

Omnia Plastica PC Polycarbonate

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, Extruded

Material Notes:

This amorphous polymer is commonly used for its high shock resistance even at low temperature. It is not a material recommended for mechanical applications, even if its dimensional stability does make it suitable for precision parts. Features: Clear Shock resistance Dielectric properties Dimensional stability Colour: clear Weak Point: It has no self-lubricating power and it is attacked by oil and grease, therefore it cannot be considered suitable for lubricated moving mechanical parts. Application: Electrical : good dielectric properties. It is mainly used in this field. Chemical: the use of PC in the chemical industry is not ideal, due to the poor resistance to hydrocarbons. Food contact: physiologically inert if natural. Mechanical: it is used for precision mechanisms when good dimensional stability is required. Information provided by Omnia Plastica s.p.a. for semifinished products such as sheet, rod, and tube.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Omnia-Plastica-PC-Polycarbonate.php

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in ³	ISO.1183 DIN.53479
Moisture Absorption at Equilibrium	0.20 %	0.20 %	50% relative humidity
Water Absorption at Saturation	0.40 %	0.40 %	23°C

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	75	75	dry sample; ISO2039.2
Ball Indentation Hardness	110 MPa	16000 psi	ISO2039.1 DIN.53456
Tensile Strength at Break	65.0 MPa	9430 psi	ISO.527 DIN.53455
Elongation at Break	100 %	100 %	ISO.527 DIN.53455
Tensile Modulus	2.30 GPa	334 ksi	ISO.527 DIN.53455
Compressive Strength	18.0 MPa	2610 psi	1% strain over 1000 hours; ISO.899 DIN.53444
Charpy Impact Unnotched	NB	NB	7.5 J; ISO.R179 DIN.53453
Charpy Impact, Notched	2.30 J/cm ²	10.9 ft-lb/in ²	ISO179/3C DIN.53453
Coefficient of Friction, Dynamic	0.50	0.50	on dry ground steel; load =0.05MPa; speed =0.6 m/s

Thermal Properties	Metric	English	Comments
CTE, linear	65.0 µm/m-°C @Temperature 23.0 - 60.0 °C	36.1 µin/in-°F @Temperature 73.4 - 140 °F	

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	120 °C	248 °F	Maximum operating temperature continuously for 5000 hours based on a tensile stress of 50% at 23° C.
	135 °C	275 °F	short period, no load
Deflection Temperature at 1.8 MPa (264 psi)	135 °C	275 °F	ISO.75 DIN.53461
Minimum Service Temperature, Air	-50.0 °C	-58.0 °F	impact conditions and heavy loads not considered
Flammability, UL94	HB	HB	
	@Thickness 3.00 mm	@Thickness 0.118 in	
	V-2	V-2	
	@Thickness 6.00 mm	@Thickness 0.236 in	
Oxygen Index	25 %	25 %	ISO.4589

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	ISO.93 DIN.53482
Dielectric Constant	3.0	3.0	ISO.250 DIN.53483
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dielectric Strength	30.0 kV/mm	762 kV/in	ISO.243 DIN.53481
Dissipation Factor	0.010	0.010	ISO.250 DIN.53483
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	

Descriptive Properties	Value	Comments
Form	Amorphous	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China