

**APSOplast® PC transparent**
**Engineering Plastic Technology  
Technical Data Sheet**
**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

**Product description**

Material name, long description	Polycarbonate
Material name, short description	PC
Material Code	PC 00.006-00
Density	1.2 g/cm <sup>3</sup>
Color	transparent

**Mechanical properties**

Modulus of elasticity and tension	Test value: 2350 MPa Test norm: ISO 527-1,-2 Test parameter: 1 mm/min
Yield stress	Test value: > 60 MPa Test norm: ISO 527-1,-2 Test parameter: 50 mm/min
Elongation at yield	Test value: 6 % Test norm: ISO 527-1,-2 Test parameter: 50 mm/min
Elongation at break	Test value: > 50 % Test norm: ISO 527-1,-2 Test parameter: 50 mm/min, nominally
Bending strength	Test value: 90 MPa Test norm: ISO 178 Test parameter: 2 mm/min
Impact strength	Test value: no break - Test norm: ISO 179-1eU Test parameter: 23 °C, without notch, Charpy

**Thermal properties**

Min. operating temperature	Test value: -100 °C
Max. operating temperature long term	Test value: 120 °C
Coefficient of linear thermal expansion	Test value: 0.65 10 <sup>-4</sup> K <sup>-1</sup> Test norm: ISO 11359-1,-2 Test parameter: 23 - 55 °C
Heat deflection temperature	Test value: 128 °C Test norm: ISO 75-1,-2 Test parameter: 1.80 MPa
	Test value: 140 °C Test norm: ISO 75-1,-2 Test parameter: 0.45 MPa
Thermal conductivity	Test value: 0.2 W/m·K Test norm: ISO 8302 Test parameter: 23 °C

**Electrical properties**

Dielectric constant	Test value: 3.1 / 3.0 MHz Test norm: IEC 60250 Test parameter: 100 Hz / 1 MHz
Dielectric loss factor	Test value: 5 10 <sup>-4</sup> / 95 10 <sup>-4</sup> Test norm: IEC 60250 Test parameter: 100 Hz / 1 MHz
Volume resistivity	Test value: 10 <sup>14</sup> Ohm·m Test norm: IEC 60093
Surface resistivity	Test value: 10 <sup>16</sup> Ohm Test norm: IEC 60093

**Other properties**

Moisture absorption	Test value: 0.12 % Test norm: ISO 62 Test parameter: 23 °C, 50 % relative humidity
Water absorption at saturation	Test value: 0.3 % Test norm: ISO 62 Test parameter: Water at 23 °C
Refractive index	Test value: 1.587 Test norm: ISO 489 Test parameter: Method A
Translucence	Test value: 87 % Test parameter: 5 mm Thickness

**Overview Fire Protection**

DIN 5510-2 (2009-05): S3 / SR2 / ST1

NF F 16-101: M2 / F2

UL 94: HB/1.5 mm