

CERTIFICATE OF STRUCTURAL ADEQUACY

**For: Aluminium Decking Board
Standard Certification**

Project: 24276
21st August, 2024

**Client: Knotwood Pty. Ltd.(QLD)
Att: Mr J Higgs**

GENERAL

KEDP150 (KTW020) and KED150 (KTW042) are 150 mm wide aluminium interlocking decking boards. These are constructed of 6063-T6 Aluminium. The maximum allowable downward uniformly distributed pressures and point loads for these two sections are to be assessed for continuous spans of 300, 450 and 600 mm.

DISCUSSION

The capacity of these decking boards were assessed according to AS/NZS 1664.1-1997 Aluminium Structures. From this the moment capacity of KEDP150 was assessed to be 0.416 kNm in sagging and 0.223 kNm in hogging for an individual plank. For KED150 the capacity was assessed as 0.366 kNm in sagging and 0.255 kNm in hogging for each plank. The shear capacity of KEDP150 is 3.81 kN and for KED150 is 2.05 kN.

From these capacities the maximum allowable pressures and point loads were determined assuming that the planks were continuous over the supports. For KEDP150 the maximum allowable downward uniformly distributed pressures were 132.1, 58.7 and 33 kPa for spans of 300, 450 and 600 mm, respectively. The maximum point loads were 3.81, 2.64 and 1.98 kN for spans of 300, 450 and 600 mm, respectively.

For the KED150 the maximum allowable downward uniformly distributed pressures were 151.1, 67.2 and 37.8 kPa for spans of 300, 450 and 600 mm, respectively. The maximum point loads were 2.05 kN for all spans.

ASSESSMENT

The aluminium decking boards as assessed according to AS/NZS 1664.1-1997 have the maximum allowable loads highlighted in the discussion.

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