

Technical Information



LUPOY PC 8003-10

Polycarbonate Resin

Introduction

LUPOY PC 8003-10 polycarbonate(PC) siloxane copolymer resin is designed for extrusion and injection molding products. It exhibits an excellent low temperature ductility, weatherability and good physical property balance of heat resistance, transparency and impact strength.

Main Characteristics

- Low Temperature ductility
- Mold release agent included

Applications

- UV absorber included
- Packaging applications
- Compounds
- Small appliances

Properties ¹	Test Method	Value	English Units	Value	SI Units
Physical					
Melt Flow Rate (300 °C /1.2 kg)	ASTM D 1238	0.0220	lb/10 min	10.0	g/10 min
Density	ASTM D 792 ISO 1183	75	lb/ft ³	1,200	kg/m ³
Mold Shrinkage	ASTM D 955	0.005~0.007	in/in	0.005~0.007	mm/mm
Water Absorption @ 24 hrs, 23°C	ASTM D 570 ISO 62	0.12	%	0.12	%
@ equilibrium, 50%RH, 23°C	ASTM D 570 ISO 62	0.20	%	0.20	%
Optical					
Light Transmittance (3.0mm)	ASTM D 1003 ISO 13468-1	>88	%	>88	%
Haze (3.0mm)	ASTM D 1003 ISO/DIS 14782	<1.0	%	<1.0	%
Thermal					
Deflection Temperature Under Load (DTUL) @ 3.2 mm @ 66 psi (0.45 MPa), annealed	ASTM D 648	268	°F	131	°C
@ 264 psi (1.8 MPa), annealed		264	°F	129	°C
@ 264 psi (1.8 MPa), unannealed		243	°F	117	°C
Deflection Temperature Under Load (DTUL) @ 264 psi (1.8 MPa), unannealed	ISO 75-2/A	237	°F	114	°C
Vicat Softening Point, 50°C /hr, 50N Load	ASTM D 1525 ISO 306/B120	279	°F	137	°C
Coefficient of Linear Thermal Expansion, @ -40 to 82°C	ASTM D 696	39 x 10 ⁻⁶	in/in/°F	70 x 10 ⁻⁶	mm/mm/°C
Mechanical					
Tensile Yield Strength ²	ASTM D 638 ISO 527-2	8,560 8,410	psi	59 58	MPa
Ultimate Tensile Strength	ASTM D 638 ISO 527-2	10,010 9,430	psi	69 65	MPa
Elongation at Yield	ASTM D 638 ISO 527-2	6 6	%	6 6	%
Elongation at Break	ASTM D 638 ISO 527-2	120 110	%	120 110	%
Tensile Modulus	ASTM D 638 ISO 527-2	321,000 352,000	psi	2,210 2,430	MPa
Flexural Strength	ASTM D 790 ISO 178	13,500 12,900	psi	93 89	MPa
Flexural Modulus	ASTM D 790 ISO 178	304,000 290,000	psi	2,100 2,000	MPa
Notched Izod Impact ³ @ 23 °C	ASTM D 256 ISO 180	15 31	ft-lb/in ft-lb/in ²	825 65	J/m kJ/m ²
Unnotched Izod Impact @ 23 °C	ASTM D 256 ISO 180	No break No break		No break No break	
Notched Izod Impact ³ @ -30 °C	ASTM D 256 ISO 180	11 22	ft-lb/in ft-lb/in ²	575 45	J/m kJ/m ²
Rockwell Hardness	ASTM D 785 ISO 2039-2	120	R Scale	50	M Scale
Electrical					
Volume Resistivity @ 23 °C, dry	ASTM D 257	1.0 x 10 ¹⁵	Ω-cm	1.0 x 10 ¹⁵	Ω-cm

1. Typical properties; not to be constructed as specifications.

2. Tensile Test @ 23 °C; 50 mm/min.

3. 0.125 in; 10 mil notch (3.2 mm; 0.25 mm notch).