

# Infino TK-2046HM

Polycyclohexylenedimethylene Terephthalate  
SAMSUNG SDI CO., LTD.

Message:

Infino TK-2046HM is a Polycyclohexylenedimethylene Terephthalate (PCT) product filled with glass fiber. It is available in Africa & Middle East, Asia Pacific, Europe, Latin America, or North America.

| General Information                                  |               |                   |                      |
|------------------------------------------------------|---------------|-------------------|----------------------|
| Filler / Reinforcement                               |               | Glass Fiber       |                      |
| Physical                                             | Nominal Value | Unit              | Test Method          |
| Specific Gravity                                     | 1.61          | g/cm <sup>3</sup> | ASTM D792, ISO 1183  |
| Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)             | 20            | g/10 min          | ASTM D1238, ISO 1133 |
| Ash Content                                          |               |                   |                      |
| --                                                   | 41            | %                 | ISO 3451             |
| --                                                   | 41            | %                 | ASTM D5630           |
| Mechanical                                           | Nominal Value | Unit              | Test Method          |
| Tensile Modulus                                      | 7100          | MPa               | ISO 527-2/50         |
| Tensile Strength                                     |               |                   |                      |
| Yield <sup>1</sup>                                   | 61.0          | MPa               | ASTM D638            |
| Yield                                                | 620           | MPa               | ISO 527-2/5          |
| Break                                                | 67.0          | MPa               | ISO 527-2/50         |
| Tensile Elongation                                   |               |                   |                      |
| Break <sup>2</sup>                                   | 1.5           | %                 | ASTM D638            |
| Break                                                | 1.5           | %                 | ISO 527-2/5          |
| Flexural Modulus <sup>3</sup>                        |               |                   |                      |
| --                                                   | 7600          | MPa               | ASTM D790            |
| --                                                   | 77000         | MPa               | ISO 178              |
| Flexural Strength <sup>4</sup>                       |               |                   |                      |
| --                                                   | 78.0          | MPa               | ASTM D790            |
| --                                                   | 800           | MPa               | ISO 178              |
| Impact                                               | Nominal Value | Unit              | Test Method          |
| Charpy Notched Impact Strength <sup>5</sup> (23°C)   | 2.8           | kJ/m <sup>2</sup> | ISO 179/1eA          |
| Charpy Unnotched Impact Strength <sup>6</sup> (23°C) | 13            | kJ/m <sup>2</sup> | ISO 179/1eU          |
| Notched Izod Impact                                  |               |                   |                      |
| 23°C, 3.18 mm                                        | 29            | J/m               | ASTM D256            |
| 23°C, 6.35 mm                                        | 26            | J/m               | ASTM D256            |
| 23°C <sup>7</sup>                                    | 3.0           | kJ/m <sup>2</sup> | ISO 180/1A           |
| Unnotched Izod Impact                                |               |                   |                      |
| 23°C, 3.18 mm                                        | 160           | J/m               | ASTM D256            |
| 23°C, 6.35 mm                                        | 150           | J/m               | ASTM D256            |

| 23°C <sup>8</sup>                 | 16              | kJ/m <sup>2</sup> | ISO 180/1U  |
|-----------------------------------|-----------------|-------------------|-------------|
| Thermal                           | Nominal Value   | Unit              | Test Method |
| Deflection Temperature Under Load |                 |                   |             |
| 1.8 MPa, Unannealed, 6.40 mm      | 250             | °C                | ASTM D648   |
| 1.8 MPa, Unannealed, 4.00 mm      | 250             | °C                | ISO 75-2/A  |
| Optical                           | Nominal Value   | Unit              | Test Method |
| Yellowness Index (3.20 mm)        | 4.0             | YI                | ASTM D1925  |
| Injection                         | Nominal Value   | Unit              |             |
| Drying Temperature                |                 |                   |             |
| --                                | 100             | °C                |             |
| Desiccant Dryer                   | 120             | °C                |             |
| Drying Time                       |                 |                   |             |
| --                                | 4.0 to 6.0      | hr                |             |
| Desiccant Dryer                   | 2.0 to 4.0      | hr                |             |
| Suggested Max Moisture            | < 0.050         | %                 |             |
| Rear Temperature                  | 290 to 295      | °C                |             |
| Middle Temperature                | 300             | °C                |             |
| Front Temperature                 | 305 to 310      | °C                |             |
| Nozzle Temperature                | 310             | °C                |             |
| Mold Temperature                  | 130 to 160      | °C                |             |
| Injection Pressure                | 118             | 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.                                | 2.8 mm/min      |                   |             |
| 4.                                | 2.8 mm/min      |                   |             |
| 5.                                | Thickness: 4 mm |                   |             |
| 6.                                | Thickness 4 mm  |                   |             |
| 7.                                | Thickness: 4 mm |                   |             |
| 8.                                | Thickness 4 mm  |                   |             |

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