

# TKG® ET (PET)

**Density** 1,39 g/cm<sup>3</sup>

**Colour** White opaque

**Chemical Designation** PET ( Polyethylene terephthalate)

PROPERTIES	RESULT	UNIT	PARAMETER	NORM USED
<b><u>Mechanical properties</u></b>				
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 <sup>2</sup>	Max. 7,5j	DIN EN ISO 179-1EU
Ball indentation hardness	194	MPa		ISO 2039-1
<b><u>Thermal properties</u></b>				
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 <sup>-5</sup> K <sup>-1</sup>	23-60°C long	DIN EN ISO 11359-1;2
Thermal expansion	10	10 <sup>-5</sup> K <sup>-1</sup>	23-100°C long	DIN EN ISO 11359-1;2
<b><u>Electrical properties</u></b>				
Surface resistance	10 <sup>14</sup>	Ω		DIN IEC 60093
<b><u>Miscellaneous properties</u></b>				
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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