

Technical Data Sheet

GEHR PMMA

I. Physical Properties

	Test method	Unit	Value
1. Specific gravity (ρ)	ISO 1183	g/cm ³	1,18
2. Water absorption	ISO 62	%	0,3
3. Maximum permissible service temp (no stronger mechanical stress involved)	-	-	-
Upper temperature limit	-	°C	70
Lower temperature limit	-	°C	-

II. Mechanical Properties

	Test method	Unit	Value
1. Tensile strength at yield	ISO 527	MPa	72
2. Elongation at yield. (ϵ_S)	ISO 527	%	-
3. Tensile strength at break (σ_R)	ISO 527	MPa	-
4. Elongation at break (ϵ_R)	ISO 527	%	4,5
5. Impact strength (a_n)	ISO 179	kJ/m ²	12
6. Notch impact strength (a_k)	ISO 179	kJ/m ²	2
7. Ball indentation / Rockwell hardness	ISO 2039-1	MPa	-
8. Shore-D	DIN 53505		-
9. Flexural strength ($\sigma_{B, 3.5\%}$)	ISO 178	MPa	105
10. Modulus of elasticity (E_t)	ISO 527	MPa	3300

III. Thermal Properties

		Test method	Unit	Value
1. Vicat-softening point	VST/B/50	ISO 306	°C	102
	VST/A/50	ISO 306	°C	-
2. Heat deflection temperature	HDT/B	ISO 75	°C	-
	HDT/A	ISO 75	°C	90
3. Coefficient of linear thermal expansion α		DIN 53752	K ⁻¹ * 10 ⁻⁴	0,7
4. Thermal conductivity at 20 °C (λ)		DIN 52612	W/(m*K)	0,19

IV. Electrical Properties

	Test method	Unit	Value
1. Volume resistivity	VDE 0303	Ω *cm	$\geq 10^{15}$
2. Surface resistivity (R_o)	VDE 0303	Ω	$\geq 10^{13}$
3. Dielectric constant at 1MHz (ϵ_r)	DIN 53483	-	2,7
4. Dielectric loss factor at 1 MHz ($\tan\delta$)	DIN 53483	-	0,02
5. Dielectric strength	VDE 0303	kV/mm	30
6. Tracking resistance	IEC 60112	-	CTI ≥ 600

V. Additional Data

	Test method	Unit	Value
1. Bond ability	-	-	+
2. Friction coefficient	DIN 53375	-	-
3. Flammability	UL 94	-	HB
4. UV stabilisation	-	-	+

All values are attributes of the used raw materials.

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