

# Acrylic Rod/Square Bar - Technical Data Sheet



the people for plastics

Physical Properties	Test method	Unit	Value
Specific gravity ( $\rho$ )	ISO 1183	g/cm <sup>3</sup>	1.18
Water absorption	ISO 62	%	0.3
Maximum permissible service temp (no stronger mechanical stress involved)	-	-	-
Upper temperature limit	-	°C	70
Lower temperature limit	-	°C	-

Mechanical Properties	Test method	Unit	Value
Tensile strength at yield	ISO 527	MPa	72
Elongation at yield. ( $\epsilon_s$ )	ISO 527	%	-
Tensile strength at break ( $\sigma_R$ )	ISO 527	MPa	-
Elongation at break ( $\epsilon_R$ )	ISO 527	%	4.5
Impact strength ( $a_n$ )	ISO 179	kJ/m <sup>2</sup>	12
Notch impact strength ( $a_k$ )	ISO 179	kJ/m <sup>2</sup>	2
Ball indentation / Rockwell hardness	ISO 20391	MPa	-
ShoreD	DIN 53505		-
Flexural strength ( $\sigma_{B 3.5\%}$ )	ISO 178	MPa	105
Modulus of elasticity ( $E_i$ )	ISO 527	MPa	3300

Thermal Properties	Test method	Unit	Value
Vicat-softening point	VST/B/50	ISO 306	°C
	VST/A/50	ISO 306	°C
Heat deflection temperature	HDT/B	ISO 75	°C
	HDT/A	ISO 75	°C
Coefficient of linear thermal expansion $\alpha$	DIN 53752	K <sup>-1</sup> *10 <sup>4</sup>	0.7
Thermal conductivity at 20 °C ( $\lambda$ )	DIN 52612	W/(m*K)	0.19

Electrical Properties	Test method	Unit	Value
Volume resistivity	VDE 0303	$\Omega$ *cm	$\geq 10^{15}$
Surface resistivity ( $R_o$ )	VDE 0303	$\Omega$	$\geq 10^{13}$
Dielectric constant at 1MHz ( $\epsilon_r$ )	DIN 53483	-	2.7
Dielectric loss factor at 1 MHz ( $\tan\delta$ )	DIN 53483	-	0.02
Dielectric strength	VDE 0303	kV/mm	30
Tracking resistance	IEC 60112	-	CTI $\geq 600$

Additional Data	Test method	Unit	Value
Bond ability	-	-	+
Friction coefficient	DIN 53375	-	-
Flammability	UL 94	-	HB
UV stabilisation	-	-	+

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 these test specimens cannot be applied to finished parts without reservations, as behaviour is influenced by processing and shaping.