
General Information

Product Description

LUPLOY PC UF1004B resin is designed for Light guide panel application. It exhibits an excellent flow-ability, thermal resistance and good Optical properties.

Main Characteristics

- Excellent flow-ability
- Good optical properties
- Thermal stability

Applications

- Light guide panel

General

| | | | |
|-----------------|-------------------------|---------------------------|--------------------------|
| Material Status | • Commercial: Active | | |
| Availability | • Asia Pacific | • Latin America | |
| | • Europe | • North America | |
| Features | • Good Flow | • Good Optical Properties | • Good Thermal Stability |
| Uses | • Lighting Applications | | |

ASTM & ISO Properties ¹

| Physical | Nominal Value | Unit | Test Method |
|----------------------------------------------------|---------------|-------------------|-------------------------|
| Density / Specific Gravity | 1.20 | g/cm ³ | ASTM D792 |
| Melt Mass-Flow Rate (MFR) | | | ASTM D1238 |
| 250°C/1.2 kg | 19 | g/10 min | |
| 300°C/1.2 kg | 130 | g/10 min | |
| 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 | 1920 | MPa | ASTM D638 |
| Tensile Strength ² (Yield, 23°C) | 50.0 | MPa | ASTM D638 |
| Tensile Elongation (Break) | 10 | % | ASTM D638 |
| Flexural Modulus | 2200 | MPa | ASTM D790 |
| Flexural Strength | 100 | MPa | ASTM D790 |
| Impact | Nominal Value | Unit | Test Method |
| Charpy Notched Impact Strength ³ (23°C) | 7.8 | kJ/m ² | ISO 179 |
| Notched Izod Impact ⁴ (23°C, 3.18 mm) | 100 | J/m | ASTM D256 |
| Thermal | Nominal Value | Unit | Test Method |
| Deflection Temperature Under Load | | | ASTM D648 |
| 0.45 MPa, Annealed, 4.00 mm | 132 | °C | |
| Vicat Softening Temperature | 139 | °C | ASTM D1525 ⁵ |

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Lupoy® UF1004B
LG Chem Ltd. - Polycarbonate

| Flammability | Nominal Value | Unit | Test Method |
|---------------------|----------------------|-------------|--------------------|
| Flame Rating | | | UL 94 |
| 0.40 mm | | V-2 | |
| 1.5 mm | | V-2 | |
| 3.0 mm | | V-2 | |
| Optical | Nominal Value | Unit | Test Method |
| Refractive Index | 1.580 | | ASTM D542 |
| Transmittance | 91.0 | % | ASTM D1003 |
| Haze | 0.100 to 1.00 | % | ASTM D1003 |

Notes

¹ Typical properties: these are not to be construed as specifications.

² 50 mm/min

³ 4 mm

⁴ 0.25 mm Notch Depth

⁵ Rate A (50°C/h), Loading 2 (50 N)