

# Infino GP-5300G

Polybutylene Terephthalate

SAMSUNG SDI CO., LTD.

Message:

Infino GP-5300G is a Polybutylene Terephthalate (PBT) product filled with glass fiber. It is available in Africa & Middle East, Asia Pacific, Europe, Latin America, or North America. Primary characteristic: flame rated.

| General Information                |                |                   |                     |
|------------------------------------|----------------|-------------------|---------------------|
| UL YellowCard                      | E115797-219678 | E115797-219682    |                     |
| Filler / Reinforcement             | Glass Fiber    |                   |                     |
| Physical                           | Nominal Value  | Unit              | Test Method         |
| Specific Gravity                   | 1.53           | g/cm <sup>3</sup> | ASTM D792, ISO 1183 |
| Melt Mass-Flow Rate (MFR)          |                |                   |                     |
| 250°C/2.16 kg                      | 20             | g/10 min          | ASTM D1238          |
| 250°C/2.16 kg                      | 22             | g/10 min          | ISO 1133            |
| Molding Shrinkage - Flow (3.20 mm) | 0.30 to 0.90   | %                 | ASTM D955           |
| Water Absorption (23°C, 24 hr)     | 6.0E-3         | %                 | ASTM D570           |
| Ash Content                        | 30             | %                 | ISO 3451            |
| Hardness                           | Nominal Value  | Unit              | Test Method         |
| Rockwell Hardness                  |                |                   |                     |
| R-Scale                            | 115            |                   | ASTM D785           |
| R-Scale                            | 118            |                   | ISO 2039-2          |
| Mechanical                         | Nominal Value  | Unit              | Test Method         |
| Tensile Modulus                    |                |                   |                     |
| -- <sup>1</sup>                    | 6800           | MPa               | ASTM D638           |
| --                                 | 7500           | MPa               | ISO 527-2/50        |
| Tensile Strength                   |                |                   |                     |
| Yield <sup>2</sup>                 | 120            | MPa               | ASTM D638           |
| Yield                              | 141            | MPa               | ISO 527-2/50        |
| Break <sup>3</sup>                 | 130            | MPa               | ASTM D638           |
| Break                              | 141            | MPa               | ISO 527-2/50        |
| Tensile Elongation                 |                |                   |                     |
| Break <sup>4</sup>                 | 3.0            | %                 | ASTM D638           |
| Break                              | 4.0            | %                 | ISO 527-2/50        |
| Flexural Modulus                   |                |                   |                     |
| -- <sup>5</sup>                    | 8000           | MPa               | ASTM D790           |
| -- <sup>6</sup>                    | 7900           | MPa               | ISO 178             |
| Flexural Strength                  |                |                   |                     |
| -- <sup>7</sup>                    | 190            | MPa               | ASTM D790           |
| -- <sup>8</sup>                    | 199            | MPa               | ISO 178             |

| Impact                                             | Nominal Value | Unit              | Test Method  |
|----------------------------------------------------|---------------|-------------------|--------------|
| Charpy Notched Impact Strength <sup>9</sup> (23°C) | 11            | kJ/m <sup>2</sup> | ISO 179/1eA  |
| Notched Izod Impact                                |               |                   |              |
| 23°C, 3.18 mm                                      | 85            | J/m               | ASTM D256    |
| 23°C, 6.35 mm                                      | 79            | J/m               | ASTM D256    |
| 23°C <sup>10</sup>                                 | 11            | 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                      | 225           | °C                | ASTM D648    |
| 0.45 MPa, Unannealed, 4.00 mm                      | 223           | °C                | ISO 75-2/B   |
| 1.8 MPa, Unannealed, 6.40 mm                       | 210           | °C                | ASTM D648    |
| 1.8 MPa, Unannealed, 4.00 mm                       | 206           | °C                | ISO 75-2/A   |
| Vicat Softening Temperature                        |               |                   |              |
| --                                                 | 216           | °C                | ISO 306/B50  |
| --                                                 | 220           | °C                | ISO 306/B120 |
| Flammability                                       | Nominal Value | Test Method       |              |
| Flame Rating                                       |               |                   | UL 94        |
| 0.750 mm                                           | HB            |                   |              |
| 1.70 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                                 | 24.5 to 49.0  | 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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