

Polyester Structural Profile Material Specifications

All profiles are made in isothalic polyester UV stabilised resin with a surface veil.
 Stock profiles less than 6mm thick are made to E17 specification. Stock profiles 6mm thick and greater are made to E23 specification.

Description BS EN 13706	Units	Grade E17	Grade 23
Full Section Modulus	GPa	17	23
Tensile Strength (axial)	MPa	170	240
Tensile Strength (transverse)	MPa	30	50
Tensile Modulus (axial)	GPa	17	23
Tensile Modulus (transverse)	GPa	5	7
Flexural Strength (axial)	MPa	170	240
Flexural Strength (transverse)	MPa	70	100
Inter-laminar Shear	MPa	15	25
Pin Bearing Strength	MPa	50	70
Density	g/m3	1.8-2.0	
Water Absorption		0.5% – 2%	
Thermal Expansion		7.2 x 10 ⁻⁶ /K	
Heat Distortion Temp		125-145°C	

Electrical Properties	
Electrical Surface Resistivity	10 ¹² OHMS
Volume Resistivity	10 ¹⁵ OHMS
Insulation Resistance	M Ohm 1000
Dielectric Strength @ 90 ⁰	Kv/mm 25
Dielectric Strength @ 90 ⁰	KV 75
Permittivity @ 50 Hz	5
Dissipation Factor	0.02
Comparative Tracking	V 600
Arc Resistance	s 300