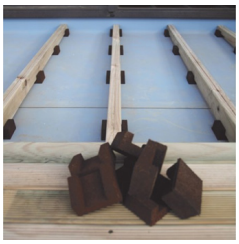
BRANZ Appraised
Appraisal No. 960 [2022]

DEKCRADLE™ AND ERGOFLOR™ TIMBER FRAMING CRADLES



Appraisal No. 960 (2022)

This Appraisal replaces BRANZ Appraisal No. 960 (2017)

Amended 14 October 2025

BRANZ Appraisals

Technical Assessments of products for building and construction.

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Product

1.1 DekCradle™ and ErgoFlor™ are rubber cradles used for supporting decking over waterproof membranes or floating floors over internal flooring. They are manufactured from reclaimed and/or recycled rubber.

Scope

2.1 DekCradle™ and ErgoFlor™ cradles have been appraised for use as supports for timber joists or battens that support decking or internal floating floors.

2.2 DekCradle™ cradles are for use externally to support decking. ErgoFlor™ cradles are for use internally to support flooring.

Building Regulations

National Construction Code (NCC)

3.1 **In the opinion of BRANZ, DekCradle™ and ErgoFlor™ timber framing cradles, 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 NCC:**

NCC 2022 Volume One - Building Code of Australia

Part B1 STRUCTURAL PROVISIONS: Performance Requirement B1P1. DekCradle™ and ErgoFlor™ timber framing cradles meet the requirements for actions arising from the following imposed actions: permanent actions (dead loads) and imposed actions (live loads arising from occupancy and use) [i.e. B1P1 (1) (a) and (b)]. See Paragraphs 8.1 and 8.2.

NCC 2022 Volume Two - Building Code of Australia

Part H1 STRUCTURE: Performance Requirement H1P1. DekCradle™ and ErgoFlor™ timber framing cradles meet the requirements for actions arising from the following imposed actions: permanent actions (dead loads) and imposed actions (live loads arising from occupancy and use) [i.e. H1P1 (2) (a) and (b)]. See Paragraphs 8.1 and 8.2.

Technical Specification

4.1 DekCradle™ and ErgoFlor™ cradles are manufactured from reclaimed and/or recycled rubber. They are bonded with a blocked resin formulation. DekCradle™ cradles are manufactured from brown coloured rubber and ErgoFlor™ cradles are manufactured from black rubber with a red fleck. The DekCradle™ and ErgoFlor™ cradles are otherwise identical dimensionally, being 90 mm wide, 70 mm long and 40 mm deep. They have a 49 mm wide, 20 mm deep channel running along the 70 mm axis to form the cradle.

Handling and Storage

5.1 DekCradle™ and ErgoFlor™ cradles are reasonably robust. They should be kept dry before installation, especially the ErgoFlor™ cradles for use internally.

Technical Literature

6.1 This Appraisal must be read in conjunction with:

- Batten & Cradle™ Flooring Systems Recommended Installation Manual for Installers, dated September 2022.

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

7.1 DekCradle™ cradles can be used to provide a level and/or elevated deck surface.

7.2 DekCradle™ and ErgoFlor™ cradles are suitable for use with most waterproofing membranes, however, confirmation as to their suitability should be sought from the membrane supplier.

7.3 The supporting structure for the DekCradle™ or ErgoFlor™ cradles and associated framing and decking or flooring must be designed to carry the imposed dead load of the floor system along with any associated live load.

7.4 DekCradle™ cradles are not fixed to the substrate that they sit on, so wind uplift of the floating decking may need to be considered. While solid balcony railings and walls provide protection against strong winds, designers and end users need to be aware of uplift from winds in exposed environments.

7.5 Battens or joists used with the DekCradle™ or ErgoFlor™ cradles must be a minimum of 45 mm wide and 40 mm high.

Structure

8.1 When planning the layout of the cradles, the maximum spacing between battens or joists is 400 mm. Cradles must be spaced at no more than 450 mm centres along the battens or joists. When installing DekCradle™ or ErgoFlor™ cradles on timber-framed decks or floors, they should be placed within 100 mm of the joists below.

8.2 At the above spacing, DekCradle™ and ErgoFlor™ cradles are capable of carrying 2 kPa live load for decks, and 3 kPa live load for floors with minimal deflections. For loads above this, specific design of the underlying structure and the overlying flooring may be required.

Durability

Serviceable Life

9.1 The expected serviceable life for the DekCradle™ and ErgoFlor™ cradles is at least 15 years.

Maintenance

10.1 DekCradle™ and ErgoFlor™ cradles should need no maintenance during their serviceable life. In external deck applications, allowance should be made to remove built-up debris from the waterproofing surface.

Safety From Falling

11.1 Barriers that are required around the perimeter of decks or floors that incorporate DekCradle™ or ErgoFlor™ installations must meet the height requirements of NCC Volume One, Deemed-to-Satisfy, Provision D3D17 and NCC Volume Two, Performance Requirement H5P2 after the installation of the cradles and decking.

Spread of Fire

Building Code of Australia (BCA) Bushfire Zones

12.1 The use of DekCradle™ and ErgoFlor™ cradles on buildings located within designated bushfire zones shall be restricted to the requirements of AS 3959.

12.2 The building designer is responsible for determining the Bushfire Attack Level for the building, in accordance with AS 3959, which will in turn determine whether the DekCradle™ or ErgoFlor™ cradles are suitable for use.

Installation Information

Installation Skill Level Requirement

13.1 All design and building work must be carried out in accordance with the DekCradle™ and ErgoFlor™ Technical Literature and this Appraisal. All building work must be undertaken by competent and experienced tradespeople conversant with the DekCradle™ and ErgoFlor™ cradles.

General

14.1 The site must be clean and free from any waste.

14.2 DekCradle™ and ErgoFlor™ cradles must be laid out such that there is no more than 450 mm between cradles along the length of the battens or joists, and no more than 400 mm between the battens or joists. There should be a cradle no more than 50 mm from each end of a batten or joist.

14.3 DekCradle™ and ErgoFlor™ cradles must not be fixed down to the surface that they are placed upon.

14.4 Joists may need to be ripped to make up for variations in floor height or for fall of a deck surface. Alternatively, shims or packers may be used within the cradles. The shim or packer is connected to the batten or joist, not the cradle, with a daub of suitable adhesive. The shim or packer cannot be packed up higher than 10 mm.

14.5 Shims or packers used with DekCradle™ cradles in external locations should be 42 mm wide plastic H packers.

14.6 No packing or shims should be placed between DekCradle™ cradles and the underlying membrane. In internal locations, ErgoFlor™ cradles may be used with packing or shims beneath them as long as the footprint of the packing is larger than the footprint of the ErgoFlor™ cradle.

14.7 Install the decking or flooring following the appropriate building practice and product specifications. All fastenings of the top surface material must be connected to only the battens or joists, not the DekCradle™ or ErgoFlor™, nor to, or through the substrate below.

Basis of Appraisal

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

Tests

15.1 Compressive testing of the cradles was undertaken by BRANZ to determine the stiffness of the cradles and their suitability under expected service loads.

Investigations

16.1 A structural assessment of the DekCradle™ and ErgoFlor™ cradles has been carried out based on the structural testing.

16.2 A durability assessment has been carried out on DekCradle™ and ErgoFlor™ cradles by BRANZ technical experts.

Quality

17.1 The manufacture of DekCradle™ and ErgoFlor™ cradles has been examined by BRANZ and found to be satisfactory.

17.2 Quality of supply of the product to the market is the responsibility of B & C Systems International Limited.

17.3 Designers are responsible for the design of the building and incorporating DekCradle™ and ErgoFlor™ cradles in accordance with this Appraisal and the Technical Literature.

17.4 Quality of installation is the responsibility of the installer.

Sources of Information

- AS 3959:2018 Construction of buildings in bushfire-prone areas.
- National Construction Code 2022, Australian Building Codes Board.

Amendments

Amendment No. 1, dated 13 November 2023

This Appraisal has been amended to update references from NCC 2019 to NCC 2022.

Amendment No. 2, dated 03 July 2025

This Appraisal has been amended for an editorial change.

Amendment No. 3, dated 14 October 2025

This Appraisal has been amended to update the Appraisal Holder's address and reference the Technical Literature.

BRANZ

In the opinion of BRANZ, DekCradle™ and ErgoFlor™ timber framing cradles are fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided they are used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to B & C Systems International Limited, 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. B & C Systems International Limited:
   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 B & C Systems International Limited.
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 B & C Systems International Limited or any third party.

For BRANZ

Chelydra Percy
Chief Executive

Date of Issue:
19 May 2022