

# Infino AR-5300H

Polybutylene Terephthalate + ASA

SAMSUNG SDI CO., LTD.

## Message:

Infino AR-5300H is a Polybutylene Terephthalate + ASA (PBT+ASA) product filled with glass fiber. It is available in Africa & Middle East, Asia Pacific, Europe, Latin America, or North America. Typical application: Automotive.

| General Information                      |                   |                   |                       |
|------------------------------------------|-------------------|-------------------|-----------------------|
| UL YellowCard                            | E115797-100393083 |                   |                       |
| Filler / Reinforcement                   | Glass Fiber       |                   |                       |
| Physical                                 | Nominal Value     | Unit              | Test Method           |
| Specific Gravity                         | 1.45              | g/cm <sup>3</sup> | ASTM D792, ISO 1183   |
| Melt Mass-Flow Rate (MFR) (250°C/5.0 kg) | 30                | g/10 min          | ASTM D1238, ISO 1133  |
| Molding Shrinkage                        |                   |                   |                       |
| Flow : 3.20 mm                           | 0.60              | %                 | ASTM D955             |
| Across Flow : 3.20 mm                    | 0.60              | %                 | ISO 2577              |
| Flow : 3.20 mm                           | 0.30              | %                 | ISO 2577              |
| Ash Content                              |                   |                   |                       |
| --                                       | 30                | %                 | ISO 3451              |
| --                                       | 30                | %                 | ASTM D5630            |
| Hardness                                 | Nominal Value     | Unit              | Test Method           |
| Rockwell Hardness (R-Scale)              | 117               |                   | ASTM D785, ISO 2039-2 |
| Mechanical                               | Nominal Value     | Unit              | Test Method           |
| Tensile Modulus                          |                   |                   |                       |
| -- <sup>1</sup>                          | 8300              | MPa               | ASTM D638             |
| --                                       | 7000              | MPa               | ISO 527-2/50          |
| Tensile Strength                         |                   |                   |                       |
| Yield <sup>2</sup>                       | 130               | MPa               | ASTM D638             |
| Yield                                    | 110               | MPa               | ISO 527-2/50          |
| Break <sup>3</sup>                       | 130               | MPa               | ASTM D638             |
| Break                                    | 105               | MPa               | ISO 527-2/50          |
| Tensile Elongation                       |                   |                   |                       |
| Break <sup>4</sup>                       | 5.0               | %                 | ASTM D638             |
| Break                                    | 5.0               | %                 | ISO 527-2/50          |
| Flexural Modulus                         |                   |                   |                       |
| -- <sup>5</sup>                          | 8800              | MPa               | ASTM D790             |
| -- <sup>6</sup>                          | 7800              | MPa               | ISO 178               |
| Flexural Strength                        |                   |                   |                       |
| -- <sup>7</sup>                          | 190               | MPa               | ASTM D790             |
| -- <sup>8</sup>                          | 170               | MPa               | ISO 178               |

| Impact                                             | Nominal Value   | Unit              | Test Method |
|----------------------------------------------------|-----------------|-------------------|-------------|
| Charpy Notched Impact Strength <sup>9</sup> (23°C) | 8.0             | kJ/m <sup>2</sup> | ISO 179/1eA |
| Notched Izod Impact                                |                 |                   |             |
| 23°C, 3.18 mm                                      | 79              | J/m               | ASTM D256   |
| 23°C, 6.35 mm                                      | 88              | J/m               | ASTM D256   |
| 23°C <sup>10</sup>                                 | 8.0             | 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                      | 195             | °C                | ISO 75-2/B  |
| 1.8 MPa, Unannealed, 6.40 mm                       | 193             | °C                | ASTM D648   |
| 1.8 MPa, Unannealed, 4.00 mm                       | 180             | °C                | ISO 75-2/A  |
| Vicat Softening Temperature                        | 205             | °C                | ISO 306/B50 |
| Injection                                          | Nominal Value   | Unit              |             |
| Drying Temperature                                 |                 |                   |             |
| --                                                 | 120             | °C                |             |
| Desiccant Dryer                                    | 120             | °C                |             |
| Drying Time                                        |                 |                   |             |
| --                                                 | 4.0             | hr                |             |
| Desiccant Dryer                                    | 4.0             | hr                |             |
| Suggested Max Moisture                             | 0.040           | %                 |             |
| Rear Temperature                                   | 230 to 240      | °C                |             |
| Middle Temperature                                 | 240 to 250      | °C                |             |
| Front Temperature                                  | 250 to 260      | °C                |             |
| Nozzle Temperature                                 | 270             | °C                |             |
| Mold Temperature                                   | 60.0 to 80.0    | °C                |             |
| Injection Pressure                                 | 98.1            | MPa               |             |
| Back Pressure                                      | 2.94 to 7.85    | MPa               |             |
| Screw Speed                                        | 5 to 25         | 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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