

BauderGLAS Roof Board G2 T3+

V3 10.01.2023

Product description

BauderGLAS Roof Board G2 T3+ is a composite geotextile faced insulation manufactured from specially graded recycled glass ($\geq 60\%$) and natural raw materials which are available in abundant supply (sand, dolomite, lime...). The insulation is totally inorganic, contains no ozone depleting propellants, flame resistant additives or binders. Without VOC or other volatile substances. The core material is non-combustible.



Application fields

Thermal insulation with a high compressive strength for use within Bauder warm roof waterproofing systems to be used as a base layer and top layer for flatboard on a metal deck. It will also be used as the base layer when using with tapered insulation on a metal deck. Both scenarios will utilise a self-adhesive membrane as the Underlayer. The facing requires priming with Bauder Activator-Primer prior to installation of the underlayer.

Facing

top: Composite geotextile 0.5mm thick

bottom: Un-faced

Board edge

Square (not rebated)

Available Thicknesses

50 to 200mm in 10mm increments

Characteristic	Test method	Unit	Value
Density	EN 1602	Kg/m ³	100
Thickness ± 2 mm	EN 823	mm	50 to 200 in 10mm increments
Length ± 5 mm	EN 822	mm	1200
Width ± 2 mm	EN 822	mm	600
Reaction to fire	EN 13501 - 1	-	Core material complying with Euroclass A1. With facing Euroclass E.
Thermal conductivity (λ_D)	EN ISO 10456	W/mK	$\lambda_D \leq 0.036$
Compressive strength (with 10% compression)	EN 826	kPa	CS ≥ 500
		N/mm ²	0.50
		Kg/m ²	50,000
Bending Strength	EN 12089	kPa	BS ≥ 450
Tensile Strength	EN 1607	kPa	TR ≥ 150
Service Temperature Limits	-	-	From -265°C to +430°C
Water vapour resistance	EN ISO 14056	-	$\mu = \infty$
Hygroscopicity	-	-	Zero
Capillarity	-	-	Zero
Melting point	cf DIN 4102-17	-	>1000°C
Thermal expansion coefficient	EN 13471	-	$9 \times 10^{-6} \text{ K}^{-1}$
Specific heat	EN ISO 10456	-	1000 J/(kg.K)

Compressive strength for permanently sited loads – please contact Bauder Ltd where plant/equipment is to be sited on top of the Bauder system

CE – Marking ensure conformity with the mandatory essential requirements of CPD as mentioned in EN13167; within the CEN Keymark certification all mentioned characteristics are certified by an empowered, notified, and accredited 3rd party.

Storage/ Transport

Thermal insulation has to be transported and stored protected from moisture, open flames and direct sunlight.

Product storage guidance

All insulation boards must be kept dry, on pallets and off the ground. The packaging of the products should not be considered adequate for outside protection. Ideally boards should be stored inside a building. If outside storage cannot be avoided the boards should be stacked clear of the ground and covered with an opaque polythene sheet or weatherproof tarpaulin.

Technical data sheet



Packaging material	BauderGLAS Insulation Boards are shrink wrapped in polythene with cardboard protection and delivered to site on pallets. Each pack shows the manufacturer's name, grade, type marking.
Handling/PPE	<p>All persons using the product should be fully aware of the manual handling methods as roofing materials are heavy and can cause serious injury. When using the product, installers should be provided with, and wear, suitable personal protective equipment. PPE should include appropriate safety goggles when cutting, drilling, or abrading to protect against dust/projectile material. Wear the PPE generally required for the jobsite with a minimum of gloves to protect against possible sharp edges on the cellular glass board and a suitable dust mask to protect against dust inhalation.</p> <p>Safety glasses are a must when handling, cutting, grinding, crushing, or drilling BauderGLAS Insulation. Wear safety glasses with side shields or dust goggles in dusty environments. Wear goggles for dust protection while cutting or abrading in wind.</p> <p>A mouth nuisance dust mask (type FFP1 or higher) is useful when cutting or abrading, but not necessary. BauderGLAS Insulation is not toxic.</p>
Shelf life	When stored correctly, the product has no stated shelf life.
Disposal guidance	BauderGLAS Insulation is recyclable. Off-cuts need to be disposed via an authorised disposal contractor to an approved waste disposal site, observing all relevant regulations.
Re-use options of product	Please refer to EPD stated below in Certification and environmental information.
Further information/ documents	Current documents such as brochures, installation guides, etc. can be found by visiting www.bauder.co.uk
Certification and environmental information	Environmental Product Declaration EPD-PCE-20150042-IBA1-DE
International Standards Organisation (ISO)	ISO 9001:2015 Quality Management Certificates EN1271 (UK) and 70499/03-15_e (Germany)
	ISO 14001:2015 Environmental Management Certificates A10552 (UK) and 70499/03-15_d (Germany)
	ISO 50001:2011 Energy Management Cert No: BM-733-585-1836 Belgium
	ISO 9001:2015 Quality Management Cert No: BQ-700-585-1831 Belgium
	ISO 14001:2015 Environmental Management Cert No: BM-730-585-1838 Belgium

Installation Guidance: Please refer to the Bauder Installation Guide and project specification for guidance.

- BauderGLAS must be installed in dry conditions
- BauderGLAS to be bonded in the specified Bauder adhesive
- To be used as a base layer and top layer for flatboard on a metal deck. It will also be used as the base layer when using with tapered insulation on a metal deck. Both scenarios will utilise a self-adhesive membrane as the Underlayer. The facing requires priming with Bauder Activator-Primer prior to installation of the underlayer.
- Prior to the BauderGLAS Insulation being installed the waterproofing/base layer must be cleaned of all debris. This careful preparation will result in a stable and rigid insulation build up.
- The top of the boards must be swept prior to installation of the Activator-Primer and subsequent self-adhesive underlayer.
- BauderGLAS Insulation is easily trimmed and shaped, therefore if the substrate or abutment is uneven, it's easy to modify the insulation by abrading/sanding or cutting to fit. The BauderGLAS Insulation layers must be fully supported upon the substrate with no rocking or movement. Please see below tools which can be used to aid trimming/shaping of the boards:



Grind Board



Grater

Technical data sheet

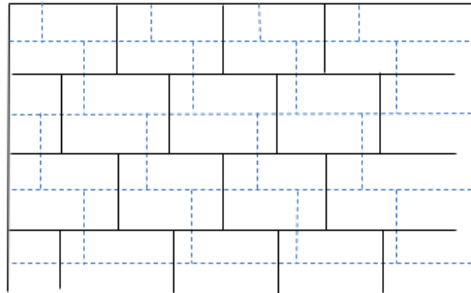
Two Layer system:

Each insulation layer is offset relative to the other. The best staggered overlap is 150mm or more. Infill pieces must have a minimum width of 150mm. The base layer, slab should always be installed with staggered joints, with minimum stagger of 150mm (Picture below - dotted line).

The insulation top layer, should always be installed with staggered joints, with minimum stagger of 150mm (Picture below - black line).

To maximise insulating performance ALL abutments and insulation joints MUST be tightly butted up. If necessary, re-measure, replace or cut/sand down and re-install any insulation which is not fitting correctly. Also ensure BauderGLAS Insulation is tight with no gaps where it meets rooflights, walls, edge details and other services which perforate the roof deck.

See blue dotted line = BauderGLAS Roof Board G2 T3+ Black full lines = BauderGLAS Roof Board G2 T3+ or BauderGLAS Tapered Roof Block G1 T3+.



Cutting BauderGLAS Insulation:

Bauder recommends that designated areas are set out on each roof area to limit the spread of debris accumulated in the cutting and abrading processes.

BauderGLAS Insulation is easy to cut and adjust.

Many contractors will set up a working area with all the necessary marking out and cutting tools; this ensures all the offcuts and dust is in one working area. Regularly clear away the offcuts and dust to maintain a clear and dust free working and installation area.

Sanding/abrading is used to make small adjustments.

Cutting is used to trim down the insulation to create the staggered layout, and to fit neatly against the adjacent insulation and abutments. To maximise insulating performance ALL abutments and insulation joints MUST be tightly butted together. If necessary, re-measure, cut and re-install any insulation which is not fitting correctly.

A metal saw or handpoint timber saw is used for cutting all BauderGLAS insulation.

It is important to use a square edge, mark a line (pic 1), and make a clean and straight cut (pic 2). Prepare a robust, flat working surface which fully supports the insulation. This will ensure accurate, safe, and easy cutting of the insulation material.



Cutting the insulation with a saw.

Make sure the insulation is fully supported and not rocking or moving. Saw on the downstroke, DO NOT saw on the upstroke, this will chip the insulation.

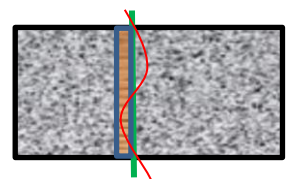
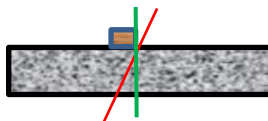
Carefully saw in a straight line (green 😊) if you do not saw in a straight line (red 😞) you will have additional work to sand the insulation until you have a flat surface.

If a diagonal line is to be cut, measure and mark very carefully to ensure the angle is accurate.

To ensure the insulation system is closed up tightly, where possible ensure that the factory machined edges of the insulation butt up against each other; and the cut edges are against an abutment such as a parapet, or rooflight etc.

Ensure you saw in a straight line and cut vertically through the insulation.

(green 😊, red 😞)

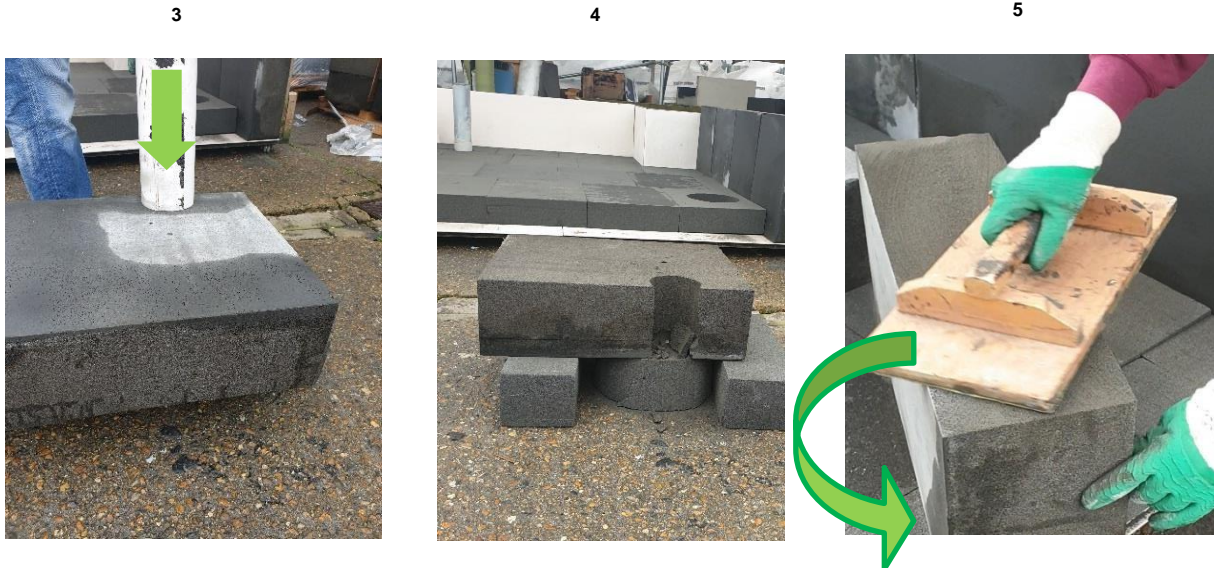


The cut side of the BauderGLAS should be to the outside (wall/parapet) to prevent open joints and getting misplacements of the next slabs.

Technical data sheet

Making holes in BauderGLAS Insulation:

To cut round holes through the insulation place the insulation on a flat and stable surface. Select a thin-walled tube with the correct external diameter (Pic 3). Using a rotating motion gradually press the tube through the BauderGLAS (finish as Pic 4). Large holes should be cut with a saw and neatly sanded to the desired shape.



Sanding/Abrading BauderGLAS insulation after cutting:

Use a sanding block to shape the underside of the insulation, to ensure a firm and stable contact with the substrate or an abutment.

Sanding the edge of BauderGLAS Insulation, sand with a downwards motion. Do not sand on the upward strokes, as this can possibly chip the insulation (see Pic 5).

Safety Data Sheets are designed to provide the necessary information to recipients of substances and mixtures in the EU & UK. This product is classed as an article; therefore, this product does not have a requirement for a Safety Data Sheet.



DoP can be found via the website



DoC can be found via the website