

## PRODUCT TECHNICAL STATEMENT

### saveBOARD – ROOFBOARD Version June 2023 V1:2

**Product Description** saveBOARD roofBOARD is a unique structural composite panel made from 100% recycled materials.

The core of the product is made from shredded and compressed composite packaging.

saveBOARD does not use glues, resins or other such biological or environmentally harmful products. During construction, or in-service use saveBOARD does not create harmful dust, vapours, or other potentially harmful Volatile Organic Compounds (VOC's).

roofBOARD is designed for use with timber or steel framing and is finished with a moisture-resistant fibreglass facer on one side and a recycled paper facing on the internal side<sup>1</sup>.

roofBOARD is manufactured in New Zealand for exclusive use in New Zealand & Australia. Please refer to the saveBOARD Product Assurance Supplier Statement for compliance with relevant performance clauses of New Zealand & Australian Building Codes/Permits.

Panel sizes are as follows:

- 2400 mm x 1200 mm x 10 mm
- 2700 mm x 1200 mm x 10 mm
- 3000 mm x 1200 mm x 10 mm
  
- 2400 mm x 1200 mm x 12 mm
- 2700 mm x 1200 mm x 12 mm
- 3000 mm x 1200 mm x 12 mm

saveBOARD roofBOARD has been manufactured and tested by independent testing laboratories in the United States (US) and has demonstrated compliance with International Building Code requirements as a roofing substrate or cover board in New Zealand (NZ) and Australia (Aus), the US test certification and data has been independently evaluated for compliance with the NZ Building Code by Oculus Architectural Engineering Ltd.

To support Oculus independent assessment additional compliance testing has been carried out by SCION laboratories to verify compliance with NZ Building Code

\*(Please refer to [www.saveBOARD.nz](http://www.saveBOARD.nz) for current test certification).

### Scope of Use

The **Oculus Engineering NZBC Compliance Statement – Aug 2021** currently supports the use of saveBOARD for the following application.

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<sup>1</sup> Boards can be made available with fibreglass facers to both sides.

### **EXTERNAL WARMROOF SUBSTRATE:**

For use as an exterior roof vapour control layer /warm roof substrate where the roof is externally insulated<sup>2</sup> and is part of an NZBC E2 compliant roof system and installed in accordance with the saveBOARD Installation Guide.

*Warm Roof: A warm roof system has a continuous layer of insulation on the exterior side of the structure.*

### **WARMROOF SUBSTRATE:**

saveBOARD roofBOARD is suitable for use as a Warm Roof substrate for all roof applications when all of the following conditions are met;

- 1) roofBOARD is used only as part of an externally insulated roof system
- 2) roofBOARD is used as part of an NZBC E2/B2 compliant roof system.
- 3) roofBOARD is installed in accordance with the current roofBOARD Installation Guide.

roofBOARD is suitable for use as a warm roof substrate subject to loading and spans conditions detailed in the roofBOARD Installation Guide. saveBOARD roofBOARD may be used as a roof diaphragm in bracing applications subject to specific engineering design and detailing.

The durability of saveBOARD roofBOARD used as a roof substrate is subject to the requirements of the Oculus Engineering NZBC Compliance Statement – Aug 2021 in accordance with NZBC Clause B2 Durability.

### **Limitations / Disclaimer**

saveBOARD roofBOARD is limited to use as part of a WARM ROOF element only. Externally insulated. Please Note: External insulation refers to >70% of the primary thermal resisting element located on the external surface of the roofBOARD.

roofBOARD does not support the use of its products on roof structures with insulation installed only in between the primary structure framing.

Always refer to the roofing system/membrane supplier's information for compatibility with roofBOARD and surface preparation requirements for specific roofing products.

Please refer to the current "saveBOARD Installation Guide for information, limitations, and requirements for the storage, handling, installation, usage, and maintenance of saveBOARD roofBOARD.

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<sup>2</sup> Externally insulated: A continuous layer of insulation on the exterior side of the primary structure.

<b>Compliance with the New Zealand Building Code</b>	saveBOARD roofBOARD specified as a WARM ROOF substrate and installed in accordance with roofBOARD Installation Guide, contributes to meeting the following provisions of the NZ Building Code:
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**B1 Structure**

**Clause B1 Structure: Performance B1.3.1, B1.3.2, B1.3.3(a,c,g,h,q), B1.3.4(d)**

saveBOARD roofBOARD has demonstrated appropriate structural properties through independent analysis. Please refer to the Oculus Engineering NZBC Compliance Statement and Scion test results (August 2021).

\*(Please refer to [www.saveBOARD.nz](http://www.saveBOARD.nz) for current test certification)

The product has been assessed as an: ALTERNATIVE SOLUTION – Equivalent to (verification method B1/VM1). Material structural performance parameters are established through the Oculus Engineering NZBC Compliance Statement and Scion test results (August 2021).

**B2 Durability**

**Clause B2 Durability: Performance B2.3.1(a)**

saveBOARD roofBOARD is manufactured to meet the requirements of the NZBC Clause B2 Durability.

The product has been assessed as an: ALTERNATIVE SOLUTION – Equivalent to (Acceptable Solution B2/AS1, 3.2.1). Compliance has been verified through analysis of US compliance testing; supported by an independent verification for use in NZ by Oculus Architectural Engineering, and Independent Laboratory testing by SCION.

If saveBOARD is appropriately stored and used in accordance with good building practices and the roofboard Installation Guide, it will comply with the requirements of the NZBC B2.

roofBOARD achieves NZBC B2 Durability requirements as part of a combined system reliant upon other building products.

**C3 Fire affecting areas beyond the fire source**

**Clause C3 Fire: Performance**

saveBOARD roofBOARD is manufactured to meet the requirements of the NZBC Clause C3.4 Fire.

The product has been assessed as an: ALTERNATIVE SOLUTION – Equivalent to (Acceptable Solution CVM2/AS1, 3.2.1). Compliance has been verified through US compliance testing.

NOTE: Under the current evaluated New Zealand scope of use SaveBOARD does not support the use of roofBOARD as a building product roof element to comply with the requirements of the NZBC C3.4 (Fire Spread).

Designers wishing to use roofBOARD for roof fire spread use must undertake further independent verification before specifying/construction.

**Clause C3 Fire - Spread of flame Group Number**

saveBOARD has been tested and independently verified as **Material Group Number 3** in accordance with AS/NZ 3837:1998. Compliance has been verified through US and NZ compliance testing supported by an independent verification for use in NZ by Oculus Architectural Engineering.

As a Warm Roof substrate saveBOARD roofBOARD meets the flashover criteria of the performance requirement of Clause. C3.4 (a).

**E2 External moisture**

**Clause E2 External Moisture: Performance E2.3.1, E2.3.2, E2.3.5, E2.3.7**

saveBOARD roofBOARD when used as part of a WARMROOF structure as a roofing substrate combined with a compliant roof membrane or metal tray deck and underlay roof system, will meet the performance requirements of E2.3.1, E2.3.2 E2.3.5 and E2.3.7.

**F2 Hazardous building materials**

**Clause F2 Hazardous Building Materials: F2.3.1**

saveBOARD roofBOARD meets the requirement of NZBC F2 and the performance requirement of F2.3.1. No harmful chemical treatment is used in the manufacturing process. It does not present a health hazard to people (during construction and building use). No harmful dust or gases are released.

**H1 Energy efficiency**

**Clause H1 Energy Efficiency: H1.3.3.1**

saveBOARD roofBOARD when used as part of a WARMROOF structure as the roofing substrate combined with a compliant roof membrane and insulation system, will meet the performance requirements of H1.3.1, H1.3.2 and H1.3.3.

saveBOARD Properties		
Thickness	10mm	12mm
Width, Standard	1200mm (1220mm special)	1200mm (1220mm special)
Length, Standard	2400mm (Up to 3000mm special)	2400mm (Up to 3000mm special)
Pieces Per Pallet	35	30
Weight, Nominal kg/m3	850	850
Weight, Nominal kg/m2	8.5	10.3

Compressive Strength ASTM D2394	3990 psi
Fire- Resistance UL 790 – ASTM E108	Class A
Fire Group Number – AS3837	3
Flute Span ability ASTM E661	17"
Mould Resistance – ASTM D3273	10
VOC Emissions - ASTM D5116	<0.003 mg/m2/hr
Formaldehyde Emission ASTM D5116	<0.013 mg/m2/hr
Permeability – ASTM E96	12.5
Fastener Pull-Resistance	525 lbf
Wind Uplift Resistance – FM 4471	FM 1-90
Water Absorption (Immersion) % Max – ASTM C473	3.9
Water Absorption (Surface) % Max – ASTM C473	2.8

**Quality Assurance**

saveBOARD's Quality Assurance process and records are independently audited by a third-party product appraisal organisation.

The Third-party organisation have demonstrated/accredited knowledge of the Building Code and building science, and carry out appropriate sample analysis and reporting on;

- Regular inspections, testing and monitoring of properties to ensure the product conforms during manufacturing.
- Periodic inspections, observations to ensure the product continues to meet the performance requirements when in use.

**Sustainability**

No raw materials are extracted to use in the manufacture of saveBOARD product. All saveBOARD product is manufactured in New Zealand or Australia from 100% locally sourced and recycled composite packaging

Every panel of roofBOARD will divert approximately 25kgs of waste from landfill

No water, glues, resins or additives are used in the production process.

The embodied carbon (calculated Cradle to Gate)of roofBOARD .85Mj/kg, 0.11kgCO2/kg material

roofboard has a DECLARE label and is deemed suitable for use in Living Building Challenge

Product Stewart Program- site off cuts can be returned to saveBOARD to be reused in the manufacture of new product

End of Life - saveBOARD product can be returned at End of Life to be reused in the manufacture of new product

VOC and formaldehyde free. No toxic or harmful dust or vapours are created during installation of saveBOARD products

saveBOARD is a member of the NZGBC

**Installation Requirements**

saveBOARD roofBOARD used as a WARMROOF roofing substrate must be installed in accordance the NZBC saveBOARD roofBOARD Installation Guide or details provided by a Licensed Building Practitioner.

Always refer to the roofing system/membrane supplier for installation, substrate selection and surface preparation requirements for specific roofing products.

**Installation information**

The installation guide can be found on the saveBOARD website [www.saveboard.nz](http://www.saveboard.nz) & [www.saveboard.com.au](http://www.saveboard.com.au)

**Service Life**

saveBOARD roofBOARD will continue to satisfy the relevant performance requirements of the NZBC for 50 years if all the requirements set out in this Product Technical Statement and the specific design parameters of the project are met.

**Maintenance Requirements**

If the membrane or metal roof product is properly maintained and inspected saveBOARD roofBOARD will not normally require maintenance as the substrate of a roofing system.

**Product Support**

All documents relating to compliance, case studies, specification, installation, maintenance and warranty can be found on the website [www.saveboard.nz](http://www.saveboard.nz)

saveBOARD has technical experts available to assist with any product enquiries. You can contact the team via the contact details on the website.

**Legal Disclaimer**

The information contained in this document is current as of June 2023 and is based on data available at the time of going to print. saveBOARD reserves the right to change the information contained in this document without prior notice. It is your responsibility to ensure that you have the most up to date information available. You can contact the team via the contact details on the website.

saveBOARD has used all reasonable endeavours to ensure the accuracy and reliability of the information contained in this document. However, to the maximum extent permitted by law, saveBOARD assumes no responsibility or liability for any inaccuracies, omissions, or errors in this information nor for any actions taken in reliance on this information.