Technical Information

LUPOY PC 1261-03

Polycarbonate Resin

Introduction

LUPOY PC 1261-03 resin is designed for extrusion blow molding(EBM) and injection stretch blow molding(ISBM) products. It exhibits an excellent physical property balance of heat resistance, transparency and impact strength. Two base colors available: Ultra blue B0786T & Ice blue W0992T

Main Characteristics

- High viscosity
- Complies with U.S. FDA Regulation 21 CFR 177.158
- Complies with E.U. Food Contact Regulations
- Complies with China GB13116-94 Regulations

Applications

- Rigid packaging
- 19L (5 gal) big water bottles

Properties[1]	Test Method[2]	English Value	English Units	SI Value	SI Units
Physical					
Melt Flow Rate (300 °C /1.2 kg)	ASTM D 1238	2.5	g/10 min	2.5	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	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	
Instrumented Dart Impact, Total Energy @ 23 °C	ASTM D 3763	830	in-lb	94	J
Rockwell Hardness	ASTM D 785	118	R Scale	74	M Scale
Taber Abrasion Resistance (Δ Haze)	ASTM D 1044	45	%	45	%
Ignition Resistance					
Limiting Oxygen Index	ASTM D 2863	26	%	26	%
Ball Indentation Temperature	IEC 598-1	>125	°C	>125	°C
Average Extent of Burning	ASTM D 635	1	in	25	mm
Electrical					
GWT 2.0 mm, 5 second	IEC 695-2-1	850	°C	850	°C
Comparative Tracking Index @ 2.0 mm	IEC 112	250	V	250	V
Dielectric Strength	ASTM D 149	420	V/mil	17	KV/mm
Dielectric Constant @ 60 Hz	ASTM D 150	3		3	
Dissipation Factor @ 60 Hz	ASTM D 150	0.001		0.001	
Volume Resistivity @ 23 °C, dry	ASTM D 257	2.0 x 10^{17}	Ω-cm	2.0 x 10^{17}	Ω-cm

1. These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.
2. ASTM test methods may not be technically equivalent, so that data values may differ from those obrained by simple unit conversion.