

# AccuThermax™ Stonewool Blanket

Product Technical Statement: 115446



Non-combustible rock wool blanket — plain, foil-faced or SS304 wired mat — low chloride, to 750°C

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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



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

Accumen Shapes Ltd

[BPIR Declaration — AccuThermax™ Stonewool Blanket | Rev 1.0 - BPIR Declaration — AccuThermax](#)



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



**masterspec partner**

### Company Contact Details



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## Technical Statement

### Product Class

CLASS 1

### Product Description

AccuThermax™ Stonewool Blanket is a flexible, non-combustible insulation blanket spun from basalt-based rock (stone) mineral wool, supplied plain, foil-faced, or stitched to wire mesh as wired mat with AISI 304 stainless or galvanised steel mesh. It insulates high-temperature pipework, vessels, tanks, ducts, boilers, exhausts and process plant across building services, power generation, dairy and food processing, petrochemical, geothermal and marine applications. The blanket conforms to ASTM C592 Type II and is independently tested by SGS across the full property suite. The base rock wool is non-combustible to AS 1530.1:2024 and ASTM E136, with surface burning indices FSI 0 / SDI 0 (ASTM E84), contributing no fuel to a fire. Maximum use temperature is 650°C at 80 kg/m³ and 750°C at 100 kg/m³ (ASTM C411), proven through 96-hour hot-surface exposure at 649°C with no warping, melting or fibre degradation (ASTM C447). Thermal conductivity is independently measured to ASTM C177: 0.035 W/m·K at 24°C mean through 0.051 at 149°C, with declared values to 350°C. Supplied as a low-chloride grade (leachable chloride 6 µg/g, ASTM C871), it passes the ASTM C795/C692 stress-corrosion drip test over Type 304 stainless steel, suiting stainless pipework and plant in geothermal, dairy and process installations. It is water-repellent (vapour sorption ≤0.4%, ASTM C1104), dimensionally stable at temperature, resistant to fungal growth (ASTM C1338), rot- and vermin-proof, and asbestos-free; fibres are classified IARC Group 3. Stocked in New Zealand as SS304 wired mat at 80 and 100 kg/m³ × 50 mm in 5000 × 600 mm rolls, with densities 50–140 kg/m³ and other thicknesses and facings by enquiry. Technical Data Sheet, BPIR declaration, SDS and independent test reports are available to specifiers and BCAs, with thermal design support from Accumen Shapes Ltd, Auckland.

### Scope of use

AccuThermax™ Stonewool Blanket is intended for the thermal and acoustic insulation of high-temperature building services and industrial plant: large-diameter pipework, valves and fittings, steam lines, flues, boilers and exhausts, vessels and tanks, ducts, plant enclosures and process equipment. Typical sectors include commercial building services, power generation, dairy and food processing, petrochemical, geothermal and marine installations. Wired mat (AISI 304 stainless or galvanised mesh) is the preferred form for high-temperature pipework and plant subject to mechanical load, vibration or external cladding; plain and foil-faced blanket suit ducts, enclosures and acoustic applications. The low-chloride grade (6 µg/g, ASTM C871; passes ASTM C795/C692) is suited to use over austenitic stainless steel. Service temperature limits: 650°C maximum use at 80 kg/m³ and 750°C at 100 kg/m³ (ASTM C411); faced product is limited by the facing service temperature, and facing volatiles may clear on first heat-up above ~200°C. Limitations: the product is not structural and provides no load-bearing function. It is not a fire-rated duct protection system — fire-rated ductwork requires a separately tested and certified system. Not intended for below-ambient or condensation-controlled services without a project-designed vapour-barrier system. Install in accordance with Accumen's published guidance, with weatherproof cladding on external or trafficable installations.

### 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)  
Acceptable Solution B2/AS1 (in-service history of comparable rock mineral wool insulation);  
AccuThermax™ Stonewool Blanket Technical Data Sheet v2, July 2026 — [accumen.co.nz](http://accumen.co.nz).  
Durability period assessed per project accessibility and replaceability.

- **Clause C3 Fire affecting areas beyond the fire source:** Performance C3.4(a)  
Verification Method C/VM2, Appendix A (non-combustible material eligible for Group 1/1-S assignment without further evaluation). Evidence: SGS Test Report SDFTS25004826R02 — AS 1530.1:2024 combustibility, result non-combustible. Original issue: 20 August 2025 (R01); current revision: 21 August 2025 (R02). Verification: check.sgsonline.com.cn. Supplementary: SGS TJIN2411000728CM01-1 (ASTM E136 non-combustible; ASTM E84 FSI 0 / SDI 0), issued 24 October 2025.
- **Clause F2 Hazardous building materials:** Performance F2.3.1  
AccuThermax™ Stonewool Blanket & Board Safety Data Sheet v1.0, July 2026 — accumen.co.nz. Not classified as hazardous (HSNO/GHS); asbestos-free.
- **Clause G6 Airborne and impact sound:** Performance G6.3.1  
AccuThermax™ Stonewool Blanket Technical Data Sheet v2, July 2026 — accumen.co.nz (acoustic absorption contribution, supplementary to G6/AS1 tested constructions).
- **Clause H1 Energy efficiency :** Performance H1.3.4(a), H1.3.6(b)  
Acceptable Solutions H1/AS1, H1/AS2; Verification Methods H1/VM1–VM3 (H1/VM3 covers commercial HVAC pipework insulation). Evidence: SGS Test Report TJIN2411000728CM01-1 — ASTM C592-24 suite incl. apparent thermal conductivity to ASTM C177 (0.035 W/m·K @ 24°C to 0.051 @ 149°C), issued 24 October 2025; SGS XMIN2512002768CM01 — AS/NZS 4859.1:2018 thermal resistance (ASTM C518), issued 17 December 2025. Verification: check.sgsonline.com.cn.

## Notes

AccuThermax™ Stonewool Blanket contributes to the ticked clauses as follows. B2.3.1(b)/(c): inorganic, rot- and vermin-proof mineral fibre; durability period assessed per project accessibility. C3.4(a): non-combustible material to AS 1530.1:2024 and ASTM E136 (independent SGS reports held), FSI 0 / SDI 0 (ASTM E84); contributes no fuel to fire. Not a fire-rated duct protection system. F2.3.1: not classified as hazardous (HSNO/GHS); asbestos-free; fibres IARC Group 3 — refer SDS. G6.3.1: dense fibrous mat contributes acoustic absorption on services, ducts and plant. H1.3.4(b)/H1.3.6(a): limits heat loss from hot water, steam and HVAC distribution; thermal conductivity independently measured to ASTM C177 (0.035 W/m·K at 24°C to 0.051 at 149°C); thickness selected by the designer against the project energy design. Compliance of the installed system rests with the design professional. Test reports available to BCAs and specifiers, complete and unaltered, under written authorisation.

## Evidence

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

AS 1530.1:2024 — Combustibility test for materials: non-combustible (independent SGS test report held), enabling Group 1/1-S assignment under NZBC Verification Method C/VM2, Appendix A. ASTM E136-2024b — non-combustible (SGS); ASTM E84-2024 — FSI 0 / SDI 0 (SGS). ASTM C592-24 (Type II, mineral fiber blanket insulation) — full property suite independently tested by SGS: maximum use temperature and hot-surface performance to ASTM C411-19 / C447-15 (96 h at 649°C); apparent thermal conductivity to ASTM C177-19 (0.035 W/m·K at 24°C to 0.051 at 149°C); density to ASTM C167; shot content to ASTM C1335; water-vapour sorption to ASTM C1104 ( $\leq 0.4\%$ ); linear shrinkage to ASTM C356; fungal resistance to ASTM C1338. AS/NZS 4859.1:2018 — thermal resistance and density determined by SGS to ASTM C518. ASTM C871-18 — leachable chloride 6  $\mu\text{g/g}$ ; ASTM C795-08 / C692-13 — passes stress-corrosion drip test over Type 304 austenitic stainless steel (SGS). Supports NZBC compliance pathways C/VM2, C/AS2, B2/AS1, and H1/AS1, H1/AS2, H1/VM1–VM3. All SGS test reports are held by Accumen Shapes Ltd and available to BCAs and specifiers, complete and unaltered, under the test authority's written authorisation.

## Supporting Evidence

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



Accumen Shapes Ltd

[BPIR Declaration — AccuThermax™ Stonewool Blanket | Rev 1.0 - BPIR Declaration — AccuThermax](#)

## Use in Service History

Rock (stone) mineral wool blanket and wired mat insulation of this class has an extensive international in-service history spanning several decades across power generation, petrochemical, marine, dairy and food processing, and commercial building services — insulating steam lines, boilers, flues, vessels and high-temperature pipework. This is the material basis on which B2/AS1 in-service history assessments for mineral wool insulation rest. The specific product supplied as AccuThermax™ Stonewool Blanket was independently tested by SGS across the full ASTM C592-24 Type II property suite (2024–2026), including 96-hour hot-surface exposure at 649°C with no warping, melting or fibre degradation, stress-corrosion testing over Type 304 stainless steel, and fungal resistance — verifying behaviour consistent with the established performance of the material class. Stocked and supported in New Zealand by Accumen Shapes Ltd, Auckland, with batch traceability maintained on all supply.

## Product Criteria

## Design requirements

Select density by service: 80 kg/m<sup>3</sup> for HVAC ducts, exhausts and general process; 100 kg/m<sup>3</sup> for steam lines, flues, boiler surfaces and higher-temperature plant (maximum use 650°C and 750°C respectively, ASTM C411). Select thickness against the project thermal design (e.g. BS 5422 schedules or the project energy brief) using measured conductivity to ASTM C177 — 0.035 W/m·K at 24°C mean to 0.051 at 149°C — noting conductivity rises with mean temperature. Specify wired mat (AISI 304 stainless or galvanised mesh) for pipework and plant subject to mechanical load, vibration or cladding; plain or foil-faced blanket for ducts, enclosures and acoustic wraps. Over austenitic stainless steel, specify the low-chloride grade (6 µg/g, ASTM C871; passes ASTM C795/C692). Faced product is limited by the facing service temperature. Not structural; not a fire-rated duct protection system. Design support and thickness selections available from Accumen Technical Services from a pipe/equipment schedule.

## Installation requirements

Install with slight pre-stressing so the blanket remains under compression; stagger all joints by at least 30°. Wired mat: lace joints with 0.5–0.7 mm stainless or galvanised tying wire or lacing screws at approximately 8 per metre. Plain blanket: secure with stainless bands at 250–300 mm centres. Apply in two or more staggered layers for thicknesses above 100 mm or service temperatures above 250°C. Over stainless steel where prolonged moisture contact is foreseeable, apply an aluminium-foil sacrificial layer between insulation and the metal surface. Finish external or trafficable installations with a weatherproof metal jacket or approved mastic, with expansion joints on long hot runs. Stage first heat-up at approximately 50°C per hour with ventilation to allow residual binder volatiles to clear. Cut with sharp hand tools where practicable; wear long sleeves, gloves, safety glasses and a P1/P2 dust mask when cutting — refer to the Safety Data Sheet. Store dry, under cover.

## Maintenance requirements

The insulation itself is inert, inorganic, rot- and vermin-proof and requires no active maintenance; achieving the B2 durability period depends on protecting it in service. Inspect insulation, jacketing and joints annually — and after any mechanical works in the area — for damage, displaced cladding, open joints or water ingress; repair promptly. Replace any sections that have been saturated or mechanically damaged; wet insulation must not be left in place over pipework or plant. Maintain the integrity of external weatherproof jacketing and re-seal penetrations after service access. Re-lace or re-band any disturbed wired mat after maintenance access to plant. The product is not a wearing or trafficable surface — protect from foot traffic and impact, and reinstate protection where removed. Durability period per B2.3.1(b)/(c) is assessed against the accessibility and replaceability of the specific installation.

## Warrantees

Accumen Shapes Ltd provides a supply-only (not install) product warranty in respect of AccuThermax™ Stonewool Blanket, ex-factory, limited to the quality of the goods supplied, in addition to the guarantees that apply under the Consumer Guarantees Act 1993 and the implied conditions of the Sale of Goods Act where applicable. The warranty covers product conforming to the published Technical Data Sheet when stored, handled, installed and maintained in accordance with Accumen's published guidance; it does not extend to installation workmanship, to product damaged, saturated or modified after delivery, or to use outside the published scope. Batch traceability is maintained on all supply. Full warranty terms are available at [accumen.co.nz](http://accumen.co.nz) or on request.

## Company Product Information

### Environmental

AccuThermax™ Stonewool Blanket is spun from natural basalt-based rock, an abundant mineral resource, and is chemically inert, stable and insoluble in the environment. It is non-combustible and contributes no fuel to fire. The product is asbestos-free and not classified as hazardous under HSNO/GHS; mineral wool fibres are classified IARC Group 3 (not classifiable as to carcinogenicity to humans) — refer to the Safety Data Sheet. In service, the insulation reduces energy consumption and associated carbon emissions from heated pipework, vessels and plant for the life of the installation, typically repaying its embodied energy many times over. It contains no ozone-depleting substances and uses no blowing agents. Offcuts and end-of-life material are inert, non-putrescible solid waste, disposable as general construction waste to an authorised facility per local council requirements; minimise dust when handling waste.

## Building Product Information Requirements

### Manufacturer

#### *Legal Trading Name:*

Accumen Shapes Ltd

#### *Contact Number/s:*

+64 09-2709228

### Importer

#### *Legal Trading Name:*

Accumen Shapes Ltd

# AccuThermax™ Stonewool Blanket

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**Business Email:**

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**Company Website:**

[www.accumen.co.nz](http://www.accumen.co.nz)

**Contact Number/s:**

+64 09 -2709228

**Product Identifier**

ACCUTHERMAX™ STONEWOOL BLANKET IS A CLASS 1 (BATCH-PRODUCED) BUILDING PRODUCT. PRODUCTS ARE IDENTIFIED BY THEIR PRODUCT LABEL NAME — E.G. "ACCUTHERMAX™ STONEWOOL BLANKET — WIRED MAT, 80 KG/M<sup>3</sup> × 50 MM, SS304" — TOGETHER WITH A BATCH NUMBER AND PRODUCTION DATE CARRIED ON EVERY ROLL LABEL. BATCH NUMBERS ARE RECORDED BY ACCUMEN SHAPES LTD AGAINST EACH SHIPMENT AND PURCHASE ORDER, PROVIDING TRACEABILITY FROM THE DELIVERED ROLL BACK TO THE PRODUCTION BATCH AND ITS SUPPORTING TEST DOCUMENTATION. THE PRODUCT NAME AND BATCH NUMBER APPEAR ON PRODUCT LABELS, DELIVERY DOCUMENTATION AND INVOICES.

**Warnings**

This product has no warnings associated with it.



Date last validated: **28 July 2026**



Date last updated: **28 July 2026**

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