



Lupoy® 1302HP-22
 LG Chem Ltd. - Polycarbonate

Saturday, July 20, 2019

General Information

Product Description

LUPOY PC 1302HP-22 resin is designed for extrusion and injection molding products. It exhibits an excellent physical property balance of heat resistance, transparency and impact strength.

General

| | | | |
|-------------------|--------------------------|------------------------|----------------------|
| Material Status | • Commercial: Active | | |
| Availability | • Asia Pacific | • Latin America | |
| | • Europe | • North America | |
| Additive | • UV Stabilizer | | |
| Features | • Good Impact Resistance | • High Heat Resistance | • Low Viscosity |
| | • High Clarity | • High Purity | |
| Uses | • Appliances | • Film | • Lighting Diffusers |
| Agency Ratings | • EC 1907/2006 (REACH) | | |
| RoHS Compliance | • RoHS Compliant | | |
| UL File Number | • E306922 | | |
| Processing Method | • Extrusion | • Injection Molding | |

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) (300°C/1.2 kg) | 22 | 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 | 2340 | MPa | ASTM D638 |
| Tensile Strength (Yield) | 60.0 | MPa | ASTM D638 |
| Tensile Strength (Break) | 66.0 | MPa | ASTM D638 |
| Tensile Elongation (Yield) | 6.0 | % | ASTM D638 |
| Tensile Elongation (Break) | 120 | % | ASTM D638 |
| Flexural Modulus | 2410 | MPa | ASTM D790 |
| Flexural Strength | 96.0 | MPa | ASTM D790 |
| Taber Abrasion Resistance - Change in Haze ² | 45 | % | ASTM D1004 |
| Impact | Nominal Value | Unit | Test Method |
| Notched Izod Impact ³ (23°C, 3.20 mm) | 750 | J/m | ASTM D256 |
| Unnotched Izod Impact (23°C) | No Break | | ASTM D256 |
| Instrumented Dart Impact ⁴ (23°C, 3.20 mm, Total Energy) | 72.0 | J | ASTM D3763 |
| Hardness | Nominal Value | Unit | Test Method |
| Rockwell Hardness | | | ASTM D785 |
| M-Scale | 72 | | |
| R-Scale | 118 | | |

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| Thermal | Nominal Value | Unit | Test Method |
|---|---------------|----------|-------------------------|
| Deflection Temperature Under Load 0.45 MPa, Annealed, 4.00 mm | 142 | °C | ASTM D648 |
| Deflection Temperature Under Load 1.8 MPa, Unannealed, 4.00 mm | 126 | °C | ASTM D648 |
| Deflection Temperature Under Load 1.8 MPa, Annealed, 4.00 mm | 139 | °C | ASTM D648 |
| Vicat Softening Temperature | 147 | °C | ASTM D1525 ⁵ |
| Ball Indentation Temperature | > 125 | °C | IEC 60598-1 |
| CLTE - Flow (-40 to 82°C) | 6.8E-5 | cm/cm/°C | ASTM D696 |
| Electrical | Nominal Value | Unit | Test Method |
| Volume Resistivity (23°C) | 2.0E+17 | ohms-cm | ASTM D257 |
| Dielectric Strength | 17 | kV/mm | ASTM D149 |
| Dielectric Constant (60 Hz) | 3.00 | | ASTM D150 |
| Dissipation Factor (60 Hz) | 1.0E-3 | | ASTM D150 |
| Comparative Tracking Index (2.00 mm) | 250 | V | IEC 60112 |
| Flammability | Nominal Value | Unit | Test Method |
| Flame Rating | | | UL 94 |
| 0.50 mm | V-2 | | |
| 1.6 mm | V-2 | | |
| 2.5 mm | V-2 | | |
| 3.0 mm | V-2 | | |
| Glow Wire Ignition Temperature ⁶ (2.0 mm) | 850 | °C | IEC 60695-2-13 |
| Oxygen Index | 26 | % | ASTM D2863 |
| Average Extent of Burning | 3 | cm | ASTM D635 |
| Optical | Nominal Value | Unit | Test Method |
| Refractive Index | 1.586 | | ASTM D542 |
| Transmittance | 89.0 | % | ASTM D1003 |
| Haze | 0.700 to 1.50 | % | ASTM D1003 |

Notes

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

² 1000g, 500 cycles, CS-10F Wheel

³ 0.25 mm Notch Depth

⁴ 3.38 m/sec

⁵ Rate A (50°C/h), Loading 2 (50 N)

⁶ 5 sec