

## Balustrade Technical Specification

### MATERIAL STRUCTURE

Ecoscope is an environmentally innovative composite material that combines the best qualities of plastic and wood fibers. Ecoscope decking and balustrade products have hollow composite profiles. The material contains no harmful chemicals.

### PROFILE DIMENSIONS

	Standard mm	Standard Lengths mm	Weight kg/m
Newel Post	95 x 95	1200 / 2400	5.25 / 10.5
Handrail	93 x 45	1800	4.15
Spindle	54 x 54	900	1.35
Post Cap	115 x 115	35	0.4

### PHYSICAL AND MECHANICAL PROPERTIES (based on newel)

Property	Test Method	Standard Requirements	Test value
Bending Strength, N/mm <sup>2</sup>	EN 310*	>2.5	6.454
Density, g/cm <sup>3</sup>	EN ISO 1183*	>0.7	2.1
Mass impact, J (1 kg/1500 mm)	EN 477*	>12	No break (>15)
Surface Hardness (Rockwell), HRR	EN 1534*	>58	64
Wear resistance (Taber 1000 r), mm	EN 438-2	<0.08g/100	0.07g/100
Swelling, thickness (24 h), %	EN 317*	<1	0.4
Slip resistance (wet)	BS7976 - 2: 2002.	>23	35
Slip resistance (dry)	BS7976 - 2: 2002.	>23	53
Fire Class	EN 13501-1	F	B

## EXPANSION

Ecoscape composites will expand and contract with changes in temperature. The following table illustrates this effect over different temperature changes. The temperature change listed relates to the temperature of the product, not air temperature. In direct sunlight, darker composites will reach higher temperatures than lighter colours.

Temp. Change of board	mm expansion / shrinkage
10° C	1
20° C	2
30° C	4
40° C	5
50° C	6

## SUPPORT

Ecoscape Balustrade systems utilize two support structures.

- 1) Galvanised steel newel support; resists give in the upright, designed for projects built upon concrete bases but can still be used affixed to timber or composite base frames. Bending strength resistance 320 N/mm<sup>2</sup>.
- 2) Colour coded steel L bracket; aids in support of newel and strength of overall balustrade structure. Bending strength resistance 235 N/mm<sup>2</sup>.

