

# PE Round Rod - Technical Data Sheet



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<b>I. Physical Properties</b>			
	<b>Test method</b>	<b>Unit</b>	<b>Value</b>
Specific gravity ( $\rho$ )	ISO 1183	g/cm <sup>3</sup>	0,95
Water absorption	ISO 62	%	0,01
Maximum permissible service temp (no stronger mechanical stress involved)	-	-	DIN 8075
Upper temperature limit	-	°C	90
Lower temperature limit	-	°C	50

<b>II. Mechanical Properties</b>			
	<b>Test method</b>	<b>Unit</b>	<b>Value</b>
Tensile strength at yield	ISO 527	MPa	27
Elongation at yield. ( $\epsilon_s$ )	ISO 527	%	9
Tensile strength at break ( $\sigma_R$ )	ISO 527	MPa	35
Elongation at break ( $\epsilon_R$ )	ISO 527	%	≥700
Impact strength ( $a_n$ )	ISO 179	kJ/m <sup>2</sup>	no break
Notch impact strength ( $a_k$ )	ISO 179	kJ/m <sup>2</sup>	29
Ball indentation / Rockwell hardness	ISO 2039-1	MPa	-
ShoreD	DIN 53505		64
Flexural strength ( $\sigma_{B 3,5 \%}$ )	ISO 178	MPa	22
Modulus of elasticity ( $E_t$ )	ISO 527	MPa	1150

<b>III. Thermal Properties</b>			
	<b>Test method</b>	<b>Unit</b>	<b>Value</b>
Vicat-softening point VST/B/50	ISO 306	°C	80
VST/A/50	ISO 306	°C	129
Heat deflection temperature HDT/B	ISO 75	°C	69
HDT/A	ISO 75	°C	-
Coefficient of linear thermal expansion $\alpha$	DIN 53752	K <sup>-1</sup> *10 <sup>4</sup>	1,5
Thermal conductivity at 20 °C ( $\lambda$ )	DIN 52612	W/(m*K)	0,42

<b>IV. Electrical Properties</b>			
	<b>Test method</b>	<b>Unit</b>	<b>Value</b>
1. Volume resistivity	VDE 0303	$\Omega$ *cm	≥10 <sup>15</sup>
2. Surface resistivity ( $R_o$ )	VDE 0303	$\Omega$	≥10 <sup>16</sup>
3. Dielectric constant at 1MHz ( $\epsilon_r$ )	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	-	-

<b>V. Additional Data</b>			
	<b>Test method</b>	<b>Unit</b>	<b>Value</b>
1. Bond ability	-	-	+
2. Friction coefficient	DIN 53375	-	0,3
3. Flammability	UL 94	-	HB
4. UV stabilisation	-	-	Fair

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.