Altus Window Systems Southern41 Thermal System

Product Technical Statement: 113014

miproducts

Southern41 Thermal is a joinery system with a unique thermal break to create a warmer dryer home

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

Altus Window Systems confirms that this minimum level of assurance has been met or exceeded by the following:

MBIE

E2 External Moisture - AS1

BPIR

The following information has been provided by Altus Window Systems demonstrating how this product complies with the Building Product Information Requirements.

masterspec partner

Company Contact Details

altus Window Systems

Company:	Altus Window Systems
Physical Address:	49 Business Parade North East Tamaki AUCKLAND 2013
Postal Address:	PO Box 204123 Highbrook AUCKLAND
Telephone:	64 9 2721700
Email:	architectural@altus.co.nz
Website:	https://www.altus.co.nz/

Technical Statement

Product Class

CLASS 2

Product Description

Southern41™ Thermal is a 41mm residential aluminium joinery system with a unique thermal break built into the frame to improve the insulation of your home, making it ideal for use in any climate.

Modern and sleek flat faced frame profiles are available across all frame types. Flat faced frames seamlessly blend with our other systems, where required.The unique Southern41™ thermal break not only builds on the impressive insulating properties of double glazing, it also delivers incomparable structural strength whilst combining traditional and modern aesthetic options. All to provide you a comfier, healthier home, all year round.

All products within the Southern41™ Thermal range can accommodate double glazed units up to 30mm in width.

Just as double glazing prevents warmth or coldness from escaping through glass, the thermal break in an aluminium frame does the same for your joinery by stopping any heat transfer via the metal. The result is an increased R-value enabling Southern41™Thermal to provide maximum protection against condensation making it easier for you to maintain your home at an optimal ‘healthy home’ minimum temperature of 18º Celsius, not to mention the significant energy savings on offer.The R-value* is a measure of how well a product insulates – the greater the value the greater the insulation properties.

But what is it exactly that makes Southern41™ Thermal different from other thermally broken products available in New Zealand? As they say, the devil is in the detail. Southern41™ thermally broken joinery is made using the ‘Pour and Debridge’ manufacturing method. This involves filling (the ‘Pour’) a channel designed into the aluminium frame with a resin. The back of the channel is then milled out (the ‘Debridge’) to sever the link between the front and the back of the aluminium and create a 5mm thermal break in the frame.

Scope of use

Suitable across multiple market segments up to and including Extra High wind zones. Please consult with Altus for specific design wind zones.

- Standard Residential-Mid Level Architectural homes
- Multi-residential
- Light Commercial Applications
- A&A (Additions and Alterations) e.g. replacement windows

Glazing

Standard 30mm IGU across all products

Windows

- Fixed, awning and casement window types
- Sashes up to 1.8mx0.8m
- Kleenline infill option

Sliding Doors

- Single, double and triple stacker doors
- 2.4m standard height (higher spans may be achievable, consider thermal bowing)

- 1.2m standard width

Hinged, French and Bifold Doors

- 2.4m standard height
- 0.9m max bifold panel width
- Standard, adjustable and parliament hinge options
- Top or bottom rolling bifold gear

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 B1 Structure:** Performance B1.3.1, B1.3.2, B1.3.3, B1.3.4
  NZS4211:2008
- **Clause B2 Durability:** Performance B2.3.1(b)
  When installed in accordance with E2/AS1
- **Clause C4 Movement to place of safety:** Performance C4.5
  Altus Southern41 Thermal System doors can be used within an escape route where relevant considerations are specified in the project requirements.
- **Clause D1 Access routes:** Performance D1.3.1, D1.3.1(b)
  Altus Southern41 Thermal System doors can be used within an access route where relevant considerations are specified in the project requirements.
- **Clause E2 External moisture:** Performance E2.3.2
  Tested in accordance with NZS4211:2008 and installed in accordance with E2/AS1
- **Clause E3 Internal moisture:** Performance E3.3.1
  Compliance with E3/AS1 when installed with IGU's (not requiring condensation channels)
- **Clause F2 Hazardous building materials:** Performance F2.3.1, F2.3.2, F2.3.3
  Altus Southern41 Thermal System is safe when handled in accordance with installation instructions. Southern41 is fabricated to comply with NZS 4223.3:2016 where specified in the project requirements.
- **Clause F4 Safety from falling:** Performance F4.3.1, F4.3.4
  Altus Southern41 Thermal System is fabricated with opening restrictors to comply with F4/AS1 Third Edition Amendment 2, Paragraph 2.0 Opening Windows, where relevant considerations are specified in the project requirements. NZS 4223.3:2016 shall be used to specify glass requirements
- **Clause G4 Ventilation:** Performance G4.3.1, G4.3.3
  Altus Southern41 Thermal System can be fabricated with opening sashes of type and dimensions specified in the project requirements to help provide building ventilation. Ventilation design may comply with G4/AS1 Fourth Edition, Paragraph 1.2 Natural ventilation, or an alternative ventilation system design which utilises opening window sashes and is provided by other parties such as mechanical services engineers could be suitable
- **Clause G7 Natural light:** Performance G7.3.1, G7.3.2
  Altus Southern41 Thermal System can be fabricated with the area and Visible Light Transmittance (VLT) of glazing specified by the project requirements to help provide natural light and awareness of the outside. Glazing design may comply with G7/AS1 Second Edition or G7/AS2 First Edition, or an alternative glazing design provided by other parties such as lighting engineers could be suitable.
- **Clause H1 Energy efficiency :** Performance H1.3.1, H1.3.2E, H1.3.3
  Altus Southern41 Thermal System can be fabricated with IGUs made from a range of possible glass, spacer and infill gas types, to suit the window insulation (R-value) requirements of the project. Depending on the window or door type, dimensions and IGU type, R-values between R0.28 and R0.56 can be provided, determined in accordance with either H1/AS1 Fifth Edition Amendment 1, Table E1.1.1, or with H1/VM1 Fifth Edition Amendment 1, Paragraph E1.

Notes

Note that durability of moving parts e.g. window hardware or door rollers is limited to 5 years durability. All clauses are subject to the building design and any causes for concern must be checked by Altus.

Evidence

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

E2/AS1

E3/AS1

H1/AS1

NZS3604

NZS4211:2008

NZS 4223.3:2016

Altus Window Systems Southern41 Thermal System

Product Technical Statement: 113014

miproducts

Supporting Evidence

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

MBIE
E2 External Moisture - AS1

Product Criteria

Design requirements

Year-round comfort ·

- In winter, it helps to prevent the coldness coming inside – or the warmth escaping - via your windows and doors. It works the same way in summer, by keeping the air cooler inside. So, whatever the weather is doing outside, you'll find it easier to set just the right temperature indoors.

H1 Compliance ·

- Suitable for use in Climate Zones 1,2,3,4,5,6

Reduce condensation

- Even with double-glazing, condensation can still form on joinery and edges of the glass if there's no thermal break. With Southern41™ Thermal, you'll have maximum protection against condensation, for a drier and healthier home.

Energy savings ·

- The R value is the measure of how well a product insulates. By combining your standard clear double glazing with Southern41™ Thermal aluminium framing, you'll increase your windows R value by 35%. (This increases to 108% if your double-glazing has Low-E and Argon gas).

Larger frames ·

- Our framing is built to suit larger windows and doors, making it the ideal product for creating superb indoor-outdoor flow.
- Southern41™ Thermal can be used for windows and doors of larger configurations (e.g doors of up to 2.6m).

Stylish square profile ·

- Southern41™ Thermal framing has a sleek square profile, not rounded, to suit modern architectural aesthetics.

Up to 30mm IGUs ·

- Our frames can accommodate widths of IGU (Insulated Glazing Unit) up to 30mm.

Installation requirements

Specific installation instructions for Altus Windows Systems' innovative products. These details focus on the fixing of the unit. For specific weathertightness details refer back to Part 2, the WGANZ / Altus document. There are 4 pages that represent cavity construction and the methods required for installation of Euroslider / stacker and bifolds into such. The claddings are shown as generic only. There are 8 pages that represent direct fix construction. 4 for thinner cladding types and 4 for thicker cladding types and the methods required for installation of Euroslider / stacker and bifolds into such. The claddings are shown as generic only, in thicker or thinner forms. Download WGANZ Installation Instructions

Maintenance requirements

Instructions on how to use, install and maintain Altus Window Systems joinery are available from Altus or any of its distributors. These instructions must be followed if aluminium joinery is to meet any quality or performance assurance. Regular cleaning is essential if the finish of anodised aluminium is to be preserved over a long period. Cleaning the anodised aluminium should be washed down with warm water and a suitable wetting agent or mild soap solution, in a similar manner to washing a car. View Care and Maintenance Instructions

Company Product Information

Environmental

We are the first aluminium extruder in NZ to have undertaken a Life Cycle Assessment. This is a fair, holistic assessment of raw material production, manufacture, distribution, use and disposal including all intervening transportation steps necessary or caused by the manufacture and distribution of Altus Windows' products and services. The Life Cycle Assessment data allows us to continuously optimise our environmental performance.

Altus has an EPD available for download

https://altus.co.nz/assets/Uploads/Sustainability/Altus-EPD-Windows-and-Doors-Jul23-FINAL.pdf

Quality Assurance

ISO 9001 (Quality Management)

Altus Window Systems Southern41 Thermal System

Product Technical Statement: 113014

miproducts

Relationships

Member of New Zealand Green Building Council

New Zealand Made

Environmental Choice New Zealand

Building Product Information Requirements

Manufacturer

Legal Trading Name:
Altus Window Systems

Business Email:
architectural@altus.co.nz

Company Website:
https://www.altus.co.nz/

Contact Number/s:
+64 9-2721700
0800 4ALTUS

Product Identifier

HTTPS://ALTUS.CO.NZ/ASSETS/UPLOADS/DOCUMENTS/BPIR/ALTUS-BPIR-SOUTHERN41-THERMAL.PDF

Warnings

This product has no warnings associated with it.

Date last validated: **20 August 2024**

Date last updated: **20 August 2024**