

FOAMGLAS® HLB High Load Bearing Insulation (800-2400)

Product Technical Statement: 115606



Load-bearing cellular glass: 800-2400 kPa, 0.045-0.057 W/mK, non-combustible, tank bases, supports

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Level of assurance needed to demonstrate NZ Building Code Compliance

Supporting documentation should include self-assessment and technical information by manufacturer



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

Accumen Shapes Ltd

[Safety Data Sheet \(NZ\) - FOAMGLAS insulation incl. HLB \(HSNO HSR002544\) - June 2022](#)



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® HLB is Owens Corning's high-load-bearing cellular glass: the same sealed-cell glass as FOAMGLAS ONE, made denser for the loads under storage tanks, vessels and pipe supports. Six grades - HLB 800, 1000, 1200, 1400, 1600 and 2400 - with compressive strengths from 800 to 2400 kPa (ASTM C552 Grades 8 to 24). Accumen Shapes Ltd, New Zealand distributor for FOAMGLAS since 2019, supplies HLB block to order (Yantai or Tessenderlo plants), can fabricate pipe-support inserts and tank-base layouts in Penrose, and supplies Owens Corning's accessories on indent.

Why specify HLB?

- Strength by grade: lot-average compressive strength 800 / 1000 / 1200 / 1400 / 1600 / 2400 kPa, individual minimum 552 / 689 / 827 / 965 / 1103 / 1655 kPa (ASTM C165, C240, C552; datasheets June 2026, declared) - no creep under sustained load.

- Thermal value that holds: lambda at 24 deg C 0.045 (HLB 800, 1000), 0.047 (1200), 0.048 (1400), 0.049 (1600), 0.057 W/mK (2400) (ASTM C518 / C177, declared), tables -165 to +204 deg C.

- Service range: -268 to +482 deg C unloaded, -268 to +400 deg C under load (declared) - cryogenic tank bases to hot bitumen storage.

- Non-combustible: ASTM E136, ASTM E84 flame spread 0 / smoke 0 (declared); Euroclass A1 on the EN 14305 sheets for Belgian production (HLB 800, 1200; declared).

- Stays dry: impermeable to water and vapour (ASTM E96 0.00 perm-in), no capillarity, absorption under 0.2% by volume (declared).

- Safe on stainless steel: acceptable per ASTM C871, C692 and C1617; meets ASTM C795 and NRC 1.36 (declared).

- Formats: 450 x 600 mm blocks in 25 mm steps (HLB 800: 50-180 mm; HLB 2400: 50-125 mm); XL 600 x 900 mm in some grades; inserts and shapes fabricated by Accumen.

Datasheets and safe-use sheet at owenscorning.com; Accumen's NZ SDS covers HLB.

Scope of use

FOAMGLAS HLB is load-bearing thermal insulation for industrial and building-services plant: insulated bases for cold, cryogenic, hot and high-temperature storage tanks; load-bearing pipe supports and hanger inserts in insulated pipework; secondary-containment corner protection; and other sustained-load applications. Grade by load: HLB 800 for most tank bases and supports, rising through 1000, 1200, 1400 and 1600 to HLB 2400 for the heaviest tanks and point loads - the engineer selects the grade for the design bearing stress with the factors Owens Corning recommends. Forms: block 450 x 600 mm in 25 mm thickness steps (HLB 800 50-180 mm; HLB 2400 50-125 mm), XL 600 x 900 mm in some grades, and pipe-support inserts, segments and tank-base layouts fabricated by Accumen. Service -268 to +482 deg C unloaded, -268 to +400 deg C under load (declared).

Limitations: not a structural element - the tank base, foundation and support design are the engineer's, using the declared strengths as inputs; strength in a bonded, sand-capped tank base is lower than the laboratory value (Owens Corning tank-base guide). Cellular glass is brittle: protect from impact and distribute loads with the specified bearing and pressure-distribution layers. Fire properties are for the

masterspec partner

Company Contact Details



FOAMGLAS®

Brand: FOAMGLAS®
Company: Accumen Shapes Ltd
Physical Address: 95 Hugo Johnston Drive
Penrose
AUCKLAND
Postal Address: PO Box 22675
Otahuhu
AUCKLAND
Telephone: 64 09 2709228
Fax: 64 09 2764269
Email: info@accumen.co.nz
Website: <https://www.foamglas.com>

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cellular glass only; adhesives and capping are assessed separately, and no NZ Group Number is claimed. Install to Owens Corning's system guides and Accumen's NZ SDS.

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(b), B2.3.1(c)
B2.3.1(b) 15 years and B2.3.1(c) 5 years: in-service history of cellular glass tank bases and supports since 1937, assessed on B2/AS1 principles, with the manufacturer's datasheet durability statements (long-term dimensional stability, constant insulating efficiency; does not creep, rot or absorb water). Documents: Owens Corning Product Data Sheets FOAMGLAS HLB 800-2400 (June 2026, owenscorning.com); FOAMGLAS HLB brochure (foamglas.com); all hosted at accumen.co.nz/insulation/foamglas. The 15-year position also covers accessible, replaceable pipe-support inserts; buried tank bases needing 50 years are assessed by the designer.
- **Clause F2 Hazardous building materials:** Performance F2.3.1
F2.3.1: HSNO classification of the product as supplied. Document: Accumen Shapes Ltd Safety Data Sheet, FOAMGLAS insulation (NZ; names FOAMGLAS, ONE and HLB), HSNO approval HSR002544, June 2022 (accumen.co.nz/insulation/foamglas); supporting: Owens Corning Safe Use Instruction Sheet OCPC00004, rev. 19 December 2022 (foamglas.com).
- **Clause H1 Energy efficiency :** Performance H1.3.4(b), H1.3.6(a)
H1.3.4(b) hot-water systems and H1.3.6(a) HVAC systems: insulation thickness and support design by calculation from the declared lambda at mean temperature, at system level by the designer - load-bearing inserts keep the services insulation continuous at supports and equipment bases. Documents: Owens Corning Product Data Sheets FOAMGLAS HLB 800 (Pub. 10024266-B), 1000, 1200, 1400, 1600, 2400, June 2026 (owenscorning.com/dms/10024266, 10024268, 10024269, 10024270, 10024271, 10024258); EN 14305 sheets HLB 800 and 1200 (Aug 2023, foamglas.com); all hosted at accumen.co.nz/insulation/foamglas.

Notes

B2.3.1(b) and (c): inert, inorganic cellular glass that does not creep, rot or absorb water; expected service life not less than 15 years when protected and maintained, which also meets the 5-year requirement; elements needing 50 years (buried tank bases) are assessed by the designer. F2.3.1: classified under HSNO as an eye irritant (category 2, HSR002544); manage glass dust from cutting per Accumen's NZ SDS. H1 (hot-water and HVAC services): at pipe supports and equipment bases HLB keeps the insulation line continuous under load, limiting heat loss and gain; the designer selects grade and thickness from the lambda values at mean temperature in the Owens Corning datasheets. B1 is not claimed: bearing design is the engineer's using the declared strengths. Non-combustibility is stated for the cellular glass only; no NZ Group Number is claimed. The product is a component within a system; 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 (services): ASTM C552 Grades 8-24 - Owens Corning PDS HLB 800 (Pub. 10024266-B), 1000, 1200, 1400, 1600, 2400, June 2026: lambda at 24 deg C 0.045 / 0.045 / 0.047 / 0.048 / 0.049 / 0.057 W/mK, tables -165 to +204 deg C (ASTM C518, C177), declared; grade and thickness by the designer. Strength (for the engineer, B1 not claimed): lot-average compressive strength 800-2400 kPa, individual minimum 552-1655 kPa (ASTM C165 / C240 / C552), declared. B2: B2/AS1 basis - in-service history of cellular glass since 1937 and of HLB tank bases internationally; datasheets state long-term dimensional stability and constant insulating efficiency, declared. F2: Accumen NZ SDS (June 2022, HSR002544; covers HLB); Owens Corning SUIS OCPC00004 (19 Dec 2022). Also held: ASTM E136 non-combustible and E84 0/0 (datasheets, declared); Euroclass A1, CS >800 kPa, -265 to +430 deg C on the EN 14305 sheets for Belgian production (HLB 800 and 1200, Aug 2023, declared); ASTM C795 / NRC 1.36 acceptability (Owens Corning statement, 28 Oct 2019). No independent test report is held for HLB; the EPD (SCS-EPD-10169, Sedalia only) is not claimed.

Supporting Evidence

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



Accumen Shapes Ltd

[Safety Data Sheet \(NZ\) - FOAMGLAS insulation incl. HLB \(HSNO HSR002544\) - June 2022](#)

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. High-load-bearing FOAMGLAS has been the standard insulation under refrigerated, cryogenic and heated storage tanks worldwide for decades - LNG and LPG tank bases, hot bitumen and chemical storage - and at load-bearing pipe supports, where its non-creeping strength keeps the insulation line continuous. The HLB grades are made to ASTM C552 (Grades 8 to 24) under Owens Corning's quality system. Accumen Shapes has been the New Zealand distributor for FOAMGLAS since 2019; HLB is

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supplied to order from Owens Corning's Yantai or Tessenderlo plants with the production lot on every carton, and Accumen can fabricate pipe-support inserts and tank-base layouts in Penrose.

Product Criteria

Design requirements

Select the grade from the design bearing stress: HLB 800 covers most tank bases and pipe supports; step up through 1000-1600 to HLB 2400 for the heaviest tanks, ring-wall zones and point loads. Owens Corning's tank-base guide applies safety factors and notes that strength in a bonded, sand-capped base is below the laboratory value - the engineer designs the base and pressure-distribution layer accordingly. Select thickness for heat loss, heat gain or frost-heave protection from the lambda values at mean temperature in the datasheets; Owens Corning can assist with design polynomials. Keep loaded service at or below +400 deg C. Tank bases: full bonding to the slab with the specified adhesive, interleaving and capping layers; built-in slope where falls are needed. Pipe supports: size the insert for the hanger load and use a bore coating where the pipe cycles or vibrates. On stainless steel the material meets ASTM C795. Accumen Technical Services: info@accumen.co.nz.

Installation requirements

Install to Owens Corning's current system guide for the application (hot or cold tank base, pipe support) and to the project specification. Tank bases: the concrete base must be clean, dry, level or to the designed falls and cured; bond the first layer fully with the specified adhesive, lay blocks tightly with staggered joints, add the interleaving layer and any second layer, then the pressure-distribution or capping layer before the tank bottom is placed. Pipe supports: fit the fabricated insert with the specified bore coating, sealant and jacketing so the insulation is continuous through the support. Cut with a saw; cellular glass is brittle - handle with care and keep point loads off unprotected block. Cutting releases glass dust and a brief rotten-egg odour from opened cells: gloves, eye protection, dust extraction and a P1 (minimum) particulate respirator where dust is high - refer to Accumen's NZ SDS. Store dry, flat and off the ground, protected from weather.

Maintenance requirements

FOAMGLAS HLB is inert, inorganic glass and needs no routine maintenance once installed and protected within the tank base or pipe-support system. Durability relies on that system: keep the tank-base perimeter sealing, drainage and capping, or the pipe-support jacketing and sealants, in good order and repair damage promptly so that water and mechanical damage are kept out. Where a support is opened or a tank is lifted for inspection, replace any block that is cracked, crushed or broken before reinstating. Do not exceed the design load of the installed grade. 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 HLB is manufactured by Owens Corning and supplied in New Zealand by Accumen Shapes Ltd as its distributor. Block is covered by Owens Corning's product warranty (Owens Corning provides written warranties for many FOAMGLAS products; project warranty requests go through Accumen). Where Accumen fabricates inserts or tank-base layouts from block, Accumen warrants its fabrication (dimensions and workmanship) under its terms of trade; the material stays under the Owens Corning warranty. 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 datasheets and system guides, within the declared loads and service conditions. Exclusions: installation workmanship and base or support design; damage after delivery; use outside the published scope; unspecified adhesives, capping or jacketing. Terms: info@accumen.co.nz.

Company Product Information

Environmental

FOAMGLAS HLB is soda-lime cellular glass: inorganic, with no fibres or binders, so it cannot rot, and it is vermin-resistant. It is non-combustible (ASTM E136, declared) and asbestos-free, inert and insoluble in service, and limits heat loss and gain under tanks and at supports for the life of the installation - Owens Corning's hot-tank-base guide puts the saving through an insulated base at up to 90% of the uninsulated heat loss. Under HSNO it is classified as an eye irritant (category 2) - see Accumen's NZ SDS; control glass dust when cutting. Off-cuts are inert; recover for reuse where possible, otherwise dispose of to approved landfill (see the SDS). Owens Corning's EPD for FOAMGLAS (SCS-EPD-10169, HLB 800-1600) covers production in Sedalia, USA only - not the stock supplied to New Zealand - so no EPD figures are claimed in this listing.

Building Product Information Requirements

Manufacturer

Legal Trading Name:

Owens Corning (FOAMGLAS plants: Pittsburgh Corning Europe NV, Tessenderlo, Belgium; Owens Corning Ya

Company Website:

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www.foamglas.com

Contact Number/s:

+64 09-2709228

Importer

Legal Trading Name:

Accumen Shapes Ltd

Business Email:

info@accumen.co.nz

Company Website:

www.accumen.co.nz

Contact Number/s:

+64 09 -2709228

Product Identifier

CLASS 1 DESIGNATED BUILDING PRODUCT (BATCH-IDENTIFIED). EACH CARTON OR PALLET CARRIES THE OWENS CORNING PRODUCT LABEL - FOR EXAMPLE "FOAMGLAS HLB 800 450 X 600 X 100 MM" - WITH THE GRADE AND A PRODUCTION LOT CODE THAT OWENS CORNING TRACES TO THE PLANT. ITEMS FABRICATED BY ACCUMEN ARE IDENTIFIED ON ACCUMEN DELIVERY DOCUMENTS AND INVOICES BY PRODUCT, GRADE, SIZE AND SOURCE LOT, WITH PURCHASE-ORDER AND SHIPMENT RECORDS HELD BY ACCUMEN SHAPES LTD. NO SEPARATE SKU SCHEME IS PUBLISHED.

Warnings

HSNO classification: eye irritant, category 2 (HSR002544) - see Accumen's NZ Safety Data Sheet and the Owens Corning Safe Use Instruction Sheet. Cutting releases fine glass dust and a brief rotten-egg odour from opened cells: wear gloves and eye protection, use dust extraction, and wear a P1 (minimum) particulate respirator where dust levels are high. Cellular glass is brittle: protect from impact and keep point loads off unprotected block. Not a structural element: the tank base, foundation and support design are the engineer's using the declared strengths, and loaded service must stay at or below +400 deg C. Fire properties apply to the cellular glass only; adhesives and capping are assessed separately.



Date last validated: **29 October 2026**



Date last updated: **29 October 2026**

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