

# TECHNICAL DATA SHEET

## "LEXAN", "MAKROLON" POLYCARBONATE

ROD Colour: ....Clear ONLY

SHEET Colour: Clear, Opal, Tint

### GENERAL

Density	1,2 g/cm <sup>3</sup>	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 <sup>2</sup>	ISO 527	DIN53455
Elongation at break	80 %	ISO 527	DIN53455
Tensile Modulus of elasticity	2200 N/mm <sup>2</sup>	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 <sup>2</sup>	ISO179/3C	DIN53453
Ball indentation hardness	110 N/mm <sup>2</sup>	ISO2039.1	DIN53456
Rockwell hardness (dry)	-	ISO2039.2	DIN53456
Coefficient of friction to steel <sup>[12]</sup>	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 <sup>[15]</sup>	135 °C	ISO75	DIN 53461
Linear expansion coefficient 23-60°C	65 x 10 <sup>-6</sup> K <sup>-1</sup>	ISO 11359	DIN 53752
Operating temperature continuously <sup>[17]</sup>	115 °C		
Operating temperature short period-no load <sup>[18]</sup>	145 °C		
Minimum operating temperature <sup>[19]</sup>	-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 <sup>15</sup> 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, & all this information given is without warranty & liability. It is the customer's responsibility to determine the suitability of this product to the given application.