

Technical Information



LUPOY PC 1603-03

Polycarbonate Resin

Introduction

LUPOY PC 1603-03 resin is designed for extrusion products. It exhibits an excellent physical property balance of heat resistance, transparency and impact strength.

Main Characteristics

- UV Stabilizer¹
- High viscosity
- Structure sheets
- Good mold release
- High melt strength
- Multi-wall sheets

Applications

Properties ²	Test Method	English		SI	
		Value	Units	Value	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 @ 66 psi (0.45 MPa), annealed	ASTM D 648	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 ³	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	
Electrical					
GWFI @ 1.5 mm	IEC 695-2-1	850	°C	850	°C

1. The addition of an UV stabilizer to a resin does not completely eliminate the effects of UV exposure but to slow down the rate at which the effects occur. These effects may include color shift, decreased mechanical properties, and/or optical properties. Actual results may vary depending on application and other factors such as resin color, transparency and additives.

Therefore, actual end-use testing is recommended.

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

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