# LUPOY® GN2101F

## LG Chem Ltd. - Polycarbonate

Thursday, November 27, 2025

## General Information

**Product Description**

Flame Retardant

Application
Electrical & Electronic Parts

Material Type
PC

**General**

| | | |
|---|---|---|
| Material Status | • Commercial: Active | |
| Availability | • Asia Pacific<br>• Europe | • Latin America<br>• North America |
| Features | • Flame Retardant | |
| Uses | • Electrical/Electronic Applications | |

## Properties

| Physical | | Nominal Value | Unit | Test Method |
|---|---|---|---|---|
| Density / Specific Gravity | | | | |
| -- | | 1.27 | g/cm³ | ASTM D792 |
| 23°C | | 1.27 | g/cm³ | ISO 1183 |
| Melt Mass-Flow Rate (MFR) (300°C/1.2 kg) | | 7.9 | g/10 min | ASTM D1238<br>ISO 1133 |
| Molding Shrinkage | | | | ASTM D955<br>ISO 294-4 |
| Flow : 2.00 mm | | 0.50 to 0.70 | % | |
| Across Flow : 2.00 mm | | 0.40 to 0.60 | % | |
| Water Absorption | | | | |
| 24 hr, 23°C, 50% RH | | 0.20 | % | ASTM D570 |
| 24 hr, 23°C | | 0.20 | % | ISO 62 |
| Outdoor Suitability (All Colors) | • | f2 | | UL 746C |
| | • | f1 | | |

| Mechanical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Tensile Modulus | | | |
| 3.20 mm [1] | 3830 | MPa | ASTM D638 |
| 4.00 mm | 3600 | MPa | ISO 527-1/1 |
| Tensile Strength | | | |
| Yield, 3.20 mm [1] | 69.6 | MPa | ASTM D638 |
| Yield, 4.00 mm | 67.0 | MPa | ISO 527-2/5 |
| Break, 3.20 mm [1] | 57.9 | MPa | ASTM D638 |
| Break, 4.00 mm | 57.0 | MPa | ISO 527-2/5 |

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| Mechanical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Tensile Elongation | | | |
| Yield, 3.20 mm [1] | 4.0 | % | ASTM D638 |
| Yield, 4.00 mm | 4.0 | % | ISO 527-2/5 |
| Break, 3.20 mm [1] | 6.8 | % | ASTM D638 |
| Break, 4.00 mm | 4.0 | % | ISO 527-2/5 |
| Flexural Modulus | | | |
| 3.20 mm [2] | 3620 | MPa | ASTM D790 |
| 4.00 mm [3] | 3550 | MPa | ISO 178 |
| Flexural Strength | | | |
| 3.20 mm [2] | 116 | MPa | ASTM D790 |
| 4.00 mm [3] | 112 | MPa | ISO 178 |

| Impact | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Charpy Notched Impact Strength | | | ISO 179 |
| -40°C | 5.0 | kJ/m² | |
| -30°C | 5.0 | kJ/m² | |
| 23°C | 6.0 | kJ/m² | |
| Notched Izod Impact | | | |
| -40°C, 6.40 mm | 49 | J/m | ASTM D256 |
| -30°C, 3.20 mm | 59 | J/m | ASTM D256 |
| -30°C, 6.40 mm | 49 | J/m | ASTM D256 |
| 23°C, 3.20 mm | 78 | J/m | ASTM D256 |
| 23°C, 6.40 mm | 69 | J/m | ASTM D256 |
| -40°C | 5.0 | kJ/m² | ISO 180 |
| -30°C | 5.0 | kJ/m² | ISO 180 |
| 23°C | 6.0 | kJ/m² | ISO 180 |

| Hardness | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Rockwell Hardness (R-Scale) | 124 | | ASTM D785<br>ISO 2039-2 |

| Thermal | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Deflection Temperature Under Load | | | |
| 0.45 MPa, Unannealed, 6.40 mm | 147 | °C | ASTM D648 |
| 0.45 MPa, Unannealed, 4.00 mm | 146 | °C | ISO 75-2/Bf |
| 1.8 MPa, Unannealed, 6.40 mm | 141 | °C | ASTM D648 |
| 1.8 MPa, Unannealed, 4.00 mm | 133 | °C | ISO 75-2/Af |
| Vicat Softening Temperature | 149 | °C | ISO 306/B50<br>ASTM D1525 [4] |
| CLTE | | | |
| Flow : -30 to 80°C | 4.4E-5 | cm/cm/°C | ASTM D696 |
| Flow : -30 to 80°C | 44 | ppm/K | ISO 11359-2 |
| Transverse : -30 to 80°C | 8.8E-5 | cm/cm/°C | ASTM D696 |
| Transverse : -30 to 80°C | 88 | ppm/K | ISO 11359-2 |
| RTI Elec | | | UL 746B |
| 1.0 mm | 80.0 | °C | |
| 1.5 mm | 120 | °C | |
| 3.0 mm | 120 | °C | |

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| Thermal | Nominal Value | Unit | Test Method |
|---|---|---|---|
| RTI Imp | | | UL 746B |
| 1.0 mm | 80.0 | °C | |
| 1.5 mm | 90.0 | °C | |
| 3.0 mm | 90.0 | °C | |
| RTI Str | | | UL 746B |
| 1.0 mm | 80.0 | °C | |
| 1.5 mm | 105 | °C | |
| 3.0 mm | 105 | °C | |

| Electrical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Surface Resistivity (23°C) | 1.0E+15 | ohms | ASTM D257 |
| Volume Resistivity (23°C) | 1.0E+15 | ohms·cm | ASTM D257 |
| Dielectric Strength (23°C, 2000 µm) | 20 | kV/mm | ASTM D149 |
| Dielectric Constant (23°C) | 3.00 | | ASTM D150 |
| Comparative Tracking Index (CTI) | PLC 3 | | UL 746A |
| High Amp Arc Ignition (HAI) | | | UL 746A |
| 1.5 mm | PLC 0 | | |
| 3.0 mm | PLC 0 | | |
| Hot-wire Ignition (HWI) | | | UL 746A |
| 1.5 mm | PLC 3 | | |
| 3.0 mm | PLC 2 | | |

| Flammability | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Flame Rating | | | UL 94 |
| 1.0 mm, All | V-2 | | |
| 1.5 mm, All | V-0 | | |
| 3.0 mm, All | • V-0<br>• 5VA | | |

## Processing Information

| Injection | Nominal Value | Unit |
|---|---|---|
| Drying Temperature | 100 to 120 | °C |
| Drying Time | 3.0 to 5.0 | hr |
| Suggested Max Moisture | 0.020 | % |
| Rear Temperature | 270 to 300 | °C |
| Middle Temperature | 280 to 310 | °C |
| Front Temperature | 290 to 330 | °C |
| Nozzle Temperature | 290 to 330 | °C |
| Processing (Melt) Temp | 300 to 340 | °C |
| Mold Temperature | 90 to 120 | °C |
| Screw Speed | 40 to 80 | rpm |

### Notes

[1] 5.0 mm/min

[2] 1.3 mm/min

[3] 2.0 mm/min

[4] Rate A (50°C/h), Loading 2 (50 N)