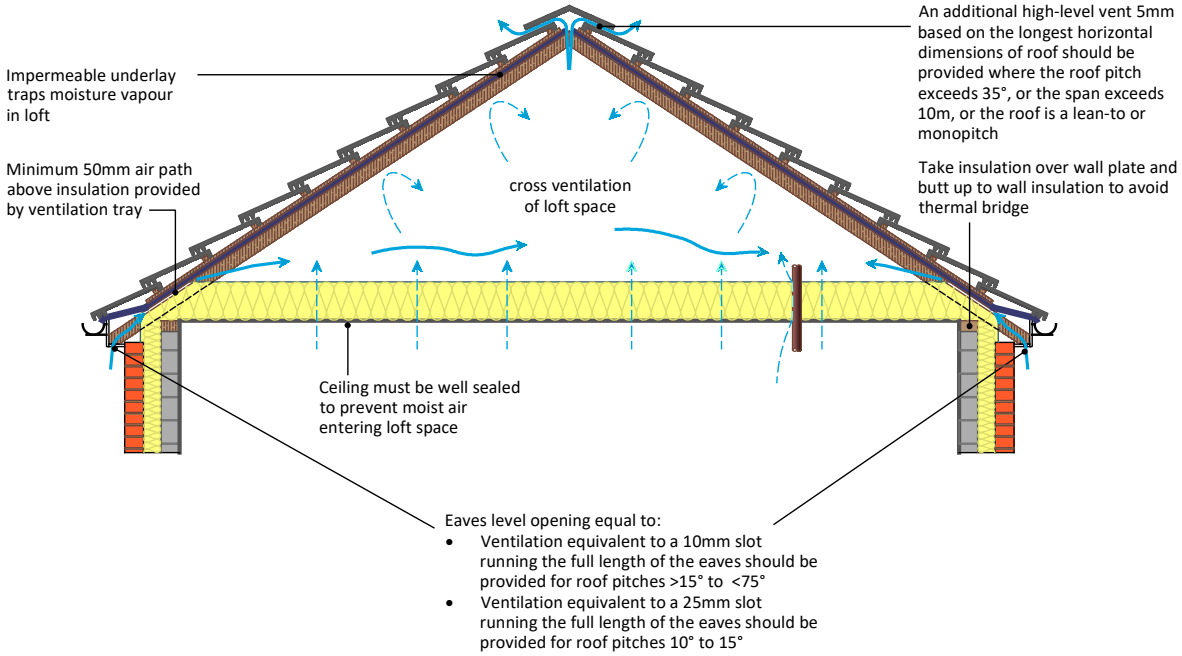
As per Section 12.5.4 of BS 5250:2021, ventilation of this roof should be:

Pitch	Underlay	Ceilings	Low-level vents location (e.g. eaves), mm^2/m*
10° to 15°	HR**	Any	25,000
>15° and <75°	HR**	Any	10,000

*Based on the longest horizontal dimensions of the roof.

**An additional high-level vent 5,000mm^2/m based on the longest horizontal dimensions of roof should be provided where the roof pitch exceeds 35°, or the span exceeds 10m, or the roof is a lean-to or monopitch.

Ceiling level insulation with HR underlay



7.2 - Type LR Underlay (low vapour resistance)

These membranes are defined as having a vapour resistance less than or equal to 0.25MNs/g. BS 5250:2021 recommends that only LR underlays with technical approvals given by UKAS accredited bodies (e.g. BBA) for this type of application are used without ventilation.

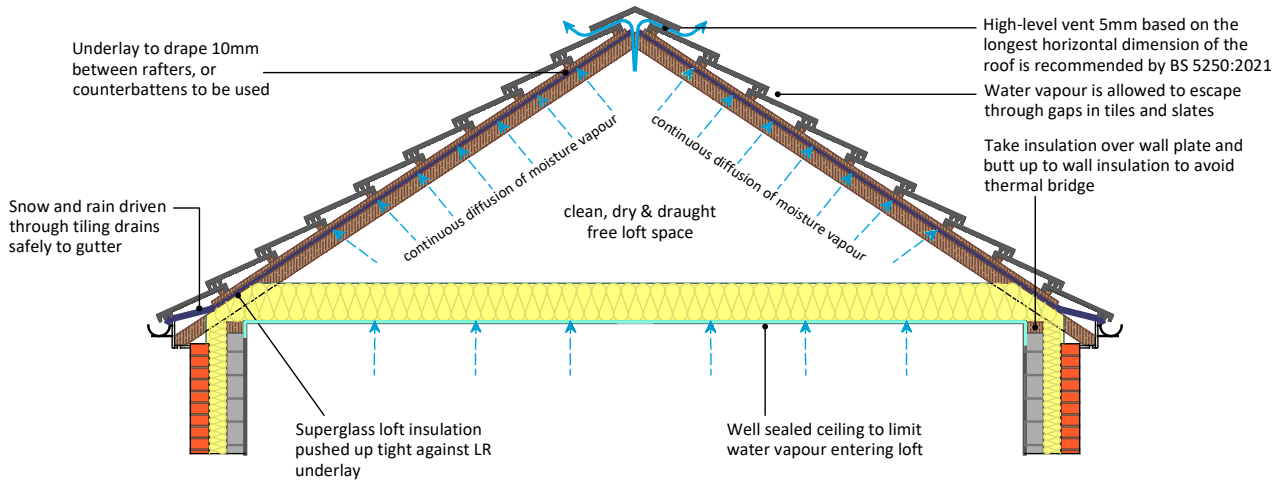
If it is proposed to use a LR underlay without this type of technical approval, then ventilation is required as per Section 12.5.4 of BS 5250:2021, ventilation of this roof should be:

Pitch	Underlay	Ceilings	Low-level vents location (e.g. eaves), mm^2/m*
10° to 75°	LR**	Normal*	7,000
		Well-sealed*	3,000**

*A normal ceiling typically has an air permeability of $300mm^2/m^2$. A well-sealed ceiling conforms to Sections 12.4.2 of BS 5250:2021 and BS 9250 and typically has an air permeability of not more than $30mm^2/m^2$.

**Alternatively, a high-level vent $5000mm^2/m$ based on the longest horizontal dimension of the roof can be provided.

Ceiling level insulation with LR underlay along with "well-sealed" ceiling



7.3 - Non-ventilated void

If using an air permeable, low water vapour resistance (type LR) underlay that holds current certification given by an UKAS accredited body (e.g. BBA) for use in a non-ventilated application along with a well-sealed ceiling, then no ventilation is required.

8. Preparation

8.1 – Unpacking

Take care in removing the shrink-wrapped shrouding and dispose of it responsibly. Once unwrapped, rolls should not be left exposed to the elements.

8.2 - Measuring and cutting

Using a tape measure, measure the internal aperture of the frame, rafter or joist you are fitting the insulation into. Note that frame centre measurements (i.e. 400mm or 600mm) include the thickness of the stud or joist, and that they may not always be consistent, so it is best to measure the internal aperture accurately to ensure the best possible fit.

Use an insulation saw, or knife with a serrated blade, for cutting the insulation to size.

9. Recovery to manufactured thickness

Superglass loft insulation products are delivered to site compression-wrapped in polythene for efficient transportation. The insulation is designed to recover to its full thickness, as referenced in the British Standard for glass mineral wool BS EN 13162.

Once unwrapped, the installer should check that the Superglass loft insulation products are recovering to the stated thickness.

The insulation should not be walked on or compressed excessively as the fibres will be damaged leading to a loss of thickness and thermal performance. If damage does occur, replacement material must be installed.

If the product does not recover to the stated thickness or is damaged, please contact Superglass Technical Services as soon as possible to be advised of the next steps.

10. Installation

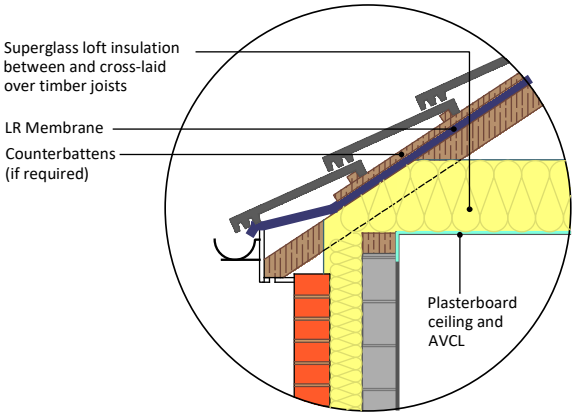
Superglass loft insulation products are designed to friction fit between and over the timber joists.

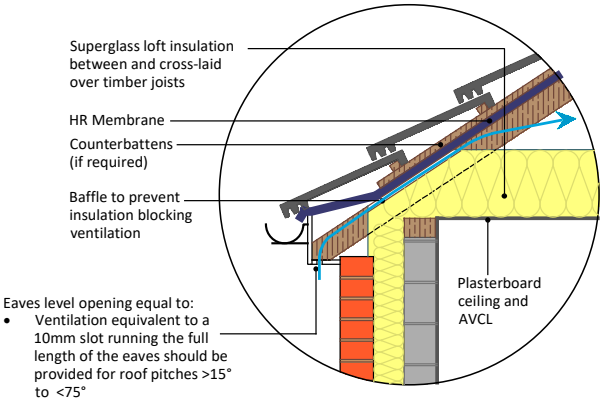
The recommended installation procedures are:

10.1 – Non-ventilated roof void with LR underlay

1) The first layer of Superglass loft insulation, same depth as the joists, is laid between the joists. The insulation should be taken over the wall plate to link up with the wall insulation.

2) The second layer, and if required 3rd layer, of Superglass loft insulation is laid at right angles to the ceiling joists, with all edges butt jointed. The insulation should be pushed up tight against the roof tile underlay, or tight against the eave's ventilator.





Eaves level opening equal to:

- Ventilation equivalent to a 10mm slot running the full length of the eaves should be provided for roof pitches >15° to <75°
- Ventilation equivalent to a 25mm slot running the full length of the eaves should be provided for roof pitches 10° to 15°

10.2 – Ventilated roof void with HR underlay

1) The first layer of Superglass loft insulation, same depth as the joists, is laid between the joists. The insulation should be taken over the wall plate to link up with the wall insulation.

2) The second layer of Superglass loft insulation is laid at right angles to the ceiling joists, with all edges butt jointed. Maintain a 25mm ventilated airspace between the insulation and the HR underlay at the eaves.

11. Precautions

11.1 – Electric cables

Electric cables should not be covered with insulation in case they overheat. Cables should be lifted up and ideally fixed to the structure above the insulation or laid on top of the loft insulation. If in any doubt consult with a suitably qualified person, such as an electrician.

11.2 - Recessed light fittings

Where recessed light fittings are to be used, LED compact fluorescent or low voltage tungsten lamps should be specified to minimise heat build-up. Locate the fittings in enclosures that provide at least 75mm clearance around the fitting for air to circulate. Seal the enclosure to prevent air leakage into the loft and, if necessary, ventilate to the room. The recessed light fittings should either conform to BS EN 60529 and be rated IP60 to IP65 (depending on room use), or incorporate an appropriate sealed hood or box which may be tested using the method specified in BS EN 13141-1:2019 5.3.

11.3 – Loft with storage deck

Where a boarded-out storage deck is used above the Superglass loft insulation, the following is required to prevent the build-up of interstitial condensation:

a) There is a minimum clearance of 50mm between the top of the insulation and the underside of the deck to ensure a clear ventilation space;

b) The edges of the deck are open such that ventilation under the deck is not restricted;

c) Where ventilation at the eaves is required to provide continuous air movement in the loft the platform does not extend such that this function is restricted by the deck or materials stored on the deck; and

d) The impact of the storage system is correctly included into the overall thermal performance of the roof.

Please refer to BS 5250:2021 for more information.

12. Free Pallet Recovery Service

A new service for our customers and a great way to protect our environment.

In association with Scott Pallets, an award-winning, national packaging recovery, repair and re-use specialist, we can now offer Superglass customers nationwide a unique and sustainable pallet recovery solution which has been endorsed by WRAP (The Waste and Resources Action Programme).

What are the benefits for you?

- All reusable pallets go back to Superglass for re-use
- No waste to landfill: pallets are either re-used or recycled (for those damaged beyond repair)
- Cheaper than disposing of pallets in waste skips
- Nationwide solution
- Service in line with the principals of the Circular Economy
- Can form a valuable part of your sustainability strategy

Key points:

- Free collection of reusable pallets (non-reusable pallets may attract a charge)
- Collections actioned as soon as a minimum of 50 pallets accumulated (can be a mix of pallets – Not just Superglass pallets)
- Nationwide Collections within 15 workings days on average from request

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Interested? Can your site please:

- Ensure pallets are stacked on site, ready to be loaded before requesting a collection
- Load the pallets safely and efficiently onto the vehicle
- Damaged pallets can be loaded
- Confirm if any vehicle or site access restrictions
- If sites can only accommodate rigid vehicles, note that the maximum quantity that can be loaded is 250 pallets (as opposed to 550 on an artic vehicle)
- Load within 1 hour of the lorry arriving on site (to avoid demurrage charges as per the RHA)

Need a collection?

- Freephone: 0800 282 488
- Email: collection@scott-pallets.com

Accreditations

Memberships

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