

# ABS Rod - Technical Data Sheet



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Physical Properties	Test method	Unit	Value
Specific gravity ( $\rho$ )	ISO 1183	g/cm <sup>3</sup>	1,04
Water absorption	ISO 62	%	0,4
Maximum permissible service temp (no stronger mechanical stress involved)	-	-	-
Upper temperature limit	-	°C	70
Lower temperature limit	-	°C	50

Mechanical Properties	Test method	Unit	Value
Tensile strength at yield	ISO 527	MPa	45
Elongation at yield. ( $\epsilon_s$ )	ISO 527	%	-
Tensile strength at break ( $\sigma_R$ )	ISO 527	MPa	-
Elongation at break ( $\epsilon_R$ )	ISO 527	%	-
Impact strength ( $a_n$ )	ISO 179	kJ/m <sup>2</sup>	333
Notch impact strength ( $a_k$ )	ISO 179	kJ/m <sup>2</sup>	37
Ball indentation / Rockwell hardness	ISO 20391	MPa	R 105
ShoreD	DIN 53505		70
Flexural strength ( $\sigma_B$ 3,5 %)	ISO 178	MPa	67
Modulus of elasticity ( $E_t$ )	ISO 527	MPa	2260

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>	-
Thermal conductivity at 20 °C ( $\lambda$ )	DIN 52612	W/(m*K)	-

Electrical Properties	Test method	Unit	Value
Volume resistivity	VDE 0303	$\Omega$ *cm	-
Surface resistivity ( $R_o$ )	VDE 0303	$\Omega$	-
Dielectric constant at 1MHz ( $\epsilon_r$ )	DIN 53483	-	-
Dielectric loss factor at 1 MHz ( $\tan\delta$ )	DIN 53483	-	-
Dielectric strength	VDE 0303	kV/mm	-
Tracking resistance	IEC 60112	-	-

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