

Lupoy® 1080-70

Polycarbonate

LG Chem Ltd.

Message:

LUPOY PC 1080-70 resin is designed for optical media discs applications. It exhibits an excellent physical property balance of heat resistance, transparency and impact strength.

General Information			
Features	Good Impact Resistance		
	Good Mold Release		
	High Clarity		
	High Heat Resistance		
	Low Viscosity		
Uses	Optical Data Storage		
RoHS Compliance	RoHS Compliant		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	70	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.50 to 0.70	%	ASTM D955
Water Absorption			ASTM D570
23°C, 24 hr	0.15	%	
Equilibrium, 23°C, 50% RH	0.32	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2300	MPa	ASTM D638
Tensile Strength			ASTM D638
Yield, 23°C ¹	60.0	MPa	
Break	48.0	MPa	
Tensile Elongation			ASTM D638
Yield	6.0	%	
Break	60	%	
Flexural Modulus	2500	MPa	ASTM D790
Flexural Strength	100	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact ² (23°C, 3.20 mm)	270	J/m	ASTM D256
Instrumented Dart Impact ³ (23°C, 3.20 mm, Total Energy)	520	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Annealed, 4.00 mm	137	°C	
1.8 MPa, Unannealed, 4.00 mm	124	°C	

Vicat Softening Temperature	147	°C	ASTM D1525 ⁴
CLTE - Flow (-40 to 82°C)	6.8E-5	cm/cm/°C	ASTM D696
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.583		ASTM D542
Transmittance	91.0	%	ASTM D1003

NOTE

1. 50 mm/min
2. 0.25 mm Notch Depth
3. 3.38 m/sec
4. Rate A (50°C/h), Loading 2 (50 N)

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