

Technical Data Sheet

POLSER PA 6E



I. Physical Properties

	Test method	Unit	Value
1. Specific gravity	ISO 1183	g/cm ³	1,13
2. Water absorption	ISO 62	%	3 / 9,5
3. Maximum permissible service temp. (no stronger mechanical stress involved)	-		-
Upper temperature limit	-	°C	130*/100**
Lower temperature limit	-	°C	-40

II. Mechanical Properties

	Test method	Unit	Value
1. Tensile strength at yield	ISO 527	MPa	70
2. Elongation at yield.	ISO 527	%	-
3. Tensile strength at break	ISO 527	MPa	-
4. Elongation at break	ISO 527	%	>= 50
5. Impact strength	ISO 179	kJ/m ²	no break
6. Notch impact strength	ISO 179	kJ/m ²	≥ 3
7. Ball indentation / Rockwell hardness	ISO 2039-1	MPa	159
8. Shore-D			82
9. Flexural strength	ISO 178	MPa	-
10. Modulus of elasticity	ISO 527	MPa	3000 / 1800

III. Thermal Properties

		Test method	Unit	Value
1. Vicat-softening point	VST/B/50	ISO 306	°C	-
	VST/A/50		°C	204
2. Heat deflection temperature	HDT/B	ISO 75	°C	190
	HDT/A		°C	75
3. Coefficient of linear thermal expansion		DIN 53752	K ⁻¹ *10 ⁻⁶	90
4. Thermal conductivity at 20 °C			W/(m*K)	0,23
5.Max. operating temperature short term			°C	160
6.Spesific heat capacity		DIN 52612	J/(g*.K)	1.7

IV. Electrical Properties

	Test method	Unit	Value
1. Volume resistivity	VDE 0303	Ω*cm	>= 10 ¹³ / >= 10 ¹⁰
2. Surface resistivity		Ω	>= 10 ¹² / -
3. Dielectric constant at 1MHz		-	3,7 / 7
4. Dielectric loss factor at 1 MHz	DIN 53483	-	0,031 / 0,3
5. Dielectric strength	VDE 0303	kV/mm	50 / 20
6. Tracking resistance	IEC 60112	-	CTI 600
7. Volume resistivity at 50 Hz	IEC 60250		0.02

V. Additional Data

	Test method	Unit	Value
1. Bond ability		-	+
2. Friction coefficient	DIN 53375	-	0,38-0,45
3. Flammability	UL 94	-	HB
4. UV stabilization	-	-	-

All values are characteristics of the used raw materials. (* = Short period, ** = Long period)

The physical data contained in this table are typical values. They are obtained on test specimens under specific conditions and represent average values of many tests at POLSER POLIMER's laboratory. The results obtained on these tests specimens cannot be applied to finished parts without reservations, as behavior is influenced by processing and shaping. Reproduction only with our definite permission. The raw material that we use is FDA compliant.