



**CUT TO SIZE
plastics**

NSW: Cnr. Dursley & Fairfield Rds.
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TECHNICAL DATA SHEET ACRYLIC (POLYMETHYL METHACRYLATE)

Attribute of the used raw materials	Norm	Unit i. e.	PMMA
I. Physical Properties			PMMA
1. Specific gravity (ρ)	ISO 1183	g/cm ³	1,18
2. Water absorption	DIN 53495	%	0,3
3. Chemical resistance	DIN 53476	-	-
4. Max. permissible service temperature (no stronger mech. stress involved)			
upper temperature limit	-	°C	75...90
lower temperature limit	-	°C	-40
II. Mechanical Properties			
1. Tensile strength at yield (σ_s)	ISO 527	MPa	70
2. Elongation at yield (ϵ_s)	ISO 527	%	-
3. Tensile strength at break (σ_R)	ISO 527	MPa	72
4. Elongation at break (ϵ_R)	ISO 527	%	5
5. Impact strength (a_n)	ISO 179	kJ/m ²	15
6. Notch impact strength (a_k)	ISO 179	kJ/m ²	1,5
7. Ball indentation hardn.(Hk)/Rockwell	ISO 2039-1	MPa	185
8. Flexural strength (σ_B 3,5%)	ISO 178	MPa	125
9. Modulus of elasticity (Et)	ISO 527	MPa	3300
III. Thermal Properties			
1. Vicat softening temp. VST/B/50	ISO 306	°C	100
VST/A/50		°C	-
2. Heat deflection temp. HDT/B	ISO 75	°C	95
HDT/A		°C	-
3. Coef. of linear therm. expansion (α)	DIN 53752	K ⁻¹ x 10 ⁻⁴	0,7
4. Thermal conductivity at 20 °C (λ)	DIN 52612	W/(m*K)	0,19
IV. Electrical Properties			
1. Volume resistivity (ρ_D)	VDE 0303	Ω x cm	$\geq 10^{15}$
2. Surface resistivity (R_o)	VDE 0303	Ω	$\geq 10^{15}$
3. Dielectric constant at 1 MHz (ϵ_r)	DIN 53483		2,9
4. Diel. loss factor at 1 MHz ($\tan\delta$)	DIN 53483		0,03
5. Dielectric strength	VDE 0303	kV/mm	30
6. Tracking resistance	DIN 53480		KC >600
V. Additional Data			
1. Bondability			+
2. Physiol. indifference	EEC 90/128		+
according	FDA		+
3. Friction coefficient	DIN 53375		0,55
4. Flammability	UL 94		HB



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5. UV stabilisation			+
VI. Chemical Properties	Norm	Unit i. e.	PMMA
1. Acid resistance			+
2. Hydrolysis resistance (delute)			+
3. Hydrocarbonat resistance			+
4. CKW resistance			0
5. Aromatic resistance			-
6. Ketone resistance			-
7. Resistance against hot water			0

Disclaimer:

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For the most recent technical data and free application advice, please call Cut To Size Plastics on: (02) 9681 0400.