

# Lumid® LW4409A(K)

Polyamide 6 + ABS

LG Chem Ltd.

## Message:

Description

Low Warpage

Applications

Automotive(Timing Belt Cover)

| General Information                                              |                           |                   |             |
|------------------------------------------------------------------|---------------------------|-------------------|-------------|
| Features                                                         | Low Warpage               |                   |             |
| Uses                                                             | Automotive Applications   |                   |             |
|                                                                  | Automotive Under the Hood |                   |             |
| Processing Method                                                | Injection Molding         |                   |             |
| Physical                                                         | Nominal Value             | Unit              | Test Method |
| Specific Gravity                                                 | 1.49                      | g/cm <sup>3</sup> | ASTM D792   |
| Molding Shrinkage - Flow (3.20 mm)                               | 0.50 to 1.1               | %                 | ASTM D955   |
| Water Absorption (23°C, 24 hr)                                   | 0.90                      | %                 | 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)                   | 108                       | MPa               | ASTM D638   |
| Tensile Elongation <sup>2</sup> (Break, 3.20 mm)                 | 4.0                       | %                 | ASTM D638   |
| Flexural Modulus <sup>3</sup> (6.40 mm)                          | 7350                      | MPa               | ASTM D790   |
| Flexural Strength <sup>4</sup> (Yield, 6.40 mm)                  | 177                       | MPa               | ASTM D790   |
| Impact                                                           | Nominal Value             | Unit              | Test Method |
| Notched Izod Impact (23°C, 3.20 mm)                              | 49                        | J/m               | ASTM D256   |
| Thermal                                                          | Nominal Value             | Unit              | Test Method |
| Deflection Temperature Under Load (1.8 MPa, Unannealed, 6.40 mm) | 200                       | °C                | ASTM D648   |
| Peak Melting Temperature                                         | 220                       | °C                | ASTM D3418  |
| CLTE - Flow                                                      | 4.0E-5                    | cm/cm/°C          | ASTM D696   |
| Electrical                                                       | Nominal Value             | Unit              | Test Method |
| Volume Resistivity                                               | 1.0E+17                   | ohms · cm         | ASTM D257   |
| Dielectric Strength (1.00 mm)                                    | 21                        | kV/mm             | ASTM D149   |
| Dielectric Constant (1 MHz)                                      | 3.00                      |                   | 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           | 245 to 265    | °C  |
| Middle Temperature         | 255 to 280    | °C  |
| Front Temperature          | 255 to 285    | °C  |
| Nozzle Temperature         | 255 to 285    | °C  |
| Processing (Melt) Temp     | 255 to 285    | °C  |
| Mold Temperature           | 80.0 to 100   | °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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### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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