

Euroseam ESA400 0.9mm aluminium LOAD/SPAN TABLES (Safe working loads)

Span (m)	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0
Imposed load	3.00* (6.87)	2.99* (5.86)	2.98* (4.96)	2.96* (4.16)	2.94* (3.49)	2.92	2.76	2.56	2.33	2.4	1.69
Suction load	2.8	2.52	2.31	2.13	1.98	1.82	1.71	1.65	1.62	1.61	1.61

Loads in kN/m² double/multispan for 0.9mm thickness aluminium

*Values limited by sheet deflection (when assessing snow drift loading the values in brackets can be used).

Notes:

The resistance values given in the Table should be compared to the characteristic (unfactored) snow and wind loads

The values given apply to Elite Systems and include standard fixing specification and Quattro spacer system where brackets are at 1.2m centres.

The values given are for uniformly distributed loads on multiple spans. All spans are assumed to be equal or within 15% of the largest span.

The values are based on full scale tests and incorporate overall safety factors of:
2.0 for negative loading (attachment resisting wind uplift)
1.5 for positive loading.

The deflection of the seam at the unfactored loads is limited to span/200 for snow and wind and span/90 for wind uplift.

The span is the distance between purlins or Quattro bars if fitted to a structural deck.

General notes:

The data has been prepared in accordance with the National Annexes (NA) to BS EN 1990: 2002 and BS EN 1993-1-3 : 2006, based on test data.

The self-weight of the Euroclad ESA400 0.9mm sheeting has been taken into account in preparing the data

For single spans, excessive loads or spans and different deflection criteria advice should be sought from Technical.

Wherever possible the loads should be determined while the adjustment of purlin centres is still possible, allowing the system performance to be taken into account.

The responsibility for defining and specifying wind loads and purlin centres lies with the structural engineer for any given project. When evaluating the design loads, the wind loads applicable to individual zones of the envelope for each building must be calculated in accordance with the recommendations of BS EN 1991-1-4 : 2005, and the imposed snow loads must be checked in accordance with the recommendations of BS EN 1991-1-3 : 2003.

Where lateral restraint of the liner or deck is part of the structural steel design, the detail of the fixing between purlin and liner must be verified by the structural engineer responsible for the overall roof design.

The maximum recommended free cantilever for ESA400 0.9mm sheet is 300mm where no foot traffic or significant load is anticipated.