WeConnectScience

LG Chem

LUPOY PC2001-10

Injection Molding & Extrusion Grade, PC

Description

FDA compliance[1], Good mold release,
Medium viscosity, Bio-compatibility ISO 10993 certified
EtO and steam sterilization at 121°C

Application

Medical Devices
(Syringes, Dialyzers, Connectors)

Ver. 23.07

Properties	Test Condition	Test Method	Unit	Typical Value
Physical				
Specific Gravity		ISO 1183	g/cm^3	1.20
Molding Shrinkage		ISO 294-4	mm/mm	0.005~0.007
Melt Flow Rate	300℃/1.2kg	ISO 1133	cm^3/10min	9
Optical				
Refractive Index, n_D		ISO 489		1.586
Light Transmittance		ASTM D 1003	%	89
Haze		ASTM D 1003	%	<1.5
Mechanical				
Tensile Strength (@ Yield)	50mm/min	ISO 527	MPa	60
Tensile Elongation (@ Break)	50mm/min	ISO 527	%	>100
Flexural Strength	2mm/min	ISO 178	MPa	96
Flexural Modulus	2mm/min	ISO 178	MPa	2,300
Charpy Impact Strength (Notched)	23℃	ISO 179	KJ/m^2	70
Izod Impact Strength (Notched)	23℃	ISO 180	KJ/m^2	70
Thermal				
Heat Deflection Temperature (unannealed, Flatwise)	0.45MPa	ISO 75	℃	133
(unannealed, Flatwise)	1.8MPa		℃	123
Vicat Softening Point	5kg, 50°C/h	ISO 306	℃	144

1) When used unmodified for the manufacture of food contact articles LUPOY PC2001-10 Polycarbonate resins comply with the U.S. Food, Drug, and Cosmetic Act and Food Additive Regulations 21 CFR 177.1580 and E.U. Food Contact Regulations

Note) Typical values are only for material selection purpose, and variation within normal tolerances are for various colors.
Values given should not be interpreted as specification and not be used for part or tool design.
All properties, except melt flow rate are measured on injection molulded specimens and after 48 hours storage at 23℃, 50% relative humidty.

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Electrical

GWT 2.0 mm, 5 second		IEC 60695-2-13	℃	850
Comparative Tracking Index(CTI)	Solution A	IEC 60112	Volts	250
Volume Resistivity	23℃	ASTM D257	Ohm·m	$2x10^{17}$
Dielectric Strength	23℃	ASTM D149	KV/mm	17
Dielectric Constant (60 Hz)	23℃	ASTM D150		3
Dissipation Factor (60 Hz)	23℃	ASTM D150		0.001
Comparative Tracking Index (2.00 mm)	23℃	IEC 60112	V	250

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Processing Guide (Injection Molding)

Processing Parameters		Unit	Value
Drying Temperature		℃	120
Drying Time		hrs	4
Maximum Moisture Content		%	0.02
Melt Temperature		℃	290 ~ 310
Cylinder Temperature	Rear	℃	270 ~ 290
	Middle	℃	280 ~ 300
	Front	℃	290 ~ 310
Nozzle Temperature		℃	290 ~ 310
Mold Temperature		℃	80 ~ 120
Back Pressure		kg/cm^2	10 ~ 40
Screw Speed		rpm	40 ~ 70

Note) Back Pressure & Screw Speed are only mentioned as general guidelines.
These may not apply or need adjustment in specific situations such as low shot sizes, thin wall molding and gas-assist molding.