



TECHNICAL DATASHEET

EXOLON® UV

Polycarbonate sheets made of MAKROLON®

PROPERTY	UNIT	VALUE	STANDARD	VARIABLE
General				
Density	g/cm ³	1,2	ISO 1183-1	
Water absorption saturation	%	0,30	ISO 62	water at 23 °C
Water absorption equilibrium	%	0,12	ISO 62	23 °C, 50% relative humidity
Mechanical				
Tensile modulus	MPa	2350	ISO 527-1,-2	1 mm/min
Yield stress	MPa	>60	ISO 527-1,-2	50 mm/min
Yield strain	%	6	ISO 527-1,-2	50 mm/min
Nominal strain at break	%	>50	ISO 527-1,-2	50 mm/min
Flexural modulus	MPa	2350	ISO 178	2 mm/min
Flexural strength	MPa	90	ISO 178	2 mm/min
Charpy unnotched impact strength	kJ/m ²	non-break	ISO 179-1eU	23 °C
Charpy notched impact strength	kJ/m ²	80P	ISO 179-1eA	23 °C, 3 mm
Izod notched impact strength	kJ/m ²	70P	ISO 180-A	23 °C, 3,2 mm
Optical				
Refractive index		1,587	ISO 489	Procedure A
Thermal				
Vicat softening temperature	°C	148	ISO 306	50 N, 50 °C/h
Thermal conductivity	W/(m*K)	0,20	ISO 8302	23 °C
Coefficient of linear thermal expansion	10 ⁻⁴ /K	0,65	ISO 11359-1,-2	23 to 55 °C
Temperature of deflection under load	°C	128	ISO 75-1,-2	1,80 MPa

The technical data given in this sheet correspond to our current state of knowledge and should not be construed as an agreement or guarantee regarding certain properties of our products. The decision on the suitability of a particular material for a specific application is up to the user. We reserve the right to modify the given data. Errors of the given data are reserved.



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PROPERTY	UNIT	VALUE	STANDARD	VARIABLE
Thermal				
Temperature of deflection under load	°C	140	ISO 75-1,-2	0,45 MPa
Electrical				
Electrical strength	kV/mm	34	IEC 60243-1	1 mm
Volume resistivity	Ohm*m	10 ¹⁴	IEC 60093	
Surface resistivity	Ohm	10 ¹⁶	IEC 60093	
Relative permittivity		3,1	IEC 60250	100 Hz
Relative permittivity		3,0	IEC 60250	1 MHz
Dissipation factor	10 ⁻⁴	5	IEC 60250	100 Hz
Dissipation factor	10 ⁻⁴	95	IEC 60250	1 Mhz
Fire classification				
Fire rating UK		Class 1Y	BS 476 Part 7	2,3,4,6 & 12 mm
Fire rating FR		M2	NF P 92-501&505	2 - 15 mm
Fire rating EU		B-s1, d0	EN 13501-1	1 - 6 mm
Fire rating USA		V2	UL94	0,75 - 1,4 mm
Fire rating USA		HB	UL94	≥1.5mm
Fire rating USA		V0	UL94	≥10mm