

# Starex SR-0330M

Acrylonitrile Butadiene Styrene

SAMSUNG SDI CO., LTD.

Message:

Starex SR-0330M is an Acrylonitrile Butadiene Styrene (ABS) product. It is available in Africa & Middle East, Asia Pacific, Europe, Latin America, or North America. Typical application: Automotive.

| General Information         |                |                   |                       |
|-----------------------------|----------------|-------------------|-----------------------|
| UL YellowCard               | E115797-219570 |                   |                       |
| Physical                    | Nominal Value  | Unit              | Test Method           |
| Specific Gravity            | 1.07           | g/cm <sup>3</sup> | ASTM D792, ISO 1183   |
| Melt Mass-Flow Rate (MFR)   |                |                   | ASTM D1238, ISO 1133  |
| 220°C/10.0 kg               | 3.0            | g/10 min          |                       |
| 250°C/2.16 kg               | 2.0            | g/10 min          |                       |
| Molding Shrinkage           |                |                   | ASTM D955, ISO 2577   |
| Flow : 3.20 mm              | 0.60           | %                 |                       |
| Across Flow : 3.20 mm       | 0.64           | %                 |                       |
| Hardness                    | Nominal Value  | Unit              | Test Method           |
| Rockwell Hardness (R-Scale) | 113            |                   | ASTM D785, ISO 2039-2 |
| Mechanical                  | Nominal Value  | Unit              | Test Method           |
| Tensile Modulus             |                |                   |                       |
| -- <sup>1</sup>             | 2200           | MPa               | ASTM D638             |
| --                          | 2330           | MPa               | ISO 527-2/50          |
| Tensile Strength            |                |                   |                       |
| Yield <sup>2</sup>          | 41.0           | MPa               | ASTM D638             |
| Yield                       | 48.0           | MPa               | ISO 527-2/50          |
| Break <sup>3</sup>          | 40.0           | MPa               | ASTM D638             |
| Break                       | 45.0           | MPa               | ISO 527-2/50          |
| Tensile Elongation          |                |                   |                       |
| Break <sup>4</sup>          | 17             | %                 | ASTM D638             |
| Break                       | 15             | %                 | ISO 527-2/50          |
| Flexural Modulus            |                |                   |                       |
| -- <sup>5</sup>             | 2200           | MPa               | ASTM D790             |
| -- <sup>6</sup>             | 2350           | MPa               | ISO 178               |
| Flexural Strength           |                |                   |                       |
| -- <sup>7</sup>             | 63.0           | MPa               | ASTM D790             |
| -- <sup>8</sup>             | 78.0           | MPa               | ISO 178               |
| Impact                      | Nominal Value  | Unit              | Test Method           |

| Charpy Notched Impact Strength <sup>9</sup> (23°C) | 15            | kJ/m <sup>2</sup> | ISO 179/1eA  |
|----------------------------------------------------|---------------|-------------------|--------------|
| 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                                      | 130           | J/m               | ASTM D256    |
| 23°C, 6.35 mm                                      | 120           | J/m               | ASTM D256    |
| -30°C <sup>10</sup>                                | 9.0           | kJ/m <sup>2</sup> | ISO 180/1A   |
| 23°C <sup>11</sup>                                 | 14            | 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                      | 116           | °C                | ASTM D648    |
| 0.45 MPa, Unannealed, 4.00 mm                      | 112           | °C                | ISO 75-2/B   |
| 0.45 MPa, Annealed                                 | 112           | °C                | ISO 75-2/B   |
| 1.8 MPa, Unannealed, 6.40 mm                       | 104           | °C                | ASTM D648    |
| 1.8 MPa, Unannealed, 4.00 mm                       | 96.0          | °C                | ISO 75-2/A   |
| 1.8 MPa, Annealed, 4.00 mm                         | 103           | °C                | ISO 75-2/A   |
| Vicat Softening Temperature                        |               |                   |              |
| --                                                 | 118           | °C                | ISO 306/B50  |
| --                                                 | 119           | °C                | ISO 306/B120 |
| Optical                                            | Nominal Value | Unit              | Test Method  |
| Yellowness Index (3.20 mm)                         | 31            | YI                | ASTM D1925   |
| Injection                                          | Nominal Value | Unit              |              |
| Drying Temperature                                 |               |                   |              |
| --                                                 | 80.0          | °C                |              |
| Desiccant Dryer                                    | 80.0          | °C                |              |
| Drying Time                                        |               |                   |              |
| --                                                 | 2.0 to 4.0    | hr                |              |
| Desiccant Dryer                                    | 2.0 to 3.0    | hr                |              |
| Suggested Max Moisture                             | < 0.050       | %                 |              |
| Rear Temperature                                   | 160 to 180    | °C                |              |
| Middle Temperature                                 | 190 to 200    | °C                |              |
| Front Temperature                                  | 210 to 220    | °C                |              |
| Nozzle Temperature                                 | 230           | °C                |              |
| Mold Temperature                                   | 40.0 to 80.0  | °C                |              |
| Injection Pressure                                 | 49.0 to 147   | 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 |
| 11. | Thickness: 4 mm |

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