

# Lumid® GP2309A(W)

Polyamide 6  
LG Chem Ltd.

Message:

Description  
General Purpose  
Applications  
Automotive(Cooling Fan)

| General Information                                              |                         |                   |             |
|------------------------------------------------------------------|-------------------------|-------------------|-------------|
| Features                                                         | General Purpose         |                   |             |
| Uses                                                             | Automotive Applications |                   |             |
| Processing Method                                                | Injection Molding       |                   |             |
| Physical                                                         | Nominal Value           | Unit              | Test Method |
| Specific Gravity                                                 | 1.35                    | g/cm <sup>3</sup> | ASTM D792   |
| Molding Shrinkage - Flow (3.20 mm)                               | 0.40 to 0.90            | %                 | ASTM D955   |
| Water Absorption (24 hr)                                         | 1.1                     | %                 | ASTM D570   |
| Hardness                                                         | Nominal Value           | Unit              | Test Method |
| Rockwell Hardness (R-Scale)                                      | 121                     |                   | ASTM D785   |
| Mechanical                                                       | Nominal Value           | Unit              | Test Method |
| Tensile Strength <sup>1</sup> (Break, 3.20 mm)                   | 162                     | MPa               | ASTM D638   |
| Tensile Elongation <sup>2</sup> (Break, 3.20 mm)                 | 4.5                     | %                 | ASTM D638   |
| Flexural Modulus <sup>3</sup> (6.40 mm)                          | 8830                    | MPa               | ASTM D790   |
| Flexural Strength <sup>4</sup> (Yield, 6.40 mm)                  | 255                     | MPa               | ASTM D790   |
| Impact                                                           | Nominal Value           | Unit              | Test Method |
| Notched Izod Impact (23°C, 6.40 mm)                              | 130                     | J/m               | ASTM D256   |
| Thermal                                                          | Nominal Value           | Unit              | Test Method |
| Deflection Temperature Under Load (1.8 MPa, Unannealed, 6.40 mm) | 210                     | °C                | ASTM D648   |
| Peak Melting Temperature                                         | 220                     | °C                | ASTM D3418  |
| CLTE - Flow                                                      | 3.5E-5                  | cm/cm/°C          | ASTM D696   |
| Electrical                                                       | Nominal Value           | Unit              | Test Method |
| Volume Resistivity                                               | 1.0E+15                 | ohms · cm         | ASTM D257   |
| Dielectric Strength (1.00 mm)                                    | 20                      | kV/mm             | ASTM D149   |
| Dielectric Constant (1 MHz)                                      | 3.80                    |                   | ASTM D150   |
| Arc Resistance                                                   | 130                     | sec               | ASTM D495   |
| Injection                                                        | Nominal Value           | Unit              |             |
| Drying Temperature                                               | 80.0 to 100             | °C                |             |
| Drying Time                                                      | 4.0 to 5.0              | hr                |             |
| Suggested Max Moisture                                           | 0.12                    | %                 |             |
| Rear Temperature                                                 | 250 to 270              | °C                |             |

|                            |               |     |
|----------------------------|---------------|-----|
| Middle Temperature         | 260 to 285    | °C  |
| Front Temperature          | 260 to 290    | °C  |
| Nozzle Temperature         | 260 to 290    | °C  |
| Processing (Melt) Temp     | 260 to 290    | °C  |
| Mold Temperature           | 80.0 to 110   | °C  |
| Back Pressure <sup>5</sup> | 0.981 to 2.94 | MPa |
| Screw Speed                | 60 to 150     | rpm |

#### NOTE

|    |                |
|----|----------------|
| 1. | 5.0 mm/min     |
| 2. | 5.0 mm/min     |
| 3. | 2.8 mm/min     |
| 4. | 2.8 mm/min     |
| 5. | Hydraulic Type |

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