

# Performance Properties

The following table provides the specific test methods applied to arrive at the stated performance. Properties of pultrusions can be modified to suit the applications. Pultron pultrusions are tested to a broad range of international standards.

PHYSICAL PROPERTIES		TEST METHOD
Specific Gravity	1.8 – 2.1	ASTM D792
Glass Content (W/W)	50% – 85%	
MECHANICAL PROPERTIES		
TENSILE STRENGTH		
Longitudinal	300 – 1450 MPa	ASTM D 7205
Transverse	30 – 120 MPa	ASTM D 638
TENSILE MODULUS		
Longitudinal	52 GPa	ASTM D 7205
Transverse	8 GPa	ASTM D 638
FLEXURAL STRENGTH		
Longitudinal	300 – 1450 MPa	ASTM D 790
Transverse	40 – 180 MPa	ASTM D 790
FLEXURAL MODULUS		
Longitudinal	14 – 52 GPa	ASTM D 790
Transverse	10 – 12 GPa	ASTM D 790
COMPRESSIVE STRENGTH		
Longitudinal	300 MPa	ASTM D 695
Transverse	80 – 150 MPa	ASTM D 695
SHORT BEAM SHEAR STRESS	50 MPa	ASTM D 4475
ELONGATION AT RUPTURE	2.5%	ASTM D 3916
IMPACT STRENGTH	125 Kj/M <sup>2</sup>	ISO 179
HARDNESS	50 Barcol	ASTM D 2583
ELECTRICAL PROPERTIES		
Electrical Strength	5 – 40 kV/mm	DIN 53 481
Surface Resistivity	10 <sup>12</sup> Ohm	DIN 53 482
Volume Resistivity	10 <sup>10</sup> Ohm.m	DIN 53 482
Dielectric Constant	<5	DIN 53 483
THERMAL PROPERTIES		
Thermal Expansion Coefficient	5.4 – 9 X10 <sup>-6</sup> K <sup>-1</sup>	ASTM D 696
Thermal Conductivity	0.25 W/Mk <sup>-1</sup>	ASTM C 117
Service Temperature	-100 °C < 160 °C	
Specific Heat	1.25 kJ/Kgk <sup>-1</sup>	

Note: These values are approximate and for general guidance only.