

Technical Data Sheet

GEHR PE-HD



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I. Physical Properties

	Test method	Unit	Value
1. Specific gravity (ρ)	ISO 1183	g/cm ³	0,95
2. Water absorption	ISO 62	%	0,01
3. Maximum permissible service temp (no stronger mechanical stress involved)	-	-	DIN 8075
Upper temperature limit	-	°C	90
Lower temperature limit	-	°C	-50

II. Mechanical Properties

	Test method	Unit	Value
1. Tensile strength at yield	ISO 527	MPa	27
2. Elongation at yield. (ϵ_S)	ISO 527	%	9
3. Tensile strength at break (σ_R)	ISO 527	MPa	35
4. Elongation at break (ϵ_R)	ISO 527	%	≥ 700
5. Impact strength (a_n)	ISO 179	kJ/m ²	no break
6. Notch impact strength (a_k)	ISO 179	kJ/m ²	29
7. Ball indentation / Rockwell hardness	ISO 2039-1	MPa	-
8. Shore-D	DIN 53505		64
9. Flexural strength ($\sigma_{B, 3.5\%}$)	ISO 178	MPa	22
10. Modulus of elasticity (E_t)	ISO 527	MPa	1150

III. Thermal Properties

		Test method	Unit	Value
1. Vicat-softening point	VST/B/50	ISO 306	°C	80
	VST/A/50	ISO 306	°C	129
2. Heat deflection temperature	HDT/B	ISO 75	°C	69
	HDT/A	ISO 75	°C	-
3. Coefficient of linear thermal expansion α		DIN 53752	K ⁻¹ * 10 ⁻⁴	1,5
4. Thermal conductivity at 20 °C (λ)		DIN 52612	W/(m*K)	0,42

IV. Electrical Properties

	Test method	Unit	Value
1. Volume resistivity	VDE 0303	Ω *cm	$\geq 10^{15}$
2. Surface resistivity (R_{\square})	VDE 0303	Ω	$\geq 10^{16}$
3. Dielectric constant at 1MHz (ϵ_r)	DIN 53483	-	2,35
4. Dielectric loss factor at 1 MHz ($\tan\delta$)	DIN 53483	-	0,0003
5. Dielectric strength	VDE 0303	kV/mm	17
6. Tracking resistance	IEC 60112	-	-

V. Additional Data

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

All values are attributes of the used raw materials.

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