

TKG® ET (PET)

Density 1,39 g/cm³

Colour White opaque

Chemical Designation PET (Polyethylene terephthalate)

PROPERTIES	RESULT	UNIT	PARAMETER	NORM USED
Mechanical properties				
Modulus of elasticity	3300	MPa	1 mm/min	DIN EN ISO 527-2
Tensile strength	91	MPa	50 mm/min	DIN EN ISO 527-2
Tensile strength at yield	91	MPa	50 mm/min	DIN EN ISO 527-2
Elongation at yield	4	%	50 mm/min	DIN EN ISO 527-2
Elongation at break	14	%	50 mm/min	DIN EN ISO 527-2
Flexural strength	134	MPa	2 mm/min , 10 N	DIN EN ISO 178
Modulus of elasticity (flex test)	3400	MPa	2 mm/min , 10 N	DIN EN ISO 178
Compression strength	21 / 38	MPa	1% / 2% . 5 mm/min , 10 N	EN ISO 604
Compression modulus	2800	MPa	5 mm/min , 10 N	EN ISO 604
Impact strength (Charpy)	150	Kj/m ²	Max. 7,5j	DIN EN ISO 179-1EU
Ball indentation hardness	194	MPa		ISO 2039-1
Thermal properties				
Glass transition temperature	81	°C		DIN 53765
Melting temperature	244	°C		DIN 53765
Service temperature	170	°C	Short term	
Service temperature	110	°C	Long term	
Thermal expansion	8	10 ⁻⁵ K ⁻¹	23-60°C long	DIN EN ISO 11359-1;2
Thermal expansion	10	10 ⁻⁵ K ⁻¹	23-100°C long	DIN EN ISO 11359-1;2
Electrical properties				
Surface resistance	10 ¹⁴	Ω		DIN IEC 60093
Miscellaneous properties				
Water absorption	0,02 / 0,03	%	24h / 96h (23°C)	DIN EN ISO 62
Resistance to hot mater / bases	-			
Resistance to weathering	-			
Flammability (UL94)	HB		According to	DIN IEC 60995-11-10

MAIN CHARACTERISTICS

Great stiffness
Great toughness
Good chemical resistance, weldable and bondable
Good slide and wear resistance
High strength

INDUSTRY APPLICATIONS

Automotive industry
Conveyor technology
Electrical and precision engineering
Mechanical engineering
Medical industry

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