



BRANZ Appraised
Appraisal No. 1257 [2023]

**DECKORATORS®
VOYAGE DECKING**

Appraisal No. 1257 [2023]
Amended 18 January 2024



BRANZ Appraisals

Technical Assessments of products for building and construction.



Eovations LLC

5 Meadowcraft Parkway
Selma
Alabama
United States of America
Tel: 00 334 872 1580
Web: www.deckorators.com



BRANZ

1222 Moonshine Rd,
RD1, Porirua 5381
Private Bag 50 908
Porirua 5240,
New Zealand
Tel: 04 237 1170
branz.co.nz



Product

- 1.1 Deckorators® Voyage Decking using Surestone™ Technology is a mineral-based composite decking for timber-framed decks.

Scope

- 2.1 Deckorators® Voyage Decking has been appraised for use as an alternative exterior decking material for decks designed and constructed in accordance with NZS 3604.
- 2.2 Deckorators® Voyage Decking has also been appraised as exterior decking when used on decks subject to specific engineering design.

Building Regulations

New Zealand Building Code (NZBC)

- 3.1 In the opinion of BRANZ, Deckorators® Voyage Decking, if designed, used, installed and maintained in accordance with the statements and conditions of this Appraisal, will meet or contribute to meeting the following provisions of the NZBC:

Clause B1 STRUCTURE: Performance B1.3.1, B1.3.2, and B1.3.4. Deckorators® Voyage Decking meets the requirements for loads arising from self-weight, imposed loads, and impact [i.e. B1.3.3 (a), (b), (j)]. See Paragraphs 8.1-8.2.

Clause B2 DURABILITY: Performance B2.3.1 (b) 15 years. Deckorators® Voyage Decking meets this requirement. See Paragraph 9.1.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. Deckorators® Voyage Decking meets this requirement.



Technical Specification

General

- 4.1 Deckorators® Voyage Decking comprises of co-extruded proprietary inorganic [mineral] fillers, a virgin/regrind polypropylene core and a thin polypropylene cap. The decking is available in various board widths and lengths as listed in Table 1. All boards are 22 mm thick and are available with either a grooved edge for concealing fixing or with a solid edge. The decking is available in six colours: Khaya, Mesa, Sedona, Costa, Sierra and Tundra. The upper surface has a simulated exposed grain texture. The bottom surface is printed with the manufacturer's name and batch codes.

Table 1: Available board sizes and edge profile

Board width [mm]	Board length [mm]	Edge profile
89	4,877	Grooved or solid
140	3,657	Grooved or solid
184	6,096	Grooved or solid
235	6,096	Grooved or solid

Accessories

- 4.2 Accessories used with the decking which are supplied by Eovations LLC are:
- Deckorators® Stowaway™ Hidden Fasteners – a black concealed fixing clip with a pre-inserted black stainless-steel screw 42 mm long x 7 g.
 - Decking fixings for solid edge boards – Starborn® Pro Plug® System 63 mm x 8 g star drive, 316 stainless steel deck screws.

Handling and Storage

- 5.1 Deckorators® Voyage Decking must be transported and stacked flat. The decking must be well supported with 8-10 supports along the length of the stack. When stored, they must be off the ground and sheltered from direct sunlight.

Technical Literature

- 6.1 This Appraisal must be read in conjunction with:
- Deckorators® Surestone™ Technology Installation Guide, dated November 2023.
- 6.2 All aspects of design, use, installation and maintenance contained in the Technical Literature and within the scope of this Appraisal must be followed.

Design Information

General

Deck Planning

- 7.1 Deckorators® Voyage Decking can be installed conventionally, diagonally or with a 'picture frame' design to encase the decking. Instead of staggering the decking joints through the deck, a breaker board should be installed at right angles. On very large decks, multiple breaker boards can be installed as required. Additional timber must be planned and allowed for in the framing to support the breaker boards. Advice regarding the design and installation of decks can be obtained from Eovations LLC.

Fixing

- 7.2 Deckorators® Voyage Decking can be installed conventionally with face fixings (two screws per joist). Alternatively, boards with the grooved edge profile can be installed using Deckorators® Stowaway™ Hidden Fasteners. The boards are end butt-jointed on joists.

Clearances

- 7.3 Deckorators® Voyage Decking does not have a minimum clearance distance from the ground or other substrates such as waterproof membrane decks and balconies. Attention should however be made to any clearances required for the support framing or substrate.

Timber Framing

- 7.4 Deckorators® Voyage Decking is designed to be laid over conventional timber deck framing consisting of bearers and joists. Joists must be maximum 400 mm centres for residential installations when the decking is laid at right angles to the joists. In commercial applications and when laid diagonally in residential applications, joists must be at 300 mm centres.
- 7.5 Construction of the deck framing must be in accordance with NZS 3604 or to a specific engineering design using NZS 3603 and AS/NZS 1170. Timber framing must be treated as required by NZBC Acceptable Solution B2/AS1.
- 7.6 Decking must not overhang the support framing at ends of a deck by more than 25 mm.

Structure

- 8.1 All thicknesses of Deckorators® Voyage Decking are suitable for use on decks designed for 2 kPa floor loads as required by NZS 3604, Paragraph 7.4.1.2.
- 8.2 Deckorators® Voyage Decking can be used on specifically engineered decks with a maximum serviceability live load of 4.79 kPa, provided the deck span does not exceed the fixing centres as specified in Paragraph 7.4 and the decking is continuous over a minimum of two spans.
- 8.3 Deckorators® Voyage Decking has adequate resistance to both imposed and impact loads likely to be encountered in normal residential use. As with timber decking alternatives, some denting or scratching could occur. The likelihood of impact damage to the material if used in public access areas should be considered at the design stage.

Durability

Serviceable Life

- 9.1 Deckorators® Voyage Decking can be expected to have a serviceable life in excess of 15 years, comparable to timber decking. Minor loss of colour can be expected during stabilisation over the first few months, and some further loss of colour is to be expected over time due to exposure to weathering.

Maintenance

- 10.1 Regular cleaning [at least annually] of the Deckorators® Voyage Decking surface is recommended to remove grime, dirt, and any organic material, and to maximise the life and appearance of the surface finish. Build-up of residue, mould or dirt can be removed by brushing with a soft brush, warm water, and sugar soap. Abrasive cleaners, thinners, solvents or petrol must not be used. Stains from BBQ grease, oil, or tannin in some vegetation, can be removed with a degreaser following the manufacturer's instructions.
- 10.2 As with timber decking, mould or mildew can develop if damp leaves are allowed to collect over a period of time. Advice from Eovations LLC should be sought regarding the best method of treatment if this should occur.
- 10.3 The dragging of heavy objects across Deckorators® Voyage Decking should be avoided as this will risk scratching the surface.

Prevention of Fire Occurring

- 11.1 Separation or protection must be provided to Deckorators® Voyage Decking from heat sources such as fireplaces, heating appliances, flues and chimneys. Part 7 of NZBC Verification Method C/VM1 and Acceptable Solution C/AS1, and NZBC Acceptable Solution C/AS2 provide methods for separation and protection of combustible materials from heat sources.

Access Routes

- 12.1 Deckorators® Voyage Decking without applied coatings has been tested to AS 4586 Appendix A. The decking achieved a wet SRV classification of 35 using the Slider 96 rubber. Deckorators® Voyage Decking may not be used for level access routes expected to become wet with water in normal use except as permitted in NZBC Acceptable Solution D1/AS1 Paragraph 2.1.2.

Installation Information

Installation Skill Level Requirement

- 13.1 All design and building work must be carried out in accordance with the Technical Literature and this Appraisal by competent and experienced tradespersons conversant with Deckorators® Voyage Decking. Where the work involves Restricted Building Work (RBW) this must be completed by, or under the supervision of, a Licensed Building Practitioner (LBP) with the relevant License Class.

Installation

- 14.1 Specific installation instructions supplied with the Deckorators® Voyage Decking regarding deck design, laying and fixing must be followed when installing the product. The quality of a finished deck will be dependent on the skill and experience of the installer.
- 14.2 Deckorators® Voyage Decking may be cut on-site by hand saw, power saw with a fine-toothed blade, jig-saw or router. Holes and cut-outs may be formed by using a hole-saw or router.
- 14.3 The decking must be fixed at every joist with either a Deckorators® Stowaway™ Hidden Fastener and the stainless steel screws supplied, or face-fixed with a pair of Starborn® 63 mm x 8 g stainless steel deck screws
- 14.4 Where required, such as on edge boards and breaker boards, the decking may be fixed through the face with Starborn® 63 mm x 8 g stainless steel deck screws.

Expansion Allowance

- 14.5 Decking should be laid out in the same area where they will be installed. This will allow the decking to all reach a similar ambient temperature and degree of expansion before being cut to length and fixed in place. Refer to the Technical Literature for recommended gaps.

Health and Safety

- 15.1 There are no special health and safety requirements, though normal care should be taken when cutting deck components.

Basis of Appraisal

The following is a summary of the technical investigations carried out:

Tests

- 16.1 Accelerated weathering testing has been completed by BRANZ following test method ASTM G155. Results for this testing were satisfactory.
- 16.2 The slip resistance of Deckorators® Voyage Decking has been tested to AS 4586 Appendix A using the Slider 96 rubber.

Other Investigations

- 17.1 An assessment was made of the durability of Deckorators® Voyage Decking and an opinion has been provided by BRANZ technical experts.
- 17.2 Load testing following ultraviolet (UV) exposure was carried out to establish sufficient span and load capacity.
- 17.3 Site inspections have been carried out by BRANZ to assess the practicability of installation and to examine completed installations.
- 17.4 The Technical Literature for Deckorators® Voyage Decking has been assessed by BRANZ and found to be satisfactory.



Quality

- 18.1 The manufacture of Deckorators® Voyage Decking has not been examined by BRANZ, but details regarding the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory. Note has been taken of CCMC certification covering quality aspects associated with the product.
- 18.2 The quality of materials, components, and accessories supplied by Deckorators® Voyage Decking is the responsibility of Eovations LLC.
- 18.3 The quality of installation on-site of components and accessories supplied by Eovations LLC is the responsibility of the deck installer.
- 18.4 Designers are responsible for the building design, and deck installers are responsible for the quality of installation of deck support framing and deck components.
- 18.5 Building owners are responsible for the maintenance of Deckorators® Voyage Decking in accordance with the advice of Eovations LLC.

Sources of Information

- AS 4586:2013 Slip resistance classification of new pedestrian surface materials.
- AS/NZS 1170:2002 Structural design actions.
- NZS 3603:1993 Timber structures standard.
- NZS 3604:2011 Timber-framed buildings.
- Ministry of Business, Innovation and Employment Record of amendments - Acceptable Solutions, Verification Methods and handbooks.
- The Building Regulations 1992.

Amendments

Amendment No. 1, dated 18 January 2024

The Appraisal has been amended to update the clearance statements in Paragraph 7.3.



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07 December 2023

DECKORATORS® VOYAGE
DECKING



BRANZ

In the opinion of BRANZ, **Deckorators® Voyage Decking** is fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided it is used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to **Eovations LLC**, and is valid until further notice, subject to the Conditions of Appraisal.

Conditions of Appraisal

1. This Appraisal:
 - a) relates only to the product as described herein;
 - b) must be read, considered and used in full together with the Technical Literature;
 - c) does not address any Legislation, Regulations, Codes or Standards, not specifically named herein;
 - d) is copyright of BRANZ.
2. **Eovations LLC**:
 - a) continues to have the product reviewed by BRANZ;
 - b) shall notify BRANZ of any changes in product specification or quality assurance measures prior to the product being marketed;
 - c) abides by the BRANZ Appraisals Services Terms and Conditions;
 - d) warrants that the product and the manufacturing process for the product are maintained at or above the standards, levels and quality assessed and found satisfactory by BRANZ pursuant to BRANZ's Appraisal of the product.
3. BRANZ makes no representation or warranty 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 **Eovations LLC**.
4. Any reference in this Appraisal to any other publication shall be read as a reference to the version of the publication specified in this Appraisal.
5. BRANZ provides no certification, guarantee, indemnity or warranty, to **Eovations LLC** or any third party.

For BRANZ

Claire Falck

Chief Executive

Date of Issue:

07 December 2023