

## Technical Data

### Product Description

LUPOY PC 1303EP-22 resin is designed for extrusion and injection molding products. It exhibits an excellent physical property balance of heat resistance, transparency and impact strength.

#### Main Characteristics

- UV stabilizer
- Low viscosity
- Good mold release

#### Applications

- Appliances
- Outdoor appliances
- Automotive headlamps
- Mobile phone keypads

### General

Material Status	• Commercial: Active
Literature <sup>1</sup>	• <a href="#">Technical Datasheet (English)</a>
UL Yellow Card <sup>2</sup>	• <a href="#">E67171-100907364</a>
Search for UL Yellow Card	• <a href="#">LG Chem Ltd.</a> • <a href="#">Lupoy®</a>
Availability	• Asia Pacific • Europe • Latin America • North America
Additive	• UV Stabilizer
Features	• Good Clarity • Good Heat Resistance • Good Impact Resistance • Good Mold Release • Low Viscosity • UV Resistant
Uses	• Appliances • Automotive Applications • Lighting Applications • Outdoor Applications
Appearance	• Clear/Transparent
Processing Method	• Extrusion • Injection Molding

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity	1.20	1.20 g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	22 g/10 min	22 g/10 min	ASTM D1238
Molding Shrinkage - Flow	5.0E-3 to 7.0E-3 in/in	0.50 to 0.70 %	ASTM D955
Water Absorption			ASTM D570
24 hr, 73°F (23°C)	0.15 %	0.15 %	
Equilibrium, 73°F (23°C), 50% RH	0.32 %	0.32 %	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	339000 psi	2340 MPa	ASTM D638
Tensile Strength			ASTM D638
Yield, 73°F (23°C) <sup>4</sup>	8700 psi	60.0 MPa	
Break	9570 psi	66.0 MPa	
Tensile Elongation			ASTM D638
Yield	6.0 %	6.0 %	
Break	120 %	120 %	
Flexural Modulus	350000 psi	2410 MPa	ASTM D790
Flexural Strength	13900 psi	96.0 MPa	ASTM D790
Taber Abrasion Resistance - Delta Haze <sup>5</sup>	45 %	45 %	ASTM D1004



Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact <sup>6</sup> 73°F (23°C), 0.125 in (3.18 mm)	14 ft·lb/in	750 J/m	ASTM D256
Unnotched Izod Impact (73°F (23°C))	No Break	No Break	ASTM D256
Instrumented Dart Impact <sup>7</sup> 73°F (23°C), 0.125 in (3.18 mm), Total Energy	637 in·lb	72.0 J	ASTM D3763
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness			ASTM D785
M-Scale	72	72	
R-Scale	118	118	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Annealed, 0.157 in (4.00 mm)	288 °F	142 °C	
264 psi (1.8 MPa), Unannealed, 0.157 in (4.00 mm)	259 °F	126 °C	
264 psi (1.8 MPa), Annealed, 0.157 in (4.00 mm)	282 °F	139 °C	
Vicat Softening Temperature	297 °F	147 °C	ASTM D1525 <sup>8</sup>
Ball Indentation Temperature	> 257 °F	> 125 °C	IEC 60598-1
CLTE - Flow (-40 to 180°F (-40 to 82°C))	3.8E-5 in/in/°F	6.8E-5 cm/cm/°C	ASTM D696
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Volume Resistivity (73°F (23°C))	2.0E+17 ohms·cm	2.0E+17 ohms·cm	ASTM D257
Dielectric Strength	430 V/mil	17 kV/mm	ASTM D149
Dielectric Constant (60 Hz)	3.00	3.00	ASTM D150
Dissipation Factor (60 Hz)	1.0E-3	1.0E-3	ASTM D150
Comparative Tracking Index 0.0787 in (2.00 mm)	250 V	250 V	IEC 60112
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Glow Wire Ignition Temperature 0.08 in (2.0 mm), 5.0 sec	1560 °F	850 °C	IEC 60695-2-13
Oxygen Index	26 %	26 %	ASTM D2863
Average Extent of Burning	1 in	3 cm	ASTM D635
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Refractive Index	1.586	1.586	ASTM D542
Transmittance	89.0 %	89.0 %	ASTM D1003
Haze	0.700 to 1.50 %	0.700 to 1.50 %	ASTM D1003

**Notes**

<sup>1</sup> These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

<sup>2</sup> A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

<sup>3</sup> Typical properties: these are not to be construed as specifications.

<sup>4</sup> 2.0 in/min (50 mm/min)

<sup>5</sup> CS-10F Wheel, 500 cycles, 1000 g

<sup>6</sup> 10 mil (0.25 mm) Notch Depth

<sup>7</sup> 11.1 ft/sec (3.39 m/sec)

<sup>8</sup> Rate A (50°C/h), Loading 2 (50 N)



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**Where to Buy**

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**Supplier****LG Chem Ltd.**

Englewood Cliffs, NJ USA

**Telephone:** 201-816-2302**Web:** <http://www.chemwide.com/>

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**Distributor****Channel Prime Alliance****Telephone:** 800-247-8038**Web:** <http://www.channelpa.com/>**Availability:** North America**Chase Plastic Services, Inc.***Chase Plastics Services is a North American distributor with representatives throughout the region. Please find your rep here: <http://www.chaseplastics.com/contact/locations>***Telephone:** 800-232-4273**Web:** <http://www.chaseplastics.com/>**Availability:** North America**Conventus Polymers****Telephone:** 973-343-7669**Web:** <http://www.conventuspolymers.com/>**Availability:** North America**Distrupol Ltd***Distrupol Ltd is a Pan European distribution company. Contact Distrupol Ltd for availability of individual products by country.***Telephone:** 08452003040**Web:** <http://www.distrupol.com/>**Availability:** Belgium, Denmark, Finland, Luxembourg, Netherlands, Norway, Sweden**GAZECHIM PLASTIQUES***GAZECHIM PLASTIQUES is a Pan European distribution company. Contact GAZECHIM PLASTIQUES for availability of individual products by country.***Telephone:** +33-4-67-49-55-37**Web:** <http://www.gazechim.com/>**Availability:** Italy**Resin Resource, Inc.****Telephone:** 877-652-3431**Web:** <http://www.resinresourceinc.com/>**Availability:** North America**RESINEX Group***RESINEX is a Pan European distribution company. Contact RESINEX for availability of individual products by country.***Telephone:** +32-14-672511**Web:** <http://www.resinex.com/>**Availability:** Europe**SNETOR Distribution***SNETOR Distribution is a Pan European distribution company. Contact SNETOR for availability of individual products by country.***Telephone:** +33-1-4904-8888**Web:** <http://www.snetor.com/>**Availability:** France**Southland Polymers****Telephone:** 562-921-0444**Web:** <http://www.southlandpolymers.com/>**Availability:** Central America, North America, South America