

# KumhoSunny PBT 3710G

Polybutylene Terephthalate

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Message:

3710G is a 10% glass fiber reforced PBT resin, offering high rigidity,high heat resistance and dimensional stability.PBT3710G is recommended for automobile air condition vent, shutter,microwave oven, etc.

| General Information                       |                                    |                   |                         |
|-------------------------------------------|------------------------------------|-------------------|-------------------------|
| Filler / Reinforcement                    | Glass Fiber,10% Filler by Weight   |                   |                         |
| Features                                  | Good Dimensional Stability         |                   |                         |
|                                           | Good UV Resistance                 |                   |                         |
|                                           | High Heat Resistance               |                   |                         |
|                                           | High Rigidity                      |                   |                         |
|                                           | Low to No Odor                     |                   |                         |
| Uses                                      | Automotive Applications            |                   |                         |
|                                           | Automotive Exterior Parts          |                   |                         |
|                                           | Automotive Interior Parts          |                   |                         |
|                                           | Consumer Applications              |                   |                         |
|                                           | Electrical Parts                   |                   |                         |
|                                           | Electrical/Electronic Applications |                   |                         |
| UL File Number                            | E254819                            |                   |                         |
|                                           | E65424                             |                   |                         |
| Forms                                     | Pellets                            |                   |                         |
| Processing Method                         | Injection Molding                  |                   |                         |
| Physical                                  | Nominal Value                      | Unit              | Test Method             |
| Specific Gravity                          | 1.38                               | g/cm <sup>3</sup> | ASTM D792, ISO 1183     |
| Melt Mass-Flow Rate (MFR) (265°C/2.16 kg) | 30                                 | g/10 min          | ISO 1133                |
| Molding Shrinkage                         |                                    |                   |                         |
| Flow                                      | 0.60 to 1.0                        | %                 | ASTM D955               |
| --                                        | 0.60 to 1.0                        | %                 | ISO 294-4               |
| Mechanical                                | Nominal Value                      | Unit              | Test Method             |
| Tensile Strength                          | 85.0                               | MPa               | ASTM D638, ISO 527-2/50 |
| Tensile Elongation (Break)                | 8.0                                | %                 | ASTM D638               |
| Flexural Modulus                          |                                    |                   |                         |
| --                                        | 4000                               | MPa               | ASTM D790               |
| -- <sup>1</sup>                           | 4000                               | MPa               | ISO 178                 |
| Flexural Strength                         |                                    |                   |                         |

|                                   |                      |                   |                       |
|-----------------------------------|----------------------|-------------------|-----------------------|
| --                                | 130                  | MPa               | ASTM D790             |
| -- <sup>2</sup>                   | 130                  | MPa               | ISO 178               |
| <b>Impact</b>                     | <b>Nominal Value</b> | <b>Unit</b>       | <b>Test Method</b>    |
| Charpy Notched Impact Strength    |                      |                   | ISO 179               |
| -30°C                             | 5.0                  | kJ/m <sup>2</sup> |                       |
| 23°C                              | 7.5                  | kJ/m <sup>2</sup> |                       |
| Notched Izod Impact               |                      |                   |                       |
| 3.20 mm                           | 60                   | J/m               | ASTM D256             |
| 23°C                              | 7.0                  | kJ/m <sup>2</sup> | ISO 180               |
| <b>Thermal</b>                    | <b>Nominal Value</b> | <b>Unit</b>       | <b>Test Method</b>    |
| Deflection Temperature Under Load |                      |                   |                       |
| 0.45 MPa, Unannealed              | 200                  | °C                | ASTM D648             |
| 1.8 MPa, Unannealed               | 180                  | °C                | ASTM D648, ISO 75-2/A |
| <b>Electrical</b>                 | <b>Nominal Value</b> | <b>Unit</b>       | <b>Test Method</b>    |
| Surface Resistivity               | > 1.0E+15            | ohms              | IEC 60093             |
| Volume Resistivity                | > 1.0E+15            | ohms·cm           | IEC 60093             |
| <b>Flammability</b>               | <b>Nominal Value</b> | <b>Unit</b>       | <b>Test Method</b>    |
| Flame Rating (0.800 mm)           | HB                   |                   | UL 94                 |
| <b>Injection</b>                  | <b>Nominal Value</b> | <b>Unit</b>       |                       |
| Drying Temperature                | 110 to 120           | °C                |                       |
| Drying Time                       | 4.0 to 6.0           | hr                |                       |
| Suggested Max Moisture            | < 0.020              | %                 |                       |
| Rear Temperature                  | 220 to 235           | °C                |                       |
| Middle Temperature                | 230 to 250           | °C                |                       |
| Front Temperature                 | 245 to 260           | °C                |                       |
| Nozzle Temperature                | 250 to 265           | °C                |                       |
| Processing (Melt) Temp            | 245 to 260           | °C                |                       |
| Mold Temperature                  | 60.0 to 80.0         | °C                |                       |
| Back Pressure                     | 0.200 to 0.800       | MPa               |                       |
| Screw Speed                       | 20 to 100            | rpm               |                       |
| <b>NOTE</b>                       |                      |                   |                       |
| 1.                                | 2.0 mm/min           |                   |                       |
| 2.                                | 2.0 mm/min           |                   |                       |

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