

PET (Polyethylene Terephthalate)

Material Specification (Typical Properties)

Physical

Property	Method	Units	Specification
Specific Gravity	---	g/cm ³	1.39
Water Absorption	DIN EN ISO 62	%	0.02 / 0.03

Mechanical

Property	Method	Units	Specification
Modulus of elasticity (tensile test)	DIN EN ISO 527-2	MPa	3300
Tensile strength	DIN EN ISO 527-2	MPa	91
Tensile strength at yield	DIN EN ISO 527-2	MPa	91
Elongation at yield	DIN EN ISO 527-2	%	4
Elongation at break	DIN EN ISO 527-2	%	14
Flexural strength	DIN EN ISO 178	MPa	134
Modulus of elasticity (flexural test)	DIN EN ISO 178	MPa	3400
Compression strength	EN ISO 604	MPa	21 / 38
Compression modulus	DIN EN ISO 527-2	MPa	2800
Impact strength (Charpy)	DIN EN ISO 179-1eU	kJ/m ²	150
Ball indentation hardness	ISO 2039-1	MPa	194

Electrical

Property	Method	Units	Specification
Specific surface resistance	DIN IEC 60093	Ω	10 ¹⁴
Specific volume resistance	DIN IEC 60093	Ω*cm	10 ¹⁴

Thermal

Property	Method	Units	Specification
Glass transition temperature	DIN 53765	°C	1
Melting temperature	DIN 53765	°C	244
Service temperature		°C	110-170
Thermal expansion (CLTE)	DIN EN ISO 11359-1;2	10 ⁻⁵ K ⁻¹	8
Thermal expansion (CLTE)	DIN EN ISO 11359-1;2	10 ⁻⁵ K ⁻¹	10