



Typical Properties Data Sheet

The Supplier of Engineering Plastics
 Rods, Sheets, Tubes, Profiles and Machining Parts

Lasenic® PMMA Properties Data Sheet

① Raw material description

Standard Grade:	Casting grade	Appearance color:	---
Applications:	Processing materials, rod, sheet, board, tube. Used in automobile, medical, industry, key for electronics, consumer goods.		
Remarks:	Character: excellent light transmittance, high surface hardness, shock resistance, heat resistance, anti-aging, excellent dielectric property.		

② Raw material technical datasheet

Property item	Test conditions	Testing method	Testing data	Unit
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I. Physical property

Density	23°C	ASTM D792	1.17~1.19	g/cm ³
Shrinkage	(cold mold/cold parts), 48hrs	ASTM D955	0.2~0.6	%
Absorption	weight gain (After 24 hours immersion)	ASTM D570	0.3	%
Flammability class	---	UL94	HB	Class
Transparency	3.2mm	ASTM D1003	92	%

II. Mechanical property

Tensile strength	---	ASTM D638	70	MPa
Tensile modulus	---	ASTM D638	2400~2800	MPa
Elongation at break	---	ASTM D638	2.5~6	%
Flexural strength	---	ASTM D790	110	MPa
Flexural modulus	---	ASTM D790	32000	kgf/cm ²
Hardness-Rockwell	---	ASTM D785	97	M (Scale)
Hardness-Shore D	---	ASTM D2240	88	D
Cantilever beam tensile strength	Drop hammer (15.2×15.2×0.3cm weight 1.4kg, radius 0.64cm)	ASTM D256	1.4	J
Cantilever beam tensile strength (notched)	23°C	ASTM D256	12.7	J/m
Coefficient of friction	---	ASTM D1894	0.5	---

III. Thermal property

Thermal deformation temperature	1.82MPa	ASTM D648	115	°C
Max. working temperature(short time)	---	UL746B	105	°C
Max. working temperature(long time)	---	UL746B	80	°C
Vicat softening point	50°C/hr, 6kg unannealed	ASTM D1525	104	°C
Brittle temperature	---	ASTM D746	-60	°C
Thermal conductivity	23°C	ASTM C177	0.14~0.2	W/(m*K)
Coefficient of linear thermal expansion	---	ASTM D696	7	10 ⁻⁵ K ⁻¹

IV. Electrical property

Dielectric constant	1 MHz	IEC 60250	2.2~2.5	10 ⁶ Hz
Dielectric loss angle tangent	1 MHz	IEC 60250	0.02~0.08	10 ⁶ Hz

Dielectric strength	---	IEC 60243	20	kV/mm
Volume resistivity	DAM	IEC 60093	10^{15}	$\Omega \cdot \text{cm}$
Surface resistivity	---	IEC 60093	10^{13}	Ω
Electric arc resistance	---	IEC 61621	no electric leakage	sec

NOTE: $1 \text{ g/cm}^3 = 1,000 \text{ kg/m}^3$, $1 \text{ Mpa} = 1 \text{ N/mm}^2$, $1 \text{ kV/mm} = 1 \text{ MV/m}$

Statement:
NOTE: The information contained herein are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. Quanda will not provide any legally binding guarantee of certain properties, or any suitability.