



PCC-194120-NZ

Product Compliance Certificate



EXPIRES 28 Feb 2024

The MSA One Roofing System



Product

1.1 The product is "a stainless steel (grade 316) one-piece roof membrane" utilizing a fully-welded standing seam method to ensure long-term weathertightness.

1.2 The MSANZ system is to be constructed only by persons trained and approved by MSANZ or their authorised agents in conformance with the MSANZ Building Product Quality Plan and site checklists.

Product Compliance Certificates

2.1 Product Compliance Certificates are issued subject to the BEAL Product Compliance Scheme Rules.

2.2 The BEAL Product Compliance Scheme Rules are based on conformance with:

- ISO/IEC 17067: 2013 - Conformity assessment - Fundamentals of product certification and guidelines for product certification schemes;
- ISO/IEC 17065: 2012 - Conformity assessment - Requirements for bodies certifying products, processes and services;
- ISO/IEC 19011: 2018 - Guidelines for auditing management systems;
- ISO/IEC 17021: 2015 - Conformity assessment - Requirements for bodies providing audit and certification of management systems - Part 1;
- ISO/IEC 9001: 2015 - Quality Management Systems;
- ISO/IEC 10005: 2018 - Quality management - Guidelines for quality plans;
- ISO/IEC 10015: 2013 - Quality management - Guidelines for competence management and people development

Certification

3.1 Subject to the conditions described in this Product Compliance Certificate, MSA One Roofing System will comply with the relevant performance requirements of the New Zealand Building Code.

Authorised Signatory:

Dated:

Applicant:

MSANZ Ltd.

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Warkworth, Auckland 0981.
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Appraiser:



BEAL

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MSA

The most up to date version of this BEAL Product Compliance Certificate can be viewed at www.beal.co.nz

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Standing seam metal roofing is defined as a concealed fastener metal panel system that features vertical legs and a broad, flat area between the two legs. It's also described as having raised seams, or vertical legs, that rise above the level of the panel's flat area. Standing seam systems have fasteners that are hidden, whether the panel is attached to the roof deck using a clip or is directly fastened to the deck under the vertical leg utilizing a fastener flange. The standing seam is considered a higher quality system that is commonly used on architectural and commercial buildings.

Performance Clauses

4.1 The MSA One Roofing System, when designed, constructed and maintained in accordance with the manufacturer's technical literature, will comply with: Performance Clause B1.3.3 (g) (h) & (m); refer Para 9.1 Performance Clauses B2.3.1 (b) and B2.3.2; refer Para 9.2

Performance Clause E2.3.2; refer Para 9.3

Performance Clause F2.3.1; refer Para 9.4

Performance Clause H1.3.1; refer Para 9.5

Compliance with other clauses fall outside the scope of this certificate.

4.2 The MSA One Roofing System has been appraised as an Alternative Solution in terms of the Building Act 2004.

Scope and Limitations

5.1 The MSA One Roofing System is to be constructed in an external environment above ground, with a (seismic) locality factor (Z) of up to 0.42 (Upper Hutt), in a temperate climate;

5.2 The MSA ONE Roofing System is suitable where the maximum wind zone is determined to be equal to or less than 'high' (47m/s) or where a specific design is employed;

5.3 The MSA ONE Roofing system is limited to use in residential housing including Class 1 and Class 2 type construction. i.e. stand-alone houses and multi-apartment dwellings;

5.4 The system shall be installed in accordance with the manufacturer's technical and quality literature and supervised by those trained by MASNZ Limited.

5.5 The PCC certificate shall be revalidated annually from the date of issuance.

Technical Literature

6.1 The MSA One Roofing System Technical & Installation Manual ver 1, available from the applicant's and BEAL's website, must be read in conjunction with this Product Compliance Certificate.

6.2 All aspects of design, use, installation and maintenance contained within the technical literature and scope of this Product Compliance Certificate must be followed.

6.3 For a copy of this manual and any subsequent updates please refer to www.msanzt.co.nz

Technical Details

7.1 Materials supplied by MSANZ Limited are as follows:
A stainless steel (grade 316) one-piece roof membrane incorporating Top Caps, Gutters, Parapets,

Soffits, Downpipes, Overflow Pipes, Purlins, Parapet Supporting Frames and Rails, Silicon Rubber Pads and Thermal Breaks, Fixing Brackets and Screws.

7.2 Materials include:

⇒ 316 Stainless Steel Roofing (incl Roof, Gutters, Parapets, Soffits)

⇒ 316 Stainless Steel Purlins

⇒ 316 Stainless Steel Brackets and Screws

⇒ Silicon Rubber PADS

⇒ Mild Steel Parapet Supporting Frames (with TEK Screws)

Advice for designers

8.1 The MSA ONE Roofing System comprises a complete roofing system (flat roofs) encompassing single and multiple roof modules.

8.2 Designers are directed to the MSA One Roofing System Technical & Installation Manual which contains comprehensive details and drawings, available from the MSANZ web site www.msanzt.co.nz

Clause B1 - Structure

9.1 The MSA ONE Roofing System, when designed and constructed in accordance with the MSA ONE Roofing System Technical & Installation Manual, will meet the performance requirement of Clause B1

Clause B2 - Durability

9.2 The MSA ONE Roofing System, when subjected to normal conditions of environment and use, is expected to have a serviceable life of at least 15 years.

Clause E2 - External Moisture

9.3 The MSA ONE Roofing System, utilizing a fully-welded standing seam method of the roof panels, will meet the performance requirement of clause E2.

Note that all welds are inspected with random selection testing. The roofs undergo a flood test when installed. Any manufacturing error is remedied when found.

Clause F2 - Hazardous Materials

9.4 No materials are used that are hazardous to occupants or users of buildings constructed from the MSA ONE Roofing System.

Clause H1 - Energy Efficiency

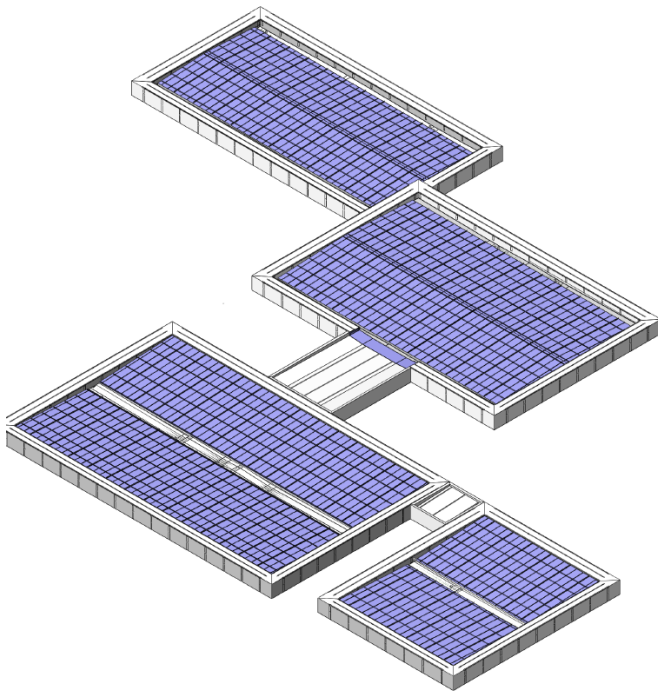
9.5 Use of thermal breaks in the form of Silicon Rubber Pads, allows the constructed product to contribute to and the completed building meeting the required "building performance index".

Installation Requirements

10.1 Construction using the MSA ONE Roofing System must be completed by persons who have been trained and approved by either MSANZ Ltd. or their authorised agents.

10.2 Design of a MSA ONE Roof System shall be in accordance with the Technical & Installation Manual. Any variation shall be subject to specific design and outside the scope of the this Product Compliance Certificate.

7.3 All construction work on site shall be subject to the requirements set out in the MSANZ Limited Building Product Quality Plan and accompanying Site Checklists, which shall be completed as work progresses, as required.



MODULAR AND SINGULAR ROOFING SYSTEM

Basis of this Product Compliance Certificate

BEAL use the *compliance verification procedure* to assess compliance with the relevant performance clauses of the NZBC, based on a risk assessment procedure. The following is a summary of the technical investigations carried out by BEAL:

Tests to verify compliance

- 8.1 The following testing of the MSA ONE Optical Composite Sheets has been undertaken by BEAL to verify compliance:
- ⇒ Clause B1 - Structural engineering report and calculations from ENSTRUCT, dated August 2019;
 - ⇒ Clause B2 - Reliance on 'Technical Guide to Stainless Steel Roofing from the European Stainless-Steel Development Association, not dated, together with a peer review from C Prouse (building scientist) dated 2 March 2020;
 - ⇒ Clause E2 - A weathertightness assessment from C Prouse, dated 2 March 2020;
 - ⇒ Clause F2 - A hazardous material assessment from C Prouse dated 2 March 2020.
 - ⇒ Clause H1 -
 - ⇒ For 'ease of construction' - report to be supplied.

Other assessment work

- 8.2 Other assessments include:
- ⇒ The technical and quality literature has been examined by BEAL and found to be satisfactory.
 - ⇒ Ease of repair or maintenance

Quality Control

9.1 The manufacture of the MSA ONE Roof System is covered by the MSANZ Limited Building Product Quality Plan, which has been assessed by BEAL and found to be satisfactory.

9.2 MSANZ Limited Building Product Quality Plan is reviewed and audited at least annually by BEAL.

9.3 Building owners and designers are responsible for the suitability of the supporting walls.

9.4 Building owners are responsible for the maintenance of the MSA Roof in accordance with the instructions of the manufacturer and this Product Compliance Certificate.

Sources of Information

9.5 The following sources of information were referred to:

- ⇒ AS/NZS 1170:2011 Structural design actions
- ⇒ AS 3566:1998 Self drilling screws for the building and construction industries.
- ⇒ AS/NZS 4859.1:2002 Materials for the thermal insulation of buildings
- ⇒ The Building Regulations 1992, up to, and including 2012 Amendments
- ⇒ Structural engineering report and calculations from ENSTRUCT
- ⇒ Technical Guide to Stainless Steel Roofing from the European Stainless-Steel Development Association
- ⇒ Thermal calculations provided by

Concluding statement

10.1 In the opinion of BEAL, based on in-service history of the materials incorporated into the MSA ONE Roofing System, the product is fit for purpose and will comply with the New Zealand Building Code to the extent described in the scope of use and limitation statement provided and that it is used, designed, installed and maintained as set out in this Product Compliance Certificate.

10.2 The Product Compliance Certificate is issued only to MSANZ Limited and is valid until the expiry date, subject to the conditions of this Product Compliance Certificate.

Conditions of this Product Compliance Certificate

11.1 This Product Compliance Certificate :

- a) Relates only to the MSA ONE Roofing System as described herein;
- b) Must be read, considered and used in full, together with the current version of the Technical and Quality Literature
- c) Does not address any legislation, regulations, codes or standards, not specifically named herein;
- d) Is copyright of BEAL and subject to BEAL's terms and conditions;

11.2 This Product Compliance Certificate is issued pursuant to conformance to the BEAL Product Compliance Certificate Scheme Rules - available on request;

11.3 The certificate-holder continues to meet the quality requirements of the MSANZ Limited Building Product Quality Plan and has the plan audited and Product Compliance Certificate revalidated by BEAL on an annual basis.

11.4 MSANZ Limited shall notify BEAL and obtain approval of any changes of the product specification or quality assurance prior to product being marketed including any trade literature, web site info or the like.

11.5 BEAL makes no representation as to:

- a) The nature of individual examples of, batches of, or individual installations of the product, including methods and workmanship;
- b) The presence or absence of any patent or similar rights subsisting in the product or any other product;
- c) Any guarantee or warranty offered by the Product Compliance Certificate holder.

11.6 BEAL's verification of the building product or system complying with one or more of the above-mentioned criteria is given on the basis that the criteria used were those that were appropriate to demonstrate compliance with the Building Code of Australia at the date of this Product Compliance Certificate. In the event that the criteria is withdrawn or amended at a later date, this Product Compliance may no longer remain valid.

11.7 Any reference in this Product Compliance Certificate to any other publication shall be read as a reference to the version of publication specified in this Product Compliance Certificate.

Authorised Signatory



C R Prouse - Director

BEAL (Building Element Assessment Laboratory Limited)

[March 2021]

