

# Infino GP-3200G

Acrylonitrile Butadiene Styrene + PBT

SAMSUNG SDI CO., LTD.

## Message:

PBT/ABS with 20% GF reinforcement that can be applied to air-conditioner blade

| General Information                      |                                    |                   |                      |
|------------------------------------------|------------------------------------|-------------------|----------------------|
| Filler / Reinforcement                   | Glass Fiber,20% Filler by Weight   |                   |                      |
| Uses                                     | Electrical/Electronic Applications |                   |                      |
| Physical                                 | Nominal Value                      | Unit              | Test Method          |
| Specific Gravity                         | 1.32                               | g/cm <sup>3</sup> | ASTM D792, ISO 1183  |
| Melt Mass-Flow Rate (MFR) (250°C/5.0 kg) | 33                                 | g/10 min          | ASTM D1238, ISO 1133 |
| Molding Shrinkage - Flow (3.20 mm)       | 0.40 to 0.90                       | %                 | ASTM D955            |
| Water Absorption (23°C, 24 hr)           | 0.080                              | %                 | ASTM D570            |
| Ash Content                              |                                    |                   |                      |
| --                                       | 19                                 | %                 | ISO 3451             |
| --                                       | 19                                 | %                 | ASTM D5630           |
| Hardness                                 | Nominal Value                      | Unit              | Test Method          |
| Rockwell Hardness                        |                                    |                   |                      |
| R-Scale                                  | 112                                |                   | ASTM D785            |
| R-Scale                                  | 110                                |                   | ISO 2039-2           |
| Mechanical                               | Nominal Value                      | Unit              | Test Method          |
| Tensile Modulus                          |                                    |                   |                      |
| -- <sup>1</sup>                          | 4900                               | MPa               | ASTM D638            |
| --                                       | 5000                               | MPa               | ISO 527-2/50         |
| Tensile Strength                         |                                    |                   |                      |
| Yield <sup>2</sup>                       | 78.0                               | MPa               | ASTM D638            |
| Yield                                    | 91.0                               | MPa               | ISO 527-2/50         |
| Break <sup>3</sup>                       | 78.0                               | MPa               | ASTM D638            |
| Break                                    | 90.0                               | MPa               | ISO 527-2/50         |
| Tensile Elongation                       |                                    |                   |                      |
| Break <sup>4</sup>                       | 3.2                                | %                 | ASTM D638            |
| Break                                    | 3.6                                | %                 | ISO 527-2/50         |
| Flexural Modulus                         |                                    |                   |                      |
| -- <sup>5</sup>                          | 4900                               | MPa               | ASTM D790            |
| -- <sup>6</sup>                          | 5000                               | MPa               | ISO 178              |
| Flexural Strength                        |                                    |                   |                      |
| -- <sup>7</sup>                          | 120                                | MPa               | ASTM D790            |
| -- <sup>8</sup>                          | 130                                | MPa               | ISO 178              |
| Impact                                   | Nominal Value                      | Unit              | Test Method          |

| Charpy Notched Impact Strength <sup>9</sup> (23°C) | 8.3           | kJ/m <sup>2</sup> | ISO 179/1eA  |
|----------------------------------------------------|---------------|-------------------|--------------|
| Notched Izod Impact                                |               |                   |              |
| 23°C, 3.18 mm                                      | 65            | J/m               | ASTM D256    |
| 23°C, 6.35 mm                                      | 65            | J/m               | ASTM D256    |
| 23°C <sup>10</sup>                                 | 7.5           | kJ/m <sup>2</sup> | ISO 180/1A   |
| Thermal                                            | Nominal Value | Unit              | Test Method  |
| Deflection Temperature Under Load                  |               |                   |              |
| 0.45 MPa, Unannealed, 6.40 mm                      | 205           | °C                | ASTM D648    |
| 0.45 MPa, Unannealed, 4.00 mm                      | 198           | °C                | ISO 75-2/B   |
| 1.8 MPa, Unannealed, 6.40 mm                       | 145           | °C                | ASTM D648    |
| 1.8 MPa, Unannealed, 4.00 mm                       | 127           | °C                | ISO 75-2/A   |
| Vicat Softening Temperature                        |               |                   |              |
| --                                                 | 133           | °C                | ISO 306/B50  |
| --                                                 | 137           | °C                | ISO 306/B120 |
| Flammability                                       | Nominal Value | Test Method       |              |
| Flame Rating                                       |               |                   | UL 94        |
| 1.50 mm                                            | HB            |                   |              |
| 3.00 mm                                            | HB            |                   |              |
| Injection                                          | Nominal Value | Unit              |              |
| Drying Temperature                                 |               |                   |              |
| --                                                 | 100           | °C                |              |
| Desiccant Dryer                                    | 100           | °C                |              |
| Drying Time                                        |               |                   |              |
| --                                                 | 4.0 to 6.0    | hr                |              |
| Desiccant Dryer                                    | 2.0 to 4.0    | hr                |              |
| Suggested Max Moisture                             | < 0.050       | %                 |              |
| Rear Temperature                                   | 210 to 220    | °C                |              |
| Middle Temperature                                 | 225 to 230    | °C                |              |
| Front Temperature                                  | 240 to 250    | °C                |              |
| Nozzle Temperature                                 | 250           | °C                |              |
| Mold Temperature                                   | 60.0 to 120   | °C                |              |
| Injection Pressure                                 | 49.0 to 245   | MPa               |              |
| Back Pressure                                      | 0.490 to 1.96 | MPa               |              |
| Screw Speed                                        | 50 to 150     | rpm               |              |
| NOTE                                               |               |                   |              |
| 1.                                                 | 5.0 mm/min    |                   |              |
| 2.                                                 | 5.0 mm/min    |                   |              |
| 3.                                                 | 5.0 mm/min    |                   |              |
| 4.                                                 | 5.0 mm/min    |                   |              |
| 5.                                                 | 2.8 mm/min    |                   |              |
| 6.                                                 | 2.0 mm/min    |                   |              |
| 7.                                                 | 2.8 mm/min    |                   |              |

|     |                 |
|-----|-----------------|
| 8.  | 2.0 mm/min      |
| 9.  | Thickness: 4 mm |
| 10. | Thickness: 4 mm |

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