

# Infino TK-6036H

Polyphthalamide

SAMSUNG SDI CO., LTD.

## Message:

Infino TK-6036H is a Polyphthalamide (PPA) 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                             | E115797-100944577 |                   |                      |
| Filler / Reinforcement                    | Glass Fiber       |                   |                      |
| Physical                                  | Nominal Value     | Unit              | Test Method          |
| Specific Gravity                          | 1.56              | g/cm <sup>3</sup> | ASTM D792, ISO 1183  |
| Melt Mass-Flow Rate (MFR) (330°C/2.16 kg) | 53                | g/10 min          | ASTM D1238, ISO 1133 |
| Molding Shrinkage                         |                   |                   |                      |
| Flow : 3.20 mm                            | 0.31              | %                 | ASTM D955, ISO 2577  |
| Across Flow : 3.20 mm                     | 0.30              | %                 | ASTM D955, ISO 294-4 |
| Ash Content                               |                   |                   |                      |
| --                                        | 41                | %                 | ASTM D5630           |
| --                                        | 41                | %                 | ISO 3451             |
| Hardness                                  | Nominal Value     | Unit              | Test Method          |
| Rockwell Hardness                         |                   |                   |                      |
| R-Scale                                   | 116               |                   | ASTM D785            |
| R-Scale                                   | 115               |                   | ISO 2039-2           |
| Mechanical                                | Nominal Value     | Unit              | Test Method          |
| Tensile Modulus                           |                   |                   |                      |
| -- <sup>1</sup>                           | 4300              | MPa               | ASTM D638            |
| --                                        | 4010              | MPa               | ISO 527-2/50         |
| Tensile Strength                          |                   |                   |                      |
| Yield <sup>2</sup>                        | 65.0              | MPa               | ASTM D638            |
| Yield                                     | 67.0              | MPa               | ISO 527-2/5          |
| Break <sup>3</sup>                        | 65.0              | MPa               | ASTM D638            |
| Break                                     | 67.0              | MPa               | ISO 527-2/5          |
| Tensile Elongation                        |                   |                   |                      |
| Break <sup>4</sup>                        | 2.0               | %                 | ASTM D638            |
| Break                                     | 2.3               | %                 | ISO 527-2/50         |
| Flexural Modulus                          |                   |                   |                      |
| -- <sup>5</sup>                           | 5700              | MPa               | ASTM D790            |
| -- <sup>6</sup>                           | 5200              | MPa               | ISO 178              |
| Flexural Strength                         |                   |                   |                      |
| -- <sup>7</sup>                           | 110               | MPa               | ASTM D790            |

|                                                    |                 |                   |             |
|----------------------------------------------------|-----------------|-------------------|-------------|
| -- 8                                               | 116             | MPa               | ISO 178     |
| Impact                                             | Nominal Value   | Unit              | Test Method |
| Charpy Notched Impact Strength <sup>9</sup> (23°C) | 0.50            | kJ/m <sup>2</sup> | ISO 179/1eA |
| Notched Izod Impact                                |                 |                   |             |
| 23°C, 3.18 mm                                      | 23              | J/m               | ASTM D256   |
| 23°C, 6.35 mm                                      | 20              | J/m               | ASTM D256   |
| 23°C <sup>10</sup>                                 | 4.5             | kJ/m <sup>2</sup> | ISO 180/1A  |
| Thermal                                            | Nominal Value   | Unit              | Test Method |
| Deflection Temperature Under Load                  |                 |                   |             |
| 1.8 MPa, Unannealed, 6.40 mm                       | 253             | °C                | ASTM D648   |
| 1.8 MPa, Unannealed, 4.00 mm                       | 227             | °C                | ISO 75-2/A  |
| Flammability                                       | Nominal Value   |                   | Test Method |
| Flame Rating (1.50 to 3.00 mm)                     | HB              |                   | UL 94       |
| Injection                                          | Nominal Value   | Unit              |             |
| Drying Temperature - Desiccant Dryer               | 80.0            | °C                |             |
| Drying Time - Desiccant Dryer                      | 4.0             | hr                |             |
| Suggested Max Moisture                             | < 0.020         | %                 |             |
| Rear Temperature                                   | 290 to 300      | °C                |             |
| Middle Temperature                                 | 300             | °C                |             |
| Front Temperature                                  | 310             | °C                |             |
| Nozzle Temperature                                 | 320             | °C                |             |
| Mold Temperature                                   | 130             | °C                |             |
| Injection Pressure                                 | 118 to 177      | MPa               |             |
| Back Pressure                                      | 0.490 to 1.96   | MPa               |             |
| Screw Speed                                        | 150 to 250      | 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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