

# Starex HR-0370F

Acrylonitrile Butadiene Styrene  
SAMSUNG SDI CO., LTD.

Message:

Starex HR-0370F is an Acrylonitrile Butadiene Styrene (ABS) product. It is available in Africa & Middle East, Asia Pacific, Europe, Latin America, or North America.

| General Information                                |               |                   |                       |
|----------------------------------------------------|---------------|-------------------|-----------------------|
| UL YellowCard                                      |               | E115797-219545    |                       |
| Physical                                           | Nominal Value | Unit              | Test Method           |
| Specific Gravity                                   |               |                   |                       |
| --                                                 | 1.06          | g/cm <sup>3</sup> | ASTM D792             |
| --                                                 | 1.05          | g/cm <sup>3</sup> | ISO 1183              |
| Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)           | 0.80          | g/10 min          | ASTM D1238, ISO 1133  |
| Molding Shrinkage                                  |               |                   | ASTM D955             |
| Flow : 3.20 mm                                     | 0.50 to 0.70  | %                 |                       |
| Across Flow : 3.20 mm                              | 0.60          | %                 |                       |
| Water Absorption (23°C, 24 hr)                     | 0.050         | %                 | ASTM D570             |
| Hardness                                           | Nominal Value | Unit              | Test Method           |
| Rockwell Hardness (R-Scale)                        | 110           |                   | ASTM D785, ISO 2039-2 |
| Mechanical                                         | Nominal Value | Unit              | Test Method           |
| Tensile Modulus                                    | 2400          | MPa               | ISO 527-2/50          |
| Tensile Strength                                   |               |                   |                       |
| Yield <sup>1</sup>                                 | 46.0          | MPa               | ASTM D638             |
| Yield                                              | 50.0          | MPa               | ISO 527-2/50          |
| Break                                              | 37.0          | MPa               | ISO 527-2/50          |
| Tensile Elongation                                 |               |                   |                       |
| Break <sup>2</sup>                                 | 14            | %                 | ASTM D638             |
| Break                                              | 18            | %                 | ISO 527-2/50          |
| Flexural Modulus                                   |               |                   |                       |
| -- <sup>3</sup>                                    | 2200          | MPa               | ASTM D790             |
| -- <sup>4</sup>                                    | 2500          | MPa               | ISO 178               |
| Flexural Strength                                  |               |                   |                       |
| -- <sup>5</sup>                                    | 69.0          | MPa               | ASTM D790             |
| -- <sup>6</sup>                                    | 80.0          | MPa               | ISO 178               |
| Impact                                             | Nominal Value | Unit              | Test Method           |
| Charpy Notched Impact Strength <sup>7</sup> (23°C) | 16            | kJ/m <sup>2</sup> | ISO 179/1eA           |
| Notched 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>             | 18              | kJ/m <sup>2</sup> | ISO 180/1A   |
|-------------------------------|-----------------|-------------------|--------------|
| Thermal                       | Nominal Value   | Unit              | Test Method  |
| Heat Deflection Temperature   |                 |                   |              |
| 0.45 MPa, Unannealed, 4.00 mm | 100             | °C                | ISO 75-2/B   |
| 0.45 MPa, Annealed            | 104             | °C                | ISO 75-2/B   |
| 1.8 MPa, Unannealed, 6.40 mm  | 95.0            | °C                | ASTM D648    |
| 1.8 MPa, Unannealed, 4.00 mm  | 85.0            | °C                | ISO 75-2/A   |
| 1.8 MPa, Annealed, 4.00 mm    | 100             | °C                | ISO 75-2/A   |
| Vicat Softening Temperature   |                 |                   |              |
| --                            | 107             | °C                | ISO 306/B50  |
| --                            | 109             | °C                | ISO 306/B120 |
| 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.                            | 2.8 mm/min      |                   |              |
| 4.                            | 2.0 mm/min      |                   |              |
| 5.                            | 2.8 mm/min      |                   |              |
| 6.                            | 2.0 mm/min      |                   |              |
| 7.                            | Thickness: 4 mm |                   |              |
| 8.                            | Thickness: 4 mm |                   |              |

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