

Technical Data Sheet

GEHR PE-UHMW®

I. Physical Properties

	Test method	Unit	Value
1. Specific gravity	ISO 1183	g/cm ³	0,93
2. Water absorption	ISO 62	%	0,01
3. Maximum permissible service temp. (no stronger mechanical stress involved)	-		-
Upper temperature limit	-	°C	90
Lower temperature limit	-	°C	-150

II. Mechanical Properties

	Test method	Unit	Value
1. Tensile strength at yield	ISO 527	MPa	17
2. Elongation at yield.	ISO 527	%	>= 8
3. Tensile strength at break	ISO 527	MPa	>= 40
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	no break
7. Ball indentation / Rockwell hardness	ISO 2039-1	MPa	38
8. Shore-D	DIN 53505		63
9. Flexural strength	ISO 178	MPa	27
10. Modulus of elasticity	ISO 527	MPa	>= 700

III. Thermal Properties

	Test method	Unit	Value
1. Vicat-softening point	VST/B/50	°C	79
	VST/A/50	°C	-
2. Heat deflection temperature	HDT/B	°C	65
	HDT/A	°C	42
3. Coefficient of linear thermal expansion	DIN 53752	K ⁻¹ *10 ⁻⁴	2
4. Thermal conductivity at 20 °C		W/(m*K)	0,41

IV. Electrical Properties

	Test method	Unit	Value
1. Volume resistivity	VDE 0303	Ω*cm	>= 10 ¹⁴
2. Surface resistivity		Ω	>= 10 ¹¹
3. Dielectric constant at 1MHz		-	3
4. Dielectric loss factor at 1 MHz	DIN 53483	-	0,0001
5. Dielectric strength	VDE 0303	kV/mm	45
6. Tracking resistance	IEC 60112	-	KB > 600

V. Additional Data

	Test method	Unit	Value
1. Bond ability		-	-
2. Friction coefficient	DIN 53375	-	0,18
3. Flammability	UL 94	-	HB
4. UV stabilisation	-	-	-

All values are attributes of the used raw materials.

The physical data contained in this table are typical values. They are obtained on test specimens under specific conditions and represent average values of a large number of tests. The results obtained on this tests specimens cannot be applied to finished parts without reservations, as behaviour is influenced by processing and shaping. Reproduction only with our definite permission.