

# LUMAX GP5106FI

Injection Molding Grade, PBT+ABS+GF10%

## Description

Flame Retardant, Impact Modified, Dimensional Stability IT/OA, E&E

## Application

| Properties                                      | Test Condition | Test Method | Unit               | Typical Value |
|---|----------------|-------------|--------------------|---------------|
| <b>Physical</b>                                 |                |             |                    |               |
| Specific Gravity                                |                | ASTM D792   | -                  | 1.40          |
| Molding Shrinkage                               |                | ASTM D955   | %                  | 0.4 ~ 0.9     |
| Melt Flow Rate                                  | 250°C/3.8kg    | ASTM D1238  | g/10min            | 6             |
| Water Absorption                                | 23°C, 24hrs    | ASTM D570   | %                  | 0.08          |
| <b>Mechanical</b>                               |                |             |                    |               |
| Tensile Strength, 3.2mm                         |                | ASTM D638   |                    |               |
| @ Break   | 5mm/min        |             | kg/cm <sup>2</sup> | 570           |
| Tensile Elongation, 3.2mm                       |                | ASTM D638   |                    |               |
| @ Yield   | 5mm/min        |             | %                  |               |
| @ Break   | 5mm/min        |             | %                  | 3.0           |
| Flexural Strength, 3.2mm                        | 1.3mm/min      | ASTM D790   | kg/cm <sup>2</sup> | 870           |
| Flexural Modulus, 3.2mm                         | 1.3mm/min      | ASTM D790   | kg/cm <sup>2</sup> | 32,000        |
| IZOD Impact Strength, 6.4mm (Notched)           | 23°C           | ASTM D256   | kg·cm/cm           | 6.0           |
| <b>Thermal</b>                                  |                |             |                    |               |
| Melt Temperature                                |                | ASTM D3418  | °C                 | 223           |
| Heat Deflection Temperature, 6.4mm (Unannealed) | 18.6kg         | ASTM D648   | °C                 | 110           |
|   | 4.6kg          |             | °C                 |               |
| Flammability                                    |                | UL94        |                    |               |
| 1.5 mm  |                |             | class              | V-0           |
| 3.0 mm  |                |             | class              | V-0           |
| Relative Temperature Index                      |                | UL 746B     |                    |               |
| Electrical                                      |                |             | °C                 | 60            |
| Mechanical with Impact                          |                |             | °C                 | 60            |
| Mechanical without Impact                       |                |             | °C                 | 60            |
| <b>Electrical</b>                               |                |             |                    |               |
| Comparative Tracking Index(CTI)                 | Solution A     | UL 746      | PLC                | 3             |
| Volume Resistivity                              | 23°C           | ASTM D257   | Ohm·cm             | 1.0E+15       |
| Arc Resistance                                  | 23°C           | ASTM D495   | PLC                | 6             |
| Dielectric Strength, 1mm                        | 23°C           | ASTM D149   | kV/mm              | 26            |

Note) All properties, except melt flow rate are measured on injection moulded specimens and after 48 hours storage at 23°C, 50% relative humidity.

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### Processing Guide (Injection Molding)

| Processing Parameters    | Unit               | Value     |           |
|--------------------------|--------------------|-----------|-----------|
| Drying Temperature       | °C                 | 100       |           |
| Drying Time              | hrs                | 4 ~ 5     |           |
| Maximum Moisture Content | %                  | 0.02      |           |
| Melt Temperature         | °C                 | 240 ~ 250 |           |
| Cylinder Temperature     | Rear               | °C        | 225 ~ 235 |
|                          | Middle             | °C        | 230 ~ 245 |
|                          | Front              | °C        | 240 ~ 250 |
| Nozzle Temperature       | °C                 | 240 ~ 250 |           |
| Mold Temperature         | °C                 | 40 ~ 80   |           |
| Back Pressure            | kg/cm <sup>2</sup> | -         |           |
| Screw Speed              | rpm                | -         |           |

Note) Back Pressure & Screw Speed are only mentioned as general guidelines.

These may not apply or need adjustment in specific situations such as low shot sizes, thin wall molding and gas-assist molding.

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