



## Equideck EPS-FR Core Grade SL 0.6mm Steel Skins - Roof Span Table for Housing Application

### Non-Cyclonic

| Wind Class | ULS Design Wind Pressure (kPa) | Panel Thickness |            |              |            |              |            |              |            |              |            |              |            |              |            |
|------------|--------------------------------|-----------------|------------|--------------|------------|--------------|------------|--------------|------------|--------------|------------|--------------|------------|--------------|------------|
|            |                                | 50 mm           |            | 75 mm        |            | 100 mm       |            | 125 mm       |            | 150 mm       |            | 200 mm       |            | 250 mm       |            |
|            |                                | Max Span (m)    |            | Max Span (m) |            | Max Span (m) |            | Max Span (m) |            | Max Span (m) |            | Max Span (m) |            | Max Span (m) |            |
|            |                                | Single Span     | Multi-Span | Single Span  | Multi-Span | Single Span  | Multi-Span | Single Span  | Multi-Span | Single Span  | Multi-Span | Single Span  | Multi-Span | Single Span  | Multi-Span |
| N2         | -1.51                          | 3.0             | 2.7        | 3.9          | 3.9        | 4.5          | 4.5        | 5.1          | 5.1        | 5.7          | 5.7        | 6.6          | 6.6        | 7.5          | 7.5        |
| N3         | -2.35                          | 2.1             | 1.8        | 3.0          | 2.7        | 3.6          | 3.6        | 4.2          | 4.2        | 4.5          | 4.5        | 5.1          | 5.1        | 5.7          | 5.7        |
| N4         | -3.50                          | 1.4             | N/A        | 2.1          | 1.8        | 3.0          | 2.4        | 3.3          | 3.0        | 3.6          | 3.6        | 4.2          | 4.2        | 4.8          | 4.2        |

### Notes:

- Wind speeds and coefficients based on AS 4055 - Wind Loads for Housing.
- Roof pressure coefficients based on the following worst case assumptions:
  - External Pressure - Ratio of building height to least horizontal dimension on plan,  $h/d < 0.5$ .  $C_{pe} = -0.9$
  - Internal Pressure - Non-Cyclonic - Building has no dominate openings & more than one permeable wall or is effectively sealed.  $C_{pi} = +0.2$
  - Local Pressure - Least Horizontal Dimension on Plan  $< 20m$  or Building Height  $< 4m$  ( $a = 4m$ ).  $K_l = 1.5$
  - Combination Factor -  $K_c = 0.95$
  - Non-cyclonic -  $C_{fig} = -1.57$
- Serviceability deflection limit of span/150 has been allowed for.
- Self weight of the panel has been allowed for, plus an allowance of up to  $10kg/m^2$  (0.1kPa dead load) for light duty fittings (lights, etc.).
- Non-trafficable maintenance access (concentrated load) of 140kg on any span has been allowed for, in roof pans only. Avoid stepping on the ribs.
- Distributed live load of 0.25kPa (as per AS/NZS 1170.1) has been allowed for.
- 4 x 14g Tek screw (or equivalent) fixings per panel are required.
- Span tables have been developed by Bligh Tanner Consulting Engineers by interpretation of physical testing conducted & reported by BRANZ.