Technical Information

LUPOY 1600-03

Polycarbonate Resin

Introduction

LUPOY PC 1600-03 resin is designed for extrusion products. It exhibits an excellent physical property balance of heat resistance, transparency and impact strength.

Main Characteristics

- High viscosity
- High melt strength

Applications

- Compounds
- Multi-wall sheets

Properties[1]	Test Method	English Value	English Units	SI Value	SI Units
Physical					
Melt Flow Rate (300 °C /1.2 kg)	ASTM D 1238	3	g/10 min	3	g/10 min
Density	ASTM D 792	1.20		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	0.15	%	0.15	%
@ equilibrium, 50%RH, 23°C	ASTM D 570	0.32	%	0.32	%
Optical					
Refractive Index, n_D	ASTM D 542	1.586		1.586	
Light Transmittance	ASTM D 1003	89	%	89	%
Haze	ASTM D 1003	0.7~1.5	%	0.7~1.5	%
Thermal					
Deflection Temperature Under Load (DTUL) @ 4 mm	ASTM D 648				
@ 66 psi (0.45 MPa), annealed		295	°F	146	°C
@ 264 psi (1.8 MPa), annealed		289	°F	143	°C
@ 264 psi (1.8 MPa), unannealed		270	°F	132	°C
Vicat Softening Point, 50°C /hr, 50N Load	ASTM D 1525	304	°F	151	°C
Coefficient of Linear Thermal Expansion, @ -40 to 82°C	ASTM D 696	38 x 10^{-6}	in/in/°F	68 x 10^{-6}	mm/mm/°C
Mechanical					
Tensile Yield Strength[2]	ASTM D 638	8,700	psi	60	MPa
Ultimate Tensile Strength	ASTM D 638	10,500	psi	72	MPa
Elongation at Yield	ASTM D 638	6	%	6	%
Elongation at Break	ASTM D 638	150	%	150	%
Tensile Modulus	ASTM D 638	350,000	psi	2,410	MPa
Flexural Strength	ASTM D 790	14,000	psi	96	MPa
Flexural Modulus	ASTM D 790	350,000	psi	2,410	MPa
Notched Izod Impact @ 23 °C	ASTM D 256	18	ft-lb/in	950	J/m
Unnotched Izod Impact @ 23 °C	ASTM D 256	No break		No break	

1. Typical properties; not to be constructed as specifications.
2. 0.125 in; 10 mil notch (3.2 mm; 0.25 mm notch)..