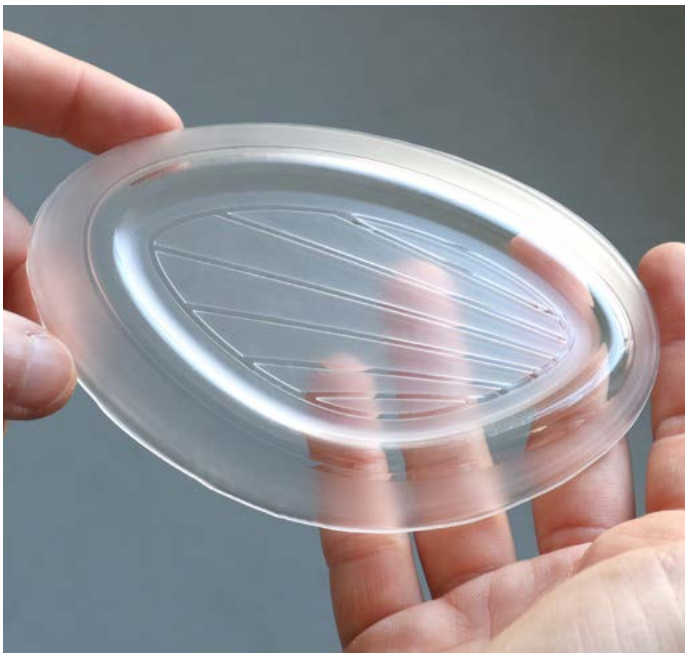
Mayku PMMA Sheets

PMMA, also known as Polymethyl methacrylate and often referred to as acrylic, is a transparent thermoplastic that is widely used as a lightweight and shatter-resistant alternative to glass. It is a versatile material that has a variety of applications due to its transparency, durability, and weather resistance.

PMMA sheets are optically clear.



Car light lens made on the Mayku Multiplier.

GENERAL

Property	Method	Unit	CRYLUX®
Density	ISO 1183-1	g/cm^3	1.19
Water absorption 24h/23 °C	ISO 62 Method 1	%	0.2
Rockwell Hardness	ISO 2039-2	M-Scale	105

MECHANICAL

Property	Method	Unit	CRYLUX®
Tensile strength	ISO 527-2	MPa	75
Elongation at break	ISO 527-2	%	6
Tensile modulus	ISO 527-2	MPa	3300
Flexural strength	ISO 178	MPa	125
Flexural modulus	ISO 178	MPa	3000
Impact strength Charpy unnotched	ISO 179-1	kJ/m^2	18
Impact strength Charpy notched	ISO 179-1	kJ/m^2	2

OPTICAL

Property	Method	Unit	CRYLUX®
Light transmission	ISO 13468-1	%	93
Refractive index	ISO 489	n^{D}_{20}	1.492

THERMAL

Property	Method	Unit	CRYLUX®
Vicat temperature (B 50)*	ISO 306	˚C	110
Heat deflection temperature (A)	ISO 75-2	˚C	105
Specific heat capacity	ISO 3146-C-60˚C	J/gK	2.16
Linear thermal expansion a	ISO 11359-2	mm/m˚C	0.07
Thermal conductivity	DIN 52612	W/mK	0.19
Service temperature continuous use		˚C	80
Max. temperature short term use		˚C	90
Degradation temperature		˚C	>280
Sheet forming temperature range		˚C	140-190

ELECTRICAL

Property	Method	Unit	CRYLUX®
Surface resistivity	IEC 60093	Ω	$>10^{14}$
Volume resistivity	IEC 60093	Ω × m	$>10^{15}$
Electrical strength	IEC 60243-1	kV/mm	10
Dielectrical strength	IEC 60243-1	kV/mm	30
Dielectrical dissipation factor 50 Hz	DIN 53483-2		0.06
Dielectrical dissipation factor 1 KHz	DIN 53483-2		0.04
Dielectrical dissipation factor 1 MHz	DIN 53483-2		0.02
Relative permittivity 50 Hz	DIN 53483-2		2.7
Relative permittivity 1 KHz	DIN 53483-2		3.1
Relative permittivity 1 MHz	DIN 53483-2		2.7

* = Pre-treatment: 16 h at 80 °C

Note: These technical data of our products are typical ones; the actually measured values are subject to production variations.