

**General Information**
**Product Description**

LUPLOY 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**

Material Status	• Commercial: Active
Availability	<ul style="list-style-type: none"> <li>• Asia Pacific</li> <li>• Europe</li> <li>• Latin America</li> <li>• North America</li> </ul>
Features	<ul style="list-style-type: none"> <li>• Good Clarity</li> <li>• Good Heat Resistance</li> <li>• Good Impact Resistance</li> <li>• Good Mold Release</li> <li>• Low Viscosity</li> </ul>
Uses	• Optical Data Storage
Agency Ratings	• EC 1907/2006 (REACH)
RoHS Compliance	• RoHS Compliant
Appearance	• Clear/Transparent

**ASTM & ISO Properties <sup>1</sup>**

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.20	g/cm <sup>3</sup>	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 (24 hr, 23°C)	0.15	%	ASTM D570
Water Absorption (Equilibrium, 23°C, 50% RH)	0.32	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2300	MPa	ASTM D638
Tensile Strength <sup>2</sup> (Yield, 23°C)	60.0	MPa	ASTM D638
Tensile Strength (Break)	48.0	MPa	ASTM D638
Tensile Elongation (Yield)	6.0	%	ASTM D638
Tensile Elongation (Break)	60	%	ASTM D638
Flexural Modulus	2500	MPa	ASTM D790
Flexural Strength	100	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact <sup>3</sup> (23°C, 3.20 mm)	270	J/m	ASTM D256
Instrumented Dart Impact <sup>4</sup> (23°C, 3.20 mm, Total Energy)	59.0	J	ASTM D3763
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale	58		
R-Scale	124		
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load 0.45 MPa, Annealed, 4.00 mm	137	°C	ASTM D648
Deflection Temperature Under Load 1.8 MPa, Unannealed, 4.00 mm	124	°C	ASTM D648
Vicat Softening Temperature	147	°C	ASTM D1525 <sup>5</sup>
CLTE - Flow (-40 to 82°C)	6.8E-5	cm/cm/°C	ASTM D696

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# Lupoy® 1080-70

## LG Chem Ltd. - Polycarbonate

Optical	Nominal Value	Unit	Test Method
Refractive Index	1.583		ASTM D542
Transmittance	91.0	%	ASTM D1003

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> 50 mm/min

<sup>3</sup> 0.25 mm Notch Depth

<sup>4</sup> 3.38 m/sec

<sup>5</sup> Rate A (50°C/h), Loading 2 (50 N)