

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.

2.1 CCPI (Code for Construction Products Information)

Superglass loft insulation products hold CCPI Assessment Mark.
Certificate number: 005800129/0227.

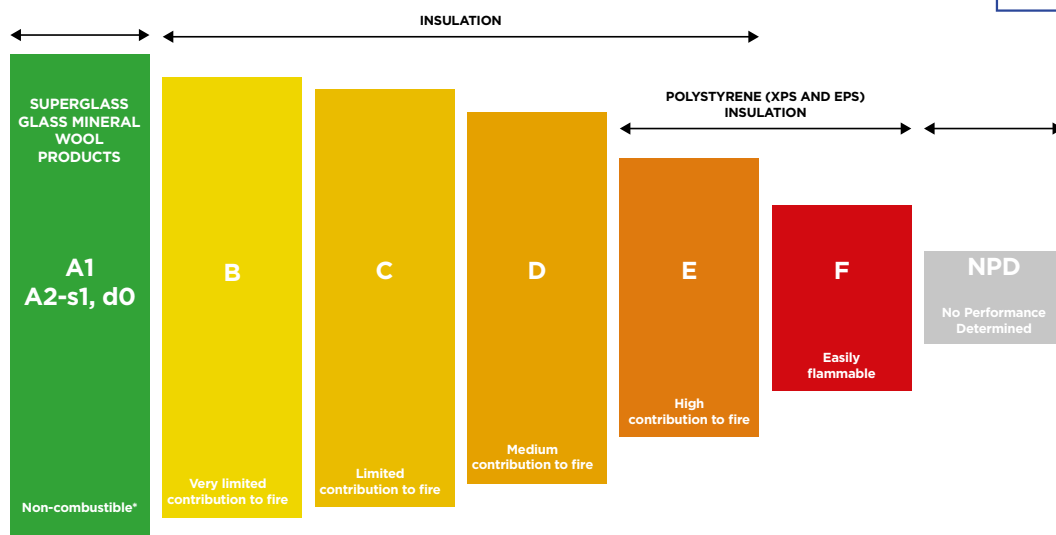
3. Performance

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 13501-1:2018 Reaction to Fire.

What does non-combustible mean?

Non-combustible refers to a material that does not ignite, burn, or support combustion when exposed to fire or heat. In other words, non-combustible materials do not contribute to the spread of flames. This property is crucial for building materials, as it enhances fire safety and helps protect structures and occupants in the event of a 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.

Reaction to Fire

This is a measurement of how building materials or systems will contribute to the development and spread of a fire, especially in the early stages, when evacuation is crucial. All insulation materials are given a Euroclass reaction to fire classification in accordance with BS EN 13501-1 Reaction to Fire.

Testing assesses the performance of materials in terms of fire behaviour, smoke production, and flaming droplets, resulting in a range of classification possibilities.

All Superglass products are non-combustible, achieve the highest possible Euroclass A1 Reaction to Fire classification and do not produce smoke or droplets.

By choosing non-combustible insulation materials, building designers and specifiers can help mitigate the risk of fire within the building fabric from the outset.

3.2 Thermal Performance

In terms of thermal performance, Superglass loft insulation products offers a range of declared thermal conductivities (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-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 ² K/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 ² K/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-Roll 40

| Thickness (mm) | Length (m) | Width (mm) | Pack Area (m ²) | Packs Per Pallet | Thermal Conductivity (W/mK) | Thermal Resistance (m ² K/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 |

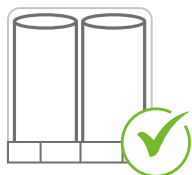
Please note that all dimensions are nominal.

Multi-Roll 44

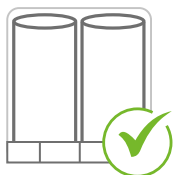
| Thickness (mm) | Length (m) | Width (mm) | Pack Area (m ²) | Thermal Conductivity (W/mK) | Thermal Resistance (m ² K/W) | Product Code |
|----------------|------------|------------------|-----------------------------|-----------------------------|---|--------------|
| 100 | 10.10 | 1200/2x600/3x400 | 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



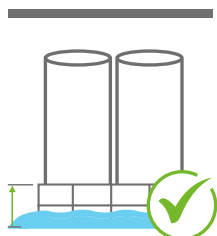
Keep the product covered and fully wrapped on a pallet until required.



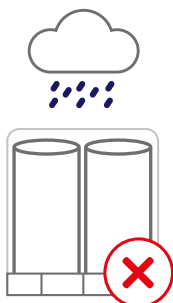
A pallet that is wrapped and has an undamaged hood can be stored outside when indoor space is unavailable, provided it is kept off the ground and protected from the elements. This should only be for short-term storage and not in severe weather conditions.



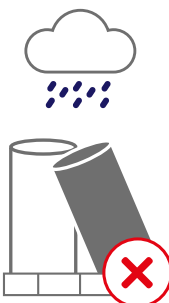
Once the plastic hood has been removed keep all of the product inside and off the ground away from the elements.



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



Product can become wet and damaged when exposed to the elements.



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.



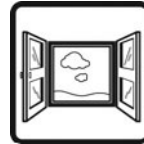
Clean area using
vacuum equipment.



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 & 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.

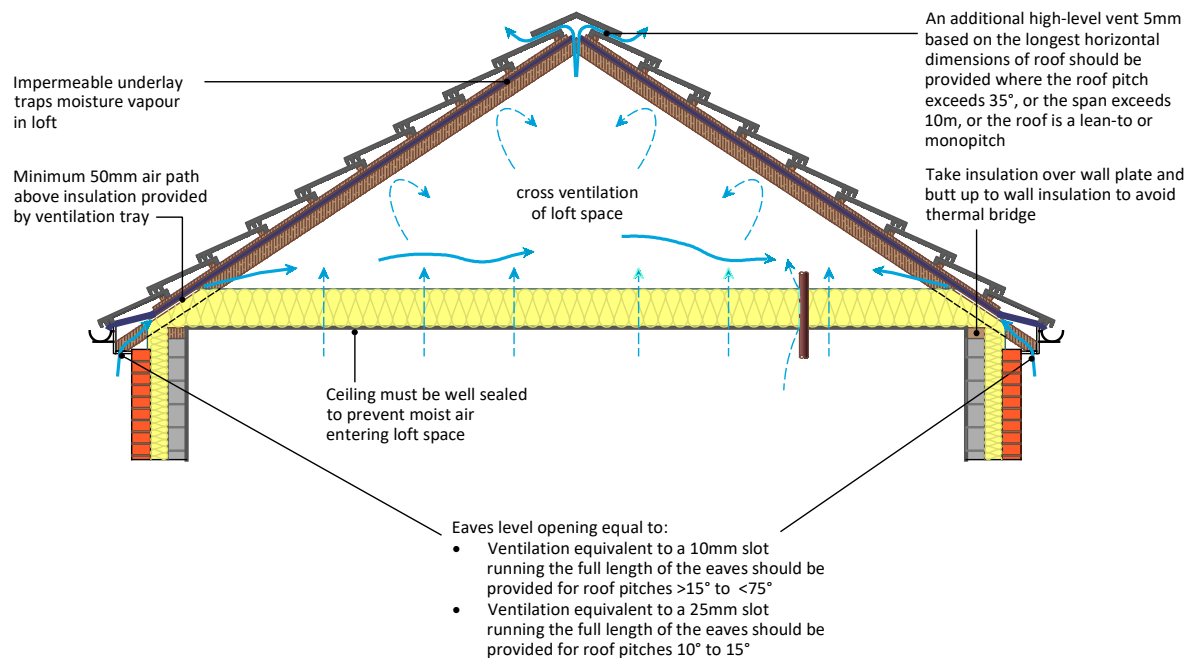
As per Section 12.5.4 of BS 5250:2021, ventilation of this roof should be:

| 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 5,000mm²/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.

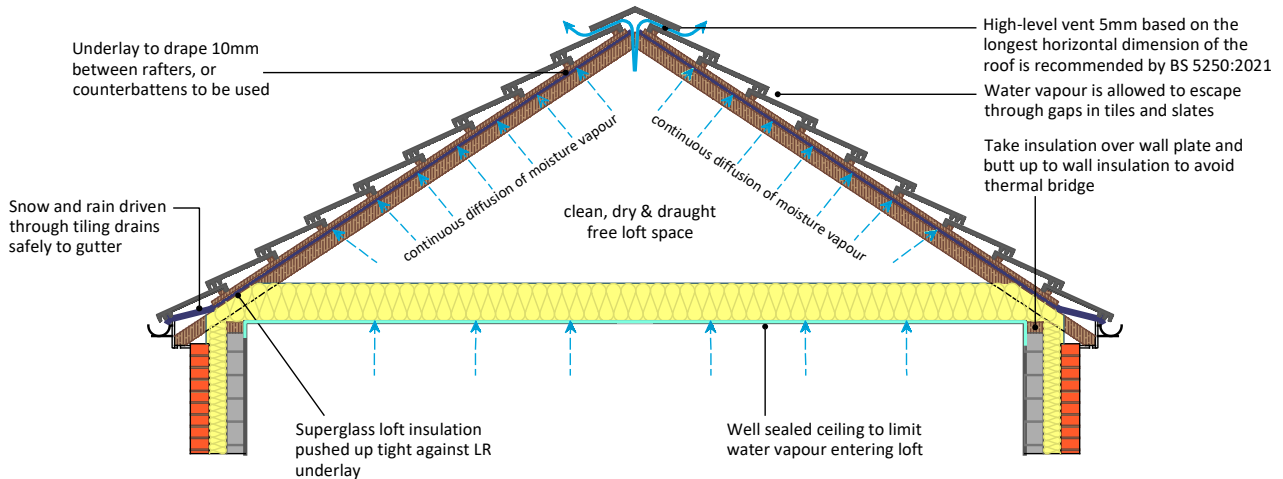
If it is proposed to use a LR underlay without this type of technical approval, then ventilation is required as per Section 12.5.4 of BS 5250:2021, ventilation of this roof should be:

| 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 300mm²/m². 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 30mm²/m².

**Alternatively, a high-level vent 5000mm²/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.

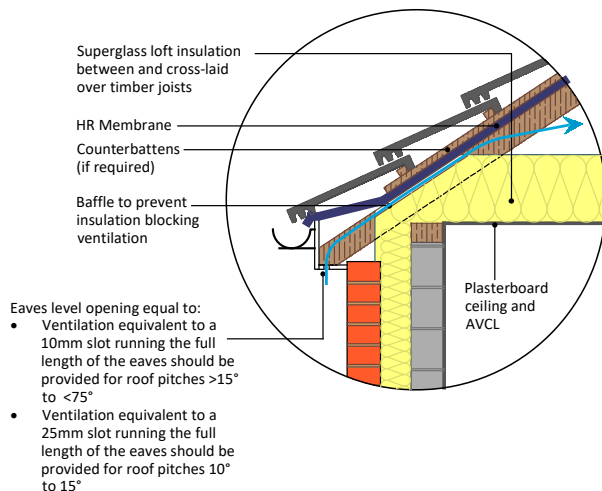
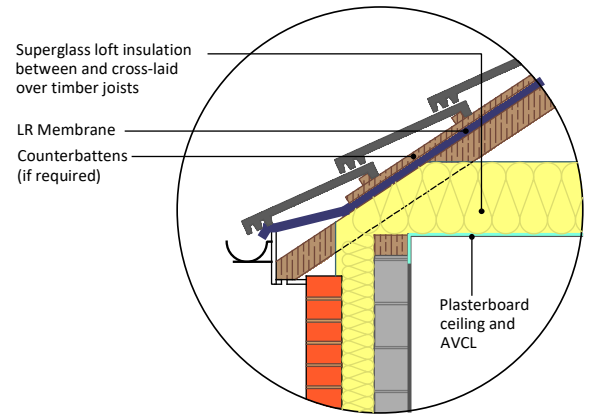
10. Installation

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.



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. Packaging & Waste Material

Our products and their pallets are wrapped in low-density polyethylene (LDPE4) plastic, which contains a minimum 30% recycled material and is fully recyclable. Before recycling, please consult your local authority for guidance.

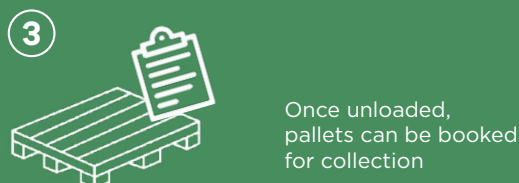
Superglass insulation products can be recycled but Superglass do not have the facilities to recycle these products. Therefore, any waste product should be disposed of to landfill in accordance with local waste disposal regulations.

Superglass is proud to be in the loop

The Pallet LOOP is a sustainable, cost-effective, easy-to-administer system covering pallet design and manufacture, pallet delivery and recovery, and a cash back incentive. Our deliveries of cured glass mineral wool products will be loaded onto LOOP pallets.

The collection process is really simple too, and using the LOOP can dramatically improve your own sustainability credentials, as you'll be helping to contribute to the UK's zero waste and zero carbon aims. **It's a win-win, all round!**

Here's how the recover/repair/reuse cycle works:



Scan here for our dedicated Pallet Loop page

the pallet[®]
loop

BSWGROUP member of binderholz ■

*£4 will be credited to your account for every green LOOP pallet collected in good condition.
£2 will be credited for LOOP pallets that require cleaning or are damaged.

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