

THERMAL AND ELECTRICAL PROPERTIES OF THERMOSET POLYESTERS

Property	Typical Values
Linear expansion coefficients	
68-212°F (per °F×10°)	
(i) parallel to laminate	2-3
(ii) normal to laminate	5-6
Max operating temperature (°C)	130
Min operating temperature (°C)	-32
Max operating temperature in water (°C)	100
Thermal conductivity (W/m K)	0.293
Specific heat (J/kg K)	1.005
Insulation resistance (Megohms)	2,000
Electrical strength at 90°C	
Flatwise (kV/mm)	8.27
Edgewise (kV/mm)	1.85

Provided by Orkot Inc.

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Property	Typical Values
Linear expansion coefficients	
68-212°F (per °F×10°)	
(i) parallel to laminate	2-3
(ii) normal to laminate	5-6
Max operating temperature (°F)	266
Min operating temperature (°F)	-26
Max operating temperature in water (°F)	212
Thermal conductivity (W/m K)	0.293
Specific heat (J/kg K)	1.005
Insulation resistance (Megohms)	2,000
Electrical strength at 90°C	
Flatwise (V/mil)	210
Edgewise (kV/in)	47

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PHYSICAL AND MECHANICAL PROPERTIES OF THERMOSET POLYESTERS

Property	Typical Values
Tensile strength	60 N/mm ² 8,727 lb/sq in
Compressive strength	
Normal to laminate	346 N/mm ² 50,325 lb/sq in
Parallel to laminate	92 N/mm ² 13,380 lb/sq in
Shear strength	83 N/mm ² 12,000 lb/sq in
Impact strength	
Normal to laminate ISO179/1982	
Charpy impact unnotched	122 KJ/m ² —
Notched Izod to BS 2782	>534 J/m >10 ft-lb/in
Max operating temperature (intermittent)	130°F/54°C 266°F/130°C
Hardness, Rockwell M	100 100
Density	1.3 g/cm ³ 0.047 lb/in ³
Swell in water (% wall thickness)	0.1 0.1
Thermal expansion coefficient	
20-100°C (per F×10 ⁻⁵)	
Normal to laminate	9-10 —
Parallel to laminate	5-6 —
86-212°F (per °F×10 ⁻⁵)	
Normal to laminate	— 5.0-5.5
Parallel to laminate	— 2.7-3.3
Static coefficient of friction	
Dry at 15 N/mm ² or 2,130 lb/sq in (against stainless steel)	0.13 0.13

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