

## SABIC Innovative Plastics Xenoy® IQ1103R PBT+PC (Asia Pacific)

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate/Polybutylene Terephthalate (PBT) Blend, Unreinforced , Polyester, TP , Polybutylene Terephthalate (PBT)

### Material Notes:

Xenoy® Resin iQ1103R - Environmentally responsible, sustainable, and low carbon footprint resin. Xenoy iQ1103R is an unreinforced, impact modified PC + iQ-PBT alloy with excellent low temperature impact, chemical resistance, and a special mold release. Range gray, black colors, limited colors.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Xenoy-IQ1103R-PBTPC-Asia-Pacific.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Xenoy-IQ1103R-PBTPC-Asia-Pacific.php)

| Physical Properties            | Metric                                               | English                                              | Comments                                |
|--------------------------------|------------------------------------------------------|------------------------------------------------------|-----------------------------------------|
| Specific Gravity               | 1.19 g/cc                                            | 1.19 g/cc                                            | ASTM D792                               |
| Density                        | 1.20 g/cc                                            | 0.0434 lb/in <sup>3</sup>                            | ISO 1183                                |
| Moisture Absorption            | 0.0800 %                                             | 0.0800 %                                             | 23Â°C / 50% RH; ISO 62                  |
| Water Absorption at Saturation | 0.30 %                                               | 0.30 %                                               | ISO 62                                  |
| Linear Mold Shrinkage, Flow    | 0.0080 - 0.012 cm/cm<br>@Thickness 3.20 mm           | 0.0080 - 0.012 in/in<br>@Thickness 0.126 in          | SABIC Method                            |
| Melt Flow                      | 13 g/10 min<br>@Load 5.00 kg,<br>Temperature 250 Â°C | 13 g/10 min<br>@Load 11.0 lb,<br>Temperature 482 Â°F | ASTM D1238                              |
| Melt Index of Compound         | 12 g/10 min<br>@Load 5.00 kg,<br>Temperature 250 Â°C | 12 g/10 min<br>@Load 11.0 lb,<br>Temperature 482 Â°F | MVR [cm <sup>3</sup> /10 min]; ISO 1133 |

| Mechanical Properties     | Metric   | English  | Comments                     |
|---------------------------|----------|----------|------------------------------|
| Tensile Strength at Break | 46.0 MPa | 6670 psi | Type I, 50 mm/min; ASTM D638 |
|                           | 47.0 MPa | 6820 psi | 50 mm/min; ISO 527           |
| Tensile Strength, Yield   | 45.0 MPa | 6530 psi | Type I, 50 mm/min; ASTM D638 |
|                           | 49.0 MPa | 7110 psi | 50 mm/min; ISO 527           |
| Elongation at Break       | 140 %    | 140 %    | Type I, 50 mm/min; ASTM D638 |
|                           | 150 %    | 150 %    | 50 mm/min; ISO 527           |
| Elongation at Yield       | 4.0 %    | 4.0 %    | Type I, 50 mm/min; ASTM D638 |
|                           | 4.0 %    | 4.0 %    | 50 mm/min; ISO 527           |

| Tensile Modulus<br>Mechanical Properties | 1.95 GPa<br>Metric       | 283 ksi<br>English       | 1 mm/min; ISO 527<br>Comments      |
|------------------------------------------|--------------------------|--------------------------|------------------------------------|
|                                          | 2.05 GPa                 | 297 ksi                  | 50 mm/min; ASTM D638               |
| Flexural Yield Strength                  | 70.0 MPa                 | 10200 psi                | 2 mm/min; ISO 178                  |
|                                          | 74.0 MPa                 | 10700 psi                | 1.3 mm/min, 50 mm span; ASTM D790  |
| Flexural Modulus                         | 1.92 GPa                 | 278 ksi                  | 2 mm/min; ISO 178                  |
|                                          | 2.00 GPa                 | 290 ksi                  | 1.3 mm/min, 50 mm span; ASTM D790  |
| Izod Impact, Notched                     | 6.50 J/cm                | 12.2 ft-lb/in            | ASTM D256                          |
|                                          | 6.00 J/cm                | 11.2 ft-lb/in            | ASTM D256                          |
|                                          | @Temperature -30.0<br>°C | @Temperature -22.0<br>°F |                                    |
| Izod Impact, Notched (ISO)               | 55.0 kJ/mÂ²              | 26.2 ft-lb/inÂ²          | 80*10*4; ISO 180/1A                |
|                                          | 47.0 kJ/mÂ²              | 22.4 ft-lb/inÂ²          | 80*10*4; ISO 180/1A                |
|                                          | @Temperature -30.0<br>°C | @Temperature -22.0<br>°F |                                    |
| Charpy Impact, Notched                   | 5.50 J/cmÂ²              | 26.2 ft-lb/inÂ²          | Edgew 80*10*4 sp=62mm; ISO 179/1eA |
|                                          | 50.0 J                   | 36.9 ft-lb               | ASTM D3763                         |
|                                          | @Temperature 23.0<br>°C  | @Temperature 73.4 °F     |                                    |

| Thermal Properties                             | Metric                           | English                         | Comments              |
|------------------------------------------------|----------------------------------|---------------------------------|-----------------------|
| CTE, linear, Parallel to Flow                  | 90.0 Âµm/m-Â°C                   | 50.0 Âµin/in-Â°F                | ASTM E 831            |
|                                                | @Temperature -40.0 -<br>150 Â°C  | @Temperature -40.0 -<br>302 Â°F |                       |
|                                                | 90.0 Âµm/m-Â°C                   | 50.0 Âµin/in-Â°F                | ISO 11359-2           |
|                                                | @Temperature -30.0 -<br>80.0 Â°C | @Temperature -22.0 -<br>176 Â°F |                       |
| CTE, linear, Transverse to Flow                | 95.0 Âµm/m-Â°C                   | 52.8 Âµin/in-Â°F                | ASTM E 831            |
|                                                | @Temperature -40.0 -<br>150 Â°C  | @Temperature -40.0 -<br>302 Â°F |                       |
|                                                | 95.0 Âµm/m-Â°C                   | 52.8 Âµin/in-Â°F                | ISO 11359-2           |
|                                                | @Temperature -30.0 -<br>80.0 Â°C | @Temperature -22.0 -<br>176 Â°F |                       |
| Deflection Temperature at 0.46 MPa<br>(66 psi) | 99.0 Â°C                         | 210 Â°F                         | unannealed; ASTM D648 |

| Thermal Properties                             | @Thickness 3.20 mm<br>Metric | @Thickness 0.126 in<br>English | Comments                         |
|------------------------------------------------|------------------------------|--------------------------------|----------------------------------|
| Deflection Temperature at 1.8 MPa<br>(264 psi) | 76.0 Â°C                     | 169 Â°F                        | Flatw 80*10*4 sp=64mm; ISO 75/Af |
|                                                | 75.0 Â°C                     | 167 Â°F                        | unannealed; ASTM D648            |
|                                                | @Thickness 3.20 mm           | @Thickness 0.126 in            |                                  |
| Vicat Softening Point                          | 115 Â°C                      | 239 Â°F                        | Rate B/50; ISO 306               |
|                                                | 117 Â°C                      | 243 Â°F                        | Rate B/120; ISO 306              |
|                                                | 117 Â°C                      | 243 Â°F                        | Rate B/50; ASTM D1525            |

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