

# Infino WP-1200

Polycarbonate + ABS

LOTTE ADVANCED MATERIALS CO., LTD.

## Message:

Infino WP-1200 is a polycarbonate acrylonitrile butadiene styrene (PC ABS) product, which contains a glass fiber reinforced material. It is available in North America, Africa and the Middle East, Latin America, Europe or Asia Pacific. Typical application areas are: automotive industry.

| General Information                       |                                 |                   |                      |
|-------------------------------------------|---------------------------------|-------------------|----------------------|
| Filler / Reinforcement                    | Glass fiber reinforced material |                   |                      |
| Features                                  | General                         |                   |                      |
| Uses                                      | Application in Automobile Field |                   |                      |
| Physical                                  | Nominal Value                   | Unit              | Test Method          |
| Specific Gravity (Natural)                | 1.27                            | g/cm <sup>3</sup> | ASTM D792, ISO 1183  |
| Melt Mass-Flow Rate (MFR) (250°C/10.0 kg) | 36                              | g/10 min          | ASTM D1238, ISO 1133 |
| Molding Shrinkage                         |                                 |                   |                      |
| Flow: 3.20mm                              | 0.15 - 0.45                     | %                 | ASTM D955            |
| Transverse flow: 3.20mm                   | 0.25 - 0.55                     | %                 | ASTM D955            |
| Lateral flow: 3.20mm                      | 0.25 - 0.55                     | %                 | ISO 2577             |
| Traffic: 3.20mm                           | 0.15 - 0.45                     | %                 | ISO 2577             |
| Ash Content                               |                                 |                   |                      |
| --                                        | 20                              | %                 | ASTM D5630           |
| --                                        | 20                              | %                 | ISO 3451             |
| Mechanical                                | Nominal Value                   | Unit              | Test Method          |
| Tensile Modulus                           |                                 |                   |                      |
| -- <sup>1</sup>                           | 4200                            | MPa               | ASTM D638            |
| --                                        | 4300                            | MPa               | ISO 527-2/5          |
| Tensile Strength                          |                                 |                   |                      |
| Yield <sup>2</sup>                        | 120                             | MPa               | ASTM D638            |
| Yield                                     | 109                             | MPa               | ISO 527-2/5          |
| Fracture <sup>3</sup>                     | 120                             | MPa               | ASTM D638            |
| Fracture                                  | 109                             | MPa               | ISO 527-2/5          |
| Tensile Elongation                        |                                 |                   |                      |
| Fracture <sup>4</sup>                     | 3.5                             | %                 | ASTM D638            |
| Fracture                                  | 3.9                             | %                 | ISO 527-2/5          |
| Flexural Modulus                          |                                 |                   |                      |
| -- <sup>5</sup>                           | 6100                            | MPa               | ASTM D790            |
| -- <sup>6</sup>                           | 7400                            | MPa               | ISO 178              |
| Flexural Strength                         |                                 |                   |                      |
| -- <sup>7</sup>                           | 150                             | MPa               | ASTM D790            |
| -- <sup>8</sup>                           | 180                             | MPa               | ISO 178              |

| Impact                                         | Nominal Value | Unit              | Test Method            |
|------------------------------------------------|---------------|-------------------|------------------------|
| Charpy Notched Impact Strength <sup>9</sup>    |               |                   | ISO 179/1eA            |
| -30°C                                          | 9.0           | kJ/m <sup>2</sup> | ISO 179/1eA            |
| 23°C                                           | 11            | kJ/m <sup>2</sup> | ISO 179/1eA            |
| Charpy Unnotched Impact Strength <sup>10</sup> |               |                   | ISO 179/1eU            |
| -30°C                                          | 58            | kJ/m <sup>2</sup> | ISO 179/1eU            |
| 23°C                                           | 62            | kJ/m <sup>2</sup> | ISO 179/1eU            |
| Notched Izod Impact                            |               |                   |                        |
| -30°C, 3.18 mm                                 | 59            | J/m               | ASTM D256              |
| -30°C, 6.35 mm                                 | 69            | J/m               | ASTM D256              |
| 23°C, 3.18 mm                                  | 69            | J/m               | ASTM D256              |
| 23°C, 6.35 mm                                  | 79            | J/m               | ASTM D256              |
| -30°C <sup>11</sup>                            | 7.0           | kJ/m <sup>2</sup> | ISO 180/1A             |
| 23°C <sup>12</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, 6.40mm                   | 138           | °C                | ASTM D648              |
| 0.45 MPa, unannealed, 4.00mm                   | 131           | °C                | ISO 75-2/B             |
| 1.8 MPa, unannealed, 6.40mm                    | 128           | °C                | ASTM D648              |
| 1.8 MPa, not annealed, 4.00mm                  | 121           | °C                | ISO 75-2/A             |
| Vicat Softening Temperature                    | 130           | °C                | ISO 306/B50            |
| Linear thermal expansion coefficient           |               |                   | ASTM E831, ISO 11359-2 |
| Flow: 40 to 100°C                              | 3.1E-6        | cm/cm/°C          | ASTM E831, ISO 11359-2 |
| Horizontal: 40 to 100°C                        | 6.4E-6        | cm/cm/°C          | ASTM E831, ISO 11359-2 |
| Injection                                      | Nominal Value | Unit              |                        |
| Drying Temperature                             |               |                   |                        |
| --                                             | 90 - 110      | °C                |                        |
| Hot air dryer                                  | 90 - 110      | °C                |                        |
| Drying Time                                    |               |                   |                        |
| --                                             | 2.0 - 4.0     | hr                |                        |
| Hot air dryer                                  | 2.0 - 4.0     | hr                |                        |
| Suggested Max Moisture                         | 0.020         | %                 |                        |
| Rear Temperature                               | 220 - 240     | °C                |                        |
| Middle Temperature                             | 240 - 250     | °C                |                        |
| Front Temperature                              | 250 - 270     | °C                |                        |
| Nozzle Temperature                             | 250 - 290     | °C                |                        |
| Mold Temperature                               | 60 - 90       | °C                |                        |
| Injection Pressure                             | 98.1          | MPa               |                        |
| Back Pressure                                  | 0.490 - 2.94  | MPa               |                        |
| Screw Speed                                    | 5 - 200       | 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: 4mm |
| 10. | Thickness: 4mm |
| 11. | Thickness: 4mm |
| 12. | Thickness: 4mm |

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