

Physical properties PMMA GS

General properties	Test method	Unit	Value
Density	ISO 1183 DIN 53479 ASTM D 792	g/cm ³	1.19
Water absorption at saturation (23°C)	ISO 62 DIN 53495 ASTM D 570	%	0.20
Optische Eigenschaften			
	ISO 13468-1/-2	%	92
Mechanical properties			
Yield Stress [sY] (+23°C)	ISO 527-1/-2 DIN 53455 ASTM D 638	%	6
Tensile Strength [sM] (+23°C)	ISO 527-1/-2 DIN 53455 ASTM D 638	MPa (N/mm ²)	75
Tensile Strain at Break [eB] (+23°C)	DIN 53455	%	6
Tensile Modulus [Et] (+23°C)	ISO 527-1/-2 DIN 53457 ASTM D 638	MPa (N/mm ²)	3400
Compressive Strength [scM]	ISO 604 ASTM D 695	MPa (N/mm ²)	130
Flexural Strength	ISO 178 ASTM D 790	MPa (N/mm ²)	120
Flexural Modulus [EB]	ISO 178 ASTM D 790	MPa (N/mm ²)	3200
Charpy Impact Strength (+23°C)	ISO 179 DIN 53453	kJ/m ²	17
Charpy Notched Impact Strength (+23°C)	ISO 179 DIN 53453	kJ/m ²	2
Rockwell Hardness [HR]	ISO 2039-2	-	100 M
Thermal properties			
max. service temperature (long time)	-	°C	80
max. service temperature (short time)	-	°C	90
Heat Deflection Temperature [HDT/A]	ISO 75-1/-2 DIN 53461 ASTM D 1525	°C	105
Vicat Softening Point	ISO 306 DIN 53460 ASTM D 1525	°C	110
	DIN 52612	W/(mxK)	0.19
heat capacity	-	J/(gxK)	2.16 (60°)

This table is a valuable help in the choice of a material. The data listed here fall within the normal range of products properties, but they should not be used to establish material specification limits nor used alone as the basis of design.

Electrical properties	Test method	Unit	Value
Dielectric Constant [ε] (1 kHz)	DIN IEC 60250 (DIN VDE 0303-4) ASTM D 150	-	3.10
Dielectric Constant [ε] (1 MHz)	DIN IEC 60250 (DIN VDE 0303-4) ASTM D 150	-	2.70
Dissipation Factor [tan δ] (50 Hz)	DIN IEC 60250 (DIN VDE 0303-4) ASTM D 150	10 ⁻⁴	0.06
Dissipation Factor [tan δ] (1 kHz)	DIN IEC 60250 (DIN VDE 0303-4) ASTM D 150	10 ⁻⁴	0.04
Dissipation Factor [tan δ] (1 MHz)	DIN IEC 60250 (DIN VDE 0303-4) ASTM D 150	10 ⁻⁴	0.02
Volume Resistivity	DIN IEC 60093 (DIN VDE 0303-30) ASTM D 257	Ωxm	>10 ¹⁵
Surface Resistivity	DIN IEC 60093 (DIN VDE 0303-30) ASTM D 257	Ω	>10 ¹⁴
Dielectric Strength	DIN EN 60243-1 (DIN VDE 0303-22)	kV/mm	30
Combustibility properties			
Flammability acc. To UL94	IEC 60695-11-10	Class	HB
Fire behavior	DIN 4102	Klasse	B2