FOAMGLAS® ONE™ Cellular Glass Insulation

Product Technical Statement: 115603

miproducts

Non-combustible, vapour-tight cellular glass: 0.040 W/mK, 40-180 mm, -265 to +430C, NZ stocked

View miproducts listing

Level of assurance needed to demonstrate NZ Building Code Compliance

LOW

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 (HSNO HSR002544) - June 2022

BPIR **The following information has been provided by FOAMGLAS® demonstrating how this product complies with the Building Product Information Requirements.**

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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
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Website:	https://www.foamglas.com

Technical Statement

Product Class

CLASS 1

Product Description

FOAMGLAS® ONE™ is Owens Corning's cellular glass insulation for pipework, equipment and tanks: rigid, sealed glass cells of soda-lime glass, with no fibres or binders. Accumen Shapes Ltd has been the New Zealand distributor for FOAMGLAS since 2019: it stocks ONE block in Auckland, fabricates it to order in Penrose and supplies FOAMGLAS accessories on indent. Used on chilled-water, refrigeration and cryogenic lines, steam, hot-water and hot-oil systems, tanks, vessels and tank bases, and below-ground pipework.

Why specify FOAMGLAS ONE?

- Non-combustible: passes ASTM E136; ASTM E84 flame spread 0, smoke 0 (RJ Lee Group, Yantai production, measured); Euroclass A1 to EN 13501-1 (DoP 100010018A, Belgian production, declared).

- Stays dry: no capillarity (declared); water absorption 0.10% by volume, vapour permeability 0.001 perm-in (ASTM C240, E96; RJ Lee, measured).

- Thermal value that holds: lambda 0.040 W/mK at 0 deg C mean (EN 14305, declared); 0.043 W/mK at 24 deg C (ASTM C518, RJ Lee, measured); the DoP declares no change with time.

- Wide service range: -265 to +430 deg C (EN 14305, declared); -268 to +482 deg C on the ASTM C552 datasheet.

- Carries load: compressive strength 600 kPa or more (EN 826, declared); 576-794 kPa capped (ASTM C165, RJ Lee, measured).

- Safe on stainless steel: passes ASTM C795, C692, C871 and C1617 (RJ Lee, measured); water-soluble chloride 2 mg/kg or less (EN 13468, declared).

- Independently verified: full ASTM C552 Grade 6 compliance, 100% closed cells (RJ Lee Group TMH1050832, Jan 2019).

- Formats: 450 x 600 mm blocks, 40-180 mm thick, from Tessenderlo (Belgium) or Yantai (China); sheets, sections and shapes fabricated to order in NZ.

Datasheets, DoP and safe-use sheet at foamglas.com; Accumen's NZ SDS at accumen.co.nz; RJ Lee report on request, complete and unaltered.

Scope of use

FOAMGLAS ONE is thermal insulation for building services, industrial and process plant: chilled-water, refrigeration and cryogenic pipework and equipment; hot-water, steam, heat-transfer-fluid and hot-oil systems; tanks, vessels and tank bases; and below-ground or direct-burial pipework. Forms: block (450 x 600 mm, 40-180 mm thick), and sheets, pipe sections, segments and custom shapes fabricated from block by Accumen to order; FOAMGLAS adhesives, sealants, coatings and jacketing are supplied on indent. Service temperature -265 to +430 deg C (EN 14305, declared). The glass itself is impermeable to water vapour; on below-ambient service, joint sealing and any vapour-retarder finish follow Owens Corning's system recommendations.

Limitations: not a structural element. Under sustained or concentrated loads (tank bases, pipe supports) the grade and bearing design are by the engineer - FOAMGLAS HLB grades are available for higher loads. Cellular glass is brittle: protect it from impact, abrasion and weather with jacketing, coatings or cladding to suit the exposure. Fire properties stated are for the cellular glass only;

adhesives, sealants, coatings and jacketing are assessed separately, and no NZ Group Number is claimed. Install and handle in accordance with the Owens Corning datasheets and system recommendations 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 since 1937, assessed on B2/AS1 principles, with the manufacturer's DoP durability declarations (thermal conductivity does not change with time; fire performance does not deteriorate). Documents: Pittsburgh Corning Europe (Owens Corning) DoP 100010018A, 1 January 2018; RJ Lee Group test report TMH1050832, January 2019 (full ASTM C552 Grade 6 compliance, 100% closed cells; on request via accumen.co.nz/insulation/foamglas). The 15-year position also covers accessible, replaceable services insulation; 50-year elements are assessed by the designer.
- **Clause F2 Hazardous building materials:** Performance F2.3.1
  F2.3.1: HSNO classification of the product as supplied. Documents: Accumen Shapes Ltd Safety Data Sheet, FOAMGLAS insulation (NZ), 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: pipe and equipment insulation thickness by calculation from the declared lambda at mean temperature, at system level by the designer (H1 Acceptable Solutions / Verification Methods for hot-water and HVAC systems). Documents: Owens Corning PDS FOAMGLAS ONE, ASTM C552 Grade 6, Pub. 10024264-C, September 2024 (owenscorning.com/dms/10024264); Owens Corning PDS FOAMGLAS ONE, EN 14305, November 2020; Pittsburgh Corning Europe DoP 100010018A, 1 January 2018 (both at foamglas.com); supporting: RJ Lee Group TMH1050832, January 2019 (ASTM C518 and C177, measured).

Notes

B2.3.1(b) and (c): inert, inorganic cellular glass; the DoP declares that its thermal conductivity does not change with time and its fire performance does not deteriorate. Expected service life not less than 15 years when protected and maintained, which also meets the 5-year requirement; elements needing 50 years 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): limits heat loss and gain from pipework and equipment; the designer selects thickness from the lambda values at mean temperature in the Owens Corning datasheets. 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): EN 14305 - Pittsburgh Corning Europe (Owens Corning) DoP 100010018A (1 Jan 2018, AVCP 3) and PDS FOAMGLAS ONE (Nov 2020): lambda 0.040 W/mK at 0 deg C, table -180 to +300 deg C, declared; ASTM C552 Grade 6 - Owens Corning PDS 10024264-C (Sep 2024): 0.042 W/mK at 24 deg C, typical, declared; RJ Lee Group TMH1050832 (Jan 2019, Yantai production): ASTM C518 0.043 W/mK at 24 deg C plus ASTM C177 at mean temperatures, measured. Thickness by the designer at system level. B2: B2/AS1 basis - in-service history of cellular glass since 1937 plus the DoP durability declarations; RJ Lee measured 100% closed cells and full ASTM C552 Grade 6 compliance. F2: Accumen NZ SDS (June 2022, HSR002544); Owens Corning Safe Use Instruction Sheet OCPC00004 (Dec 2022). Also held: Euroclass A1 (DoP, declared); ASTM E136 pass, E84 0/0, and C795, C692, C871 and C1617 pass (RJ Lee, measured). Test reports are available to BCAs and specifiers on request, complete and unaltered.

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 (HSNO HSR002544) - June 2022

Use in Service History

In 1937 Pittsburgh Corning built its first cellular glass plant, in Pittsburgh, USA, and FOAMGLAS has been made and used internationally ever since; Owens Corning now makes it in the USA, Belgium, the Czech Republic and China. FOAMGLAS ONE is the current block grade for industrial and commercial pipework and equipment. New Zealand stock comes from the Tessenderlo plant in Belgium - CE-marked to EN 14305 with a Declaration of Performance - or from the Yantai plant in China, whose production was independently tested against ASTM C552 Grade 6 by RJ Lee Group (lot of April 2018, report January 2019). Accumen Shapes has been the New Zealand distributor for FOAMGLAS since 2019: it holds block in Auckland, fabricates it in Penrose, and supplies FOAMGLAS for pipework, tanks and tank bases on New Zealand projects.

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miproducts

Product Criteria

Design requirements

Use FOAMGLAS ONE for general pipe, equipment and tank insulation; where sustained compressive loads exceed its capacity (tank bases, load-bearing supports) use a FOAMGLAS HLB grade to the engineer's design. The designer selects thickness for heat loss or gain, surface temperature or condensation control, from the lambda values at mean temperature in the Owens Corning datasheets; Owens Corning can assist with its design polynomials. Above +430 deg C, confirm with Accumen which datasheet applies to the supplied lot. On below-ambient service, design joint sealing and the vapour-retarder finish to Owens Corning's system. Allow for a bore coating where the pipe cycles in temperature, vibrates, or bears on the insulation at supports. On austenitic stainless steel the insulation passes ASTM C795 - keep accessories compatible. Protect from impact and weather with jacketing or cladding. Accumen Technical Services: info@accumen.co.nz.

Installation requirements

Install to Owens Corning's current system recommendations for the service temperature and to the project specification. Complete pressure testing first; surfaces must be clean, dry and free of frost. Store dry, flat and off the ground, protected from weather. Cut with a saw; the material is brittle, so handle it with care. Fit tightly, with staggered joints in multi-layer work; seal joints with the specified FOAMGLAS sealant or adhesive, secure with bands or tape as specified, and apply the specified bore coating, vapour-retarder, coating or jacketing. On tank bases, lay to the engineer's details on a flat, clean bearing surface. Cutting releases 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 - refer to Accumen's NZ SDS. Accumen can fabricate sheets and shapes to size to reduce site cutting.

Maintenance requirements

FOAMGLAS ONE is inert, inorganic glass and needs no routine maintenance once installed and protected. Durability relies on the protective system: inspect jacketing, coatings, cladding and joint sealants annually and after nearby works, and repair damage promptly so that mechanical damage and water are kept out of the system. Replace sections that are cracked, crushed or broken. On cold lines, check that the vapour-retarder finish remains continuous. The insulation is not a trafficable surface unless designed for load (for example a tank base). 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 ONE 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 sheets, sections or shapes 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 recommendations, within the published service conditions. Exclusions: installation workmanship; damage after delivery; use outside the published scope; accessories, coatings or jacketing not specified as part of the system. Terms: info@accumen.co.nz.

Company Product Information

Environmental

FOAMGLAS ONE 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, measured; Euroclass A1 for Belgian production, declared) and asbestos-free. It is inert and insoluble in service, and limits heat loss and gain for the life of the installation. 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 them for reuse where possible, otherwise dispose of them to approved landfill (see the SDS). Owens Corning's EPD for FOAMGLAS (SCS-EPD-10169) covers production in Sedalia, USA only - not the Belgian or Chinese 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:

www.foamglas.com

Contact Number/s:

+64 09-2709228

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Product Technical Statement: 115603

miproducts

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 ONE 450 X 600 X 50 MM" - WITH A PRODUCTION LOT CODE THAT OWENS CORNING TRACES TO THE PLANT (TESSENDERLO, BELGIUM OR YANTAI, CHINA). ITEMS FABRICATED BY ACCUMEN ARE IDENTIFIED ON ACCUMEN DELIVERY DOCUMENTS AND INVOICES BY PRODUCT, 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 it from impact and abrasion; broken edges are sharp. Fire properties apply to the cellular glass only; adhesives, sealants, coatings and jacketing are assessed separately. Not a structural element; under sustained loads the grade and bearing design are by the engineer.

Date last validated: **10 November 2026**

Date last updated: **10 November 2026**

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