

FOAMGLAS® PERINSUL HL Load-Bearing Thermal Break

Product Technical Statement: 115604



Load-bearing cellular glass thermal break: 2.9 N/mm², 0.058 W/mK, 65-140 mm courses, NZ stocked

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Level of assurance needed to demonstrate NZ Building Code Compliance

Supporting documentation should include technical information by manufacturer and either an independent assessment or reference to an industry-based scheme



FOAMGLAS® confirms that this minimum level of assurance has been met or exceeded by the following:

Owens Corning

[PERINSUL thermal break brochure and technical guideline \(design calculations, CAD details\) - INT edition](#)



The following information has been provided by FOAMGLAS® demonstrating how this product complies with the [Building Product Information Requirements](#).

Technical Statement

Product Class

CLASS 1

Product Description

FOAMGLAS® PERINSUL HL is Owens Corning's load-bearing thermal break: a 200 kg/m³ cellular glass block, bitumen-coated top and bottom with a PE/glass-fleece liner compatible with masonry mortar, laid as a single course where a wall meets a floor, under a timber or steel-framed sole plate, at parapets, structural junctions and under sills. Accumen Shapes Ltd has been the New Zealand distributor for FOAMGLAS since 2019: it stocks 65 x 100 x 450 and 65 x 140 x 450 mm blocks in Auckland and supplies other sizes on indent. Insulation that lays like a brick, so the thermal line runs unbroken through the junction.

Why specify PERINSUL HL?

- Carries the wall: mean compressive strength 2.9 N/mm², individual minimum 2.32, long-term 1.4 N/mm² (EN 772-1 basis; DoP 140410320B and ETA 18/0636, declared); BBA design resistance 0.8 N/mm² - 80 kN/m for a 100 mm wide block.
- Closes the thermal bridge: lambda 0.058 W/mK horizontal, 0.068 W/mK vertical (EN 1745, declared), against 0.5-1.1 W/mK for the masonry it replaces; the BBA tabulates junction psi-values.
- Stays dry for life: closed glass cells, no capillarity, vapour resistance infinite, long-term water absorption 0.5 kg/m² or less (declared).
- Independently assessed: ETA 18/0636 (UBAtc, v03, April 2025); BBA Agreement Certificate 14/5111 - durability equal to the wall it is built into.
- Fire: cellular glass core Euroclass A1; the bitumen-faced block as supplied is Euroclass E (EN 13501-1, declared) - no NZ Group Number is claimed.
- Environmental: EPD to EN 15804 (IBU, EPD-PCE-20260424-IBA1-EN, Tessenderlo production).
- Formats: 450 mm long; 65, 100 and 140 mm thick; 100, 140 and 215 mm wide (other widths 90-365 mm and heights 50-200 mm to order).

Datasheet, DoP, ETA and EPD at foamglas.com; the BBA certificate and design guides are available from Accumen.

Scope of use

PERINSUL HL is a thermally insulating, load-bearing masonry unit for eliminating structural thermal bridges in residential and commercial buildings: as the base course of masonry walls at the floor-wall junction, above or below the DPC; beneath the sole plate of timber or steel-framed walls; at parapet upstands and other structural junctions; and under window and door sills. It is installed as a single linear course in a mortar bed, with perpend joints dry-butted. Forms: 450 mm long blocks, 65 / 100 / 140 mm thick, 100 / 140 / 215 mm wide; other widths (90-365 mm) and heights (50-200 mm) to order. The 65 x 100 and 65 x 140 mm blocks are stocked in Auckland; other sizes are indent.

Limitations: the wall and its junction remain the structural engineer's design - the block's declared strengths are inputs to a masonry design to the applicable standards (EN 1996-1-1 basis in the ETA and BBA; NZ equivalence by the engineer), and it is not a substitute for structural elements, footings or bearers. For protected constructions only: keep it clear of direct weather exposure, soil and ground or surface water, and use it with a conventional DPC. Protect from impact. Under sills, add a load-distributing board (for example fibre cement) to avoid point loads. The product as supplied is Euroclass

masterspec partner

Company Contact Details



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E; no NZ Group Number is claimed. Install to Owens Corning's instructions and the Owens Corning safe-use sheet OCPC00009.

New Zealand Building Code (NZBC)

The product will, if employed in accordance with the supplier's installation and maintenance requirements, assist with meeting the following provisions of the building code:

- **Clause B2 Durability:** Performance B2.3.1(a)
B2.3.1(a) 50 years: third-party durability assessment (BBA 14/5111 section 12: life equal to the wall in which it is installed) and the ETA 18/0636 assumed working life of 50 years, on B2/AS1 principles with the in-service history of cellular glass; the manufacturer declares that thermal conductivity does not change with time. Documents: BBA Agreement Certificate 14/5111 (3rd issue 13 Dec 2019, amended 22 May 2024) - available from Accumen; ETA 18/0636 v03 (UBAtc, 22 Apr 2025); DoP 140410320B (17 Feb 2025) - both at foamglas.com. Conditions: protected construction, kept clear of weather, soil and ground water, used with a conventional DPC.
- **Clause E3 Internal moisture:** Performance E3.3.1
E3.3.1: surface-condensation control at the floor-wall junction, evidenced by third-party assessment (alternative-solution support). Continuous insulation through the junction raises internal surface temperatures; BBA 14/5111 section 10 tabulates temperature factors above the BRE IP 1/06 criteria for the example junctions. Document: BBA Agreement Certificate 14/5111, 3rd issue 13 Dec 2019, amended 22 May 2024 - available from Accumen (accumen.co.nz/insulation/foamglas). The designer confirms the junction detail for the New Zealand climate zone.
- **Clause F2 Hazardous building materials:** Performance F2.3.1
F2.3.1: hazard status of the product as supplied - an article, not classified hazardous. Document: Owens Corning Safe Use Instruction Sheet, FOAMGLAS boards, blocks and PERINSUL, OCPC00009, rev. 22 May 2018 (linked from the Owens Corning product pages and hosted at accumen.co.nz/insulation/foamglas). Glass dust from cutting is managed per the sheet: gloves, eye protection, dust control.
- **Clause H1 Energy efficiency :** Performance H1.3.1(a)
H1.3.1(a): contribution to the thermal envelope at junctions - the designer calculates junction psi-values and construction R-values from the declared lambda (0.058 W/mK horizontal, 0.068 W/mK vertical, EN 1745). Documents: ETA 18/0636 v03 (UBAtc, 22 Apr 2025); DoP 140410320B (17 Feb 2025); Owens Corning PDS PERINSUL HL (02.04.2025) - all at foamglas.com; supporting: BBA Agreement Certificate 14/5111 (psi-values for example junctions) - available from Accumen. No AS/NZS 4859.1 R-value is claimed for the block itself.

Notes

H1.3.1: removes the thermal bridge at the wall base or junction; lambda 0.058 W/mK horizontal and 0.068 W/mK vertical (EN 1745, declared) for the designer's junction (psi-value) and R-value calculations; no AS/NZS 4859.1 R-value is claimed. E3.3.1: continuous insulation through the junction raises internal surface temperatures and limits surface condensation and mould risk (BBA 14/5111 section 10; temperature factors tabulated). B2.3.1(a): BBA assesses a life equal to the wall in which it is installed; the ETA assumes a 50-year working life - expected service life not less than 50 years when protected and kept dry. F2.3.1: an article, not classified hazardous (Owens Corning SUIS OCPC00009); glass dust from cutting is managed per the sheet. B1 is not claimed: the masonry design is by the engineer. The product is a component within a wall; compliance of the installed system rests with the design professional.

Evidence

The product meets the requirements set out in the following documents, or relevant parts of cited standards within the documents:

H1 (envelope, thermal bridging): EAD 170018-00-0305 - ETA 18/0636 v03 (UBAtc, 22 Apr 2025) and DoP 140410320B (17 Feb 2025, AVCP 2+): lambda 0.068 W/mK vertical, 0.058 W/mK horizontal (EN 1745 + EN 12667), declared; BBA Agreement Certificate 14/5111 (3rd issue 13 Dec 2019, amended 22 May 2024): lambda 0.058 W/mK, junction psi-values and temperature factors for example constructions. Strength (information for the engineer, B1 not claimed): mean compressive strength 2.9 N/mm², individual minimum 2.32, long-term 1.4 (DoP, ETA); masonry fk with the block included 1.4-1.6 N/mm² (ETA Table 3), characteristic initial shear 0.13 N/mm² or more (BBA 6.6). E3: BBA 14/5111 section 10 (condensation) - temperature factors above BRE IP 1/06 criteria for the Figure 1 and 2 junctions. B2: BBA section 12 - life equal to the wall; ETA 2.1 - 50-year assumed working life; DoP durability declarations. F2: Owens Corning Safe Use Instruction Sheet OCPC00009 (rev. 22 May 2018). Fire: Euroclass E as supplied (DoP); core A1 (BBA section 8) - no NZ Group Number claimed. Documents are published by Owens Corning; the BBA certificate is available from Accumen.

Supporting Evidence

The product has and can make available the following additional evidence to support the above statements:



Owens Corning

[PERINSUL thermal break brochure and technical guideline \(design calculations, CAD details\) - INT edition](#)

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Use in Service History

Cellular glass has been made since 1937, when Pittsburgh Corning built its first plant in Pittsburgh, USA; Owens Corning now makes FOAMGLAS in the USA, Belgium, the Czech Republic and China. PERINSUL thermal break blocks have been used in European masonry construction for decades to stop heat loss at wall bases, and PERINSUL HL - the high-load grade - has held a BBA Agreement Certificate since 21 February 2015 (14/5111, third issue December 2019) and a European Technical Assessment since 20 December 2018 (ETA 18/0636, now version 03), with CE marking under AVCP system 2+ and third-party surveillance of production. The 2026 EPD covers production at Tessenderlo, Belgium. Accumen Shapes has been the New Zealand distributor for FOAMGLAS since 2019 and stocks the 65 x 100 and 65 x 140 mm PERINSUL HL blocks in Auckland; every carton carries the Owens Corning label and production lot.

Product Criteria

Design requirements

Place the block wherever a load-bearing element would break the insulation line: the first course of the inner or outer leaf at the floor-wall junction, beneath sole plates, at parapet upstands and under sills. Select width to match the wall leaf or plate (100, 140 or 215 mm standard; 90-365 mm to order) and thickness (65, 100 or 140 mm) for the thermal improvement required - the junction psi-value is calculated by the designer from λ 0.058 W/mK (horizontal) or 0.068 W/mK (vertical). Structural design is by the engineer using the declared strengths (mean 2.9 N/mm²; long-term 1.4; BBA design resistance 0.8 N/mm², 80 kN/m per 100 mm width) and the ETA masonry values; where loads exceed these, add width or redesign. Keep the course protected: DPC as normal, no weather or ground-water exposure; a load-distributing board under sills. Exclusions: not a footing, bearer or lintel; not for exposed or buried use. Accumen Technical Services: info@accumen.co.nz.

Installation requirements

Lay PERINSUL HL as conventional masonry on a full horizontal bed of mortar, level and true, with the blocks butted tightly end to end and the perpendicular joints left dry (no mortar). Tap each block gently into the bed with a trowel until mortar flows from all sides. Lay the next course fully into mortar so the load is spread evenly. Timber or steel frame: bed the block, re-check level before the mortar sets, lay the DPC over it and set the sole plate on it without packing; secure the plate with strap fixings to the engineer's design - fixings do not pass through the block. Sills: place a load-distributing board (for example fibre cement) over the block, then bed the sill fully in mortar. Keep movement joints as for the rest of the wall. Cut with a saw. Protect from impact, weather, soil and ground water. Cutting releases glass dust: gloves, eye protection and dust control per Owens Corning safe-use sheet OCPC00009. Store in cartons on pallets, dry.

Maintenance requirements

PERINSUL HL is inert cellular glass built into a protected wall and needs no maintenance; the BBA notes that, confined within the wall with suitable durability, maintenance is not required. Durability relies on the wall remaining protected: keep the damp-proof course, cladding, flashings and drainage that protect the base of the wall in good order so the course is not exposed to standing water, soil contact or weather; repair damage to them promptly. Where the block is visible (for example under a sill before finishing), replace any block that is cracked or crushed. The contribution of the product to B2.3.1 assumes these conditions are maintained; specified durability for the element remains a project-specific assessment by the design professional.

Warrantees

FOAMGLAS PERINSUL HL is manufactured by Owens Corning (Pittsburgh Corning Europe NV, Tessenderlo, Belgium) and supplied in New Zealand by Accumen Shapes Ltd as its distributor. The product is covered by Owens Corning's product warranty (Owens Corning provides written warranties for many FOAMGLAS products; project warranty requests go through Accumen). Guarantees under the Consumer Guarantees Act 1993 apply where applicable; nothing here limits rights under that Act or the Contract and Commercial Law Act 2017. Conditions: store, handle and install to the Owens Corning datasheet and instructions, in a protected construction with a DPC, within the published loads and service conditions. Exclusions: installation workmanship and masonry design; damage after delivery; use outside the published scope, including exposed or buried use; mortar, DPC and fixings, which are specified separately. Terms: info@accumen.co.nz.

Company Product Information

Environmental

PERINSUL HL is cellular glass - inorganic, made mainly from recycled glass with natural raw materials (sand, dolomite, lime), with no ozone-depleting propellants, flame-retardant additives, binders or VOCs (Owens Corning datasheet, declared). The core cannot rot and is pest-proof; the block as supplied carries a bitumen coating and PE/glass-fleece liner on the bed faces. It is an article, not classified hazardous (Owens Corning SUIS OCPC00009); control glass dust when cutting. An Environmental Product Declaration to EN 15804+A2 is published - EPD-PCE-20260424-IBA1-EN (IBU, issued 18 Aug 2026, valid to 17 Aug 2031), covering production at Tessenderlo, Belgium, the source of New Zealand stock. In service it reduces junction heat loss for the life of the wall. Off-cuts are inert; dispose of with masonry waste or to approved landfill.

Building Product Information Requirements

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Manufacturer

Legal Trading Name:

Owens Corning (Pittsburgh Corning Europe NV, Tessenderlo, Belgium)

Company Website:

www.foamglas.com

Contact Number/s:

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Importer

Legal Trading Name:

Accumen Shapes Ltd

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Product Identifier

CLASS 1 DESIGNATED BUILDING PRODUCT (BATCH-IDENTIFIED). EACH CARTON CARRIES THE OWENS CORNING PRODUCT LABEL - FOR EXAMPLE "FOAMGLAS PERINSUL HL 450 X 100 X 100 MM" - WITH THE CE MARKING REFERENCE (DOP 140410320B, ETA 18/0636) AND A PRODUCTION LOT CODE TRACEABLE BY OWENS CORNING TO THE TESSENDERLO PLANT. THE SAME IDENTIFIERS APPEAR ON ACCUMEN DELIVERY DOCUMENTS AND INVOICES, WITH PURCHASE-ORDER AND SHIPMENT RECORDS HELD BY ACCUMEN SHAPES LTD. NO SEPARATE SKU SCHEME IS PUBLISHED.

Warnings

Not a structural element in its own right: the wall and junction design, including the loads on the block, are the structural engineer's responsibility using the declared strengths. For protected constructions only - keep clear of direct weather, soil and ground or surface water and use with a conventional DPC; not for exposed or buried use. The block as supplied is Euroclass E (bitumen faces); no NZ Group Number is claimed. Cellular glass is brittle: protect from impact; cutting releases glass dust - wear gloves and eye protection and control dust (Owens Corning safe-use sheet OCPC00009). Under sills use a load-distributing board to avoid point loads.



Date last validated: **29 October 2026**



Date last updated: **29 October 2026**

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