

# Lupoy® 1200-10

Polycarbonate

LG Chem Ltd.

## Message:

LUPOY PC 1200-10 resin is designed for extrusion and injection molding products. It exhibits an excellent physical property balance of heat resistance, transparency and impact strength.

| General Information                      |                                     |                   |             |
|------------------------------------------|-------------------------------------|-------------------|-------------|
| UL YellowCard                            | E67171-100907358                    |                   |             |
| Features                                 | Food Contact Acceptable             |                   |             |
|                                          | Good Impact Resistance              |                   |             |
|                                          | High Clarity                        |                   |             |
|                                          | High Heat Resistance                |                   |             |
|                                          | Medium Viscosity                    |                   |             |
| Uses                                     | Disposable Tableware                |                   |             |
|                                          | Packaging                           |                   |             |
|                                          | Toys                                |                   |             |
| Agency Ratings                           | EU Food Contact, Unspecified Rating |                   |             |
|                                          | FDA 21 CFR 177.1580                 |                   |             |
| RoHS Compliance                          | RoHS Compliant                      |                   |             |
| UL File Number                           | E306922                             |                   |             |
| Processing Method                        | Extrusion                           |                   |             |
|                                          | Injection Molding                   |                   |             |
| Physical                                 | Nominal Value                       | Unit              | Test Method |
| Specific Gravity                         | 1.20                                | g/cm <sup>3</sup> | ASTM D792   |
| Melt Mass-Flow Rate (MFR) (300°C/1.2 kg) | 10                                  | g/10 min          | ASTM D1238  |
| Molding Shrinkage - Flow                 | 0.50 to 0.70                        | %                 | ASTM D955   |
| Water Absorption                         |                                     |                   | ASTM D570   |
|                                          | 23°C, 24 hr                         | 0.15              | %           |
|                                          | Equilibrium, 23°C, 50% RH           | 0.32              | %           |
| Hardness                                 | Nominal Value                       | Unit              | Test Method |
| Rockwell Hardness                        |                                     |                   | ASTM D785   |
|                                          | M-Scale                             | 73                |             |
|                                          | R-Scale                             | 118               |             |
| Mechanical                               | Nominal Value                       | Unit              | Test Method |
| Tensile Modulus                          | 2410                                | MPa               | ASTM D638   |

|                                                                     |               |           |                         |
|---------------------------------------------------------------------|---------------|-----------|-------------------------|
| Tensile Strength                                                    |               |           | ASTM D638               |
| Yield, 23°C <sup>1</sup>                                            | 60.0          | MPa       |                         |
| Break                                                               | 71.0          | MPa       |                         |
| Tensile Elongation                                                  |               |           | ASTM D638               |
| Yield                                                               | 6.0           | %         |                         |
| Break                                                               | 150           | %         |                         |
| Flexural Modulus                                                    | 2410          | MPa       | ASTM D790               |
| Flexural Strength                                                   | 96.0          | MPa       | ASTM D790               |
| Taber Abrasion Resistance - Change in Haze <sup>2</sup>             | 45            | %         | ASTM D1004              |
| Average Extent of Burning                                           | 3             | cm        | ASTM D635               |
| Impact                                                              | Nominal Value | Unit      | Test Method             |
| Notched Izod Impact <sup>3</sup> (23°C, 3.20 mm)                    | 900           | J/m       | ASTM D256               |
| Unnotched Izod Impact (23°C)                                        | No Break      |           | ASTM D256               |
| Instrumented Dart Impact <sup>4</sup> (23°C, 3.20 mm, Total Energy) | 87.0          | J         | ASTM D3763              |
| Thermal                                                             | Nominal Value | Unit      | Test Method             |
| Deflection Temperature Under Load                                   |               |           | ASTM D648               |
| 0.45 MPa, Annealed, 4.00 mm                                         | 144           | °C        |                         |
| 1.8 MPa, Unannealed, 4.00 mm                                        | 128           | °C        |                         |
| 1.8 MPa, Annealed, 4.00 mm                                          | 141           | °C        |                         |
| Vicat Softening Temperature                                         | 149           | °C        | ASTM D1525 <sup>5</sup> |
| 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                   |
| 3.00 mm                                                             | HB            |           |                         |
| 0.500 mm                                                            | V-2           |           |                         |
| 1.60 mm                                                             | V-2           |           |                         |
| 2.50 mm                                                             | V-2           |           |                         |
| 2.70 mm                                                             | V-2           |           |                         |
| Glow Wire Ignition Temperature <sup>6</sup> (2.00 mm)               | 850           | °C        | IEC 60695-2-13          |
| Oxygen Index                                                        | 26            | %         | ASTM D2863              |
| Optical                                                             | Nominal Value | Unit      | Test Method             |
| Refractive Index                                                    | 1.586         |           | ASTM D542               |
| Transmittance                                                       | 89.0          | %         | ASTM D1003              |

|      |                                   |   |            |
|------|-----------------------------------|---|------------|
| Haze | 0.70 to 1.5                       | % | ASTM D1003 |
| NOTE |                                   |   |            |
| 1.   | 50 mm/min                         |   |            |
| 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                             |   |            |

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