

TECHNICAL DATA SHEET

POLYCARBONATE (Lexan or Makrolon)

Sheet Colour: OPAL, CLEAR & Light GREY TINT

Rod: CLEAR Only

GENERAL

Density	1,2 g/cm ³	ISO 1183	DIN 53479
Water absorption in air 50% r.h.	0,15 %	ISO 62	DIN 53715
Absorption 23-C in water-saturation	0,36 %	ISO 62	DIN 53495

MECHANICAL PROPERTIES

Tensile stress at yield at break	60 N/mm ²	ISO 527	DIN53455
Elongation at break	80 %	ISO 527	DIN53455
Tensile Modulus of elasticity	2200 N/mm ²	ISO 527	DIN53455
Compression test 1% strain 1000h	-	ISO 899	DIN53444
Impact strength Charpy 7,5 J	no break	ISO R179	DIN53453
Notched impact strength Charpy	40 KJ/ mm ²	ISO179/3C	DIN53453
Ball indentation hardness	110 N/mm ²	ISO2039.1	DIN53456
Rockwell hardness (dry)	-	ISO2039.2	DIN53456
Coefficient of friction to steel ^[12]	0,55	ISO 8295	DIN 53375

THERMAL PROPERTIES

Melting point	-	ISO 3146	
Thermal conductivity	0,2 W/(km)	ISO 22007.2	DIN 52612
Deformation at temperature HDT ^[15]	135 °C	ISO75	DIN 53461
Linear expansion coefficient 23-60°C	65 x 10 ⁻⁶ K ⁻¹	ISO 11359	DIN 53752
Operating temperature continuously ^[17]	115 °C		
Operating temperature short period-no load ^[18]	145 °C		
Minimum operating temperature ^[19]	-60 °C		
Flammability UL 94 (3-6 mm thickness)	HB		UL94
Oxygen index (LOI)	25 %	ISO4589	DIN 22117

ELECTRICAL PROPERTIES

Dielectric constant at 1 MHz.	2,9	ISO 250	DIN 53483
Dielectric strength	30 KV/mm	ISO 243	DIN 53481
Volume resistivity	10 ¹⁵ Ωcm	ISO 93	DIN 53482
Dissipation factor tan Δ at 1MHz	0,0011	ISO 250	DIN 53483

Characteristics:

- Excellent Machinability
- High Dimensional Stability
- Extreme Impact Strength
- UV Stability
- Good Chemical Resistance
- Good Electrical Properties

Applications:

- Semiconductor Components
- Insulators
- Machine Guards
- Prototypes

Please Note: The above Technical Data Sheet is a general guide to the physical properties of the material. This information is given without Warranty or Liability. It is the customers responsibility to determine if this product is suitable for the application.