

Application purpose and characteristics

For very heavy-duty applications, such as security glazing, machine protection, protection against vandalism
Extreme impact strength, wide temperature resistance range, good fire protection classification

Material name, short description	PC
Material name, based on technical standards	Polycarbonate
Density	1.2 g/cm ³
Color	transparent
Compound code	PC 00.006-00
Remarks	Makrolon GP

Mechanical properties

Modulus of elasticity & tension 1	2350 N/mm ² ISO 527-1,-2 1 mm/min
Yield stress	≥ 60 N/mm ² ISO 527-1,-2 50 mm/min
Elongation at break	≥ 50 % ISO 527-1,-2 50 mm/min, nominally
Elongation at yield	6 % ISO 527-1,-2 50 mm/min
Bending strength 1	90 N/mm ² ISO 178 2 mm/min
Impact strength	no break ISO 179-1eU 23 °C, without notch, Charpy

Electrical attributes

Dielectric dissipation factor 1	0.001 IEC 60250 100 Hz
Dielectric dissipation factor 2	0.01 IEC 60250 1 MHz
Dielectric constant 1	3.1 IEC 60250 100 Hz
Dielectric constant 2	3 1 MHz
Surface resistivity	10 ¹⁶ Ω IEC 60093
Volume resistivity	10 ¹⁴ Ω*cm IEC 60093

Thermal attributes

Min. operating temperature	-100 °C
Max. operating temperature long term	120 °C
Coefficient of linear thermal expansion 1	0.65 * 10 ⁻⁴ K ⁻¹ ISO 11359-1,-2 23 - 55 °C
Heat deflection temperature 1	128 °C ISO 75-1,-2 1.80 N/mm ²
Heat deflection temperature 2	140 °C ISO 75-1,-2 0.45 N/mm ²
Thermal conductivity	0.2 W/(m·K) ISO 8302 23 °C

Other attributes

Moisture absorption	0.12 % ISO 62 23 °C, 50 % relative humidity
Water absorption	0.3 % ISO 62 Water at 23 °C
Refractive index	1.587 ISO 489 Method A

In compliance with **RoHS** and **REACH** directives.

This information is based on our available data. These values are measured on standard test specimens and are within the normal tolerance range of material properties and do not represent guaranteed property values. Therefore they shall not be used for specification purposes. The customer is solely responsible for quality and suitability of material for his application. He has to test usage and processing prior to use. Angst+Pfister makes no guarantees for the suitability of the material for any given application and assumes no obligation or liability in connection with the information provided above.