

## SABIC Innovative Plastics Xenoy® IQ4840 PBT+PC (Asia Pacific)

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

### Material Notes:

Xenoy iQ4840 (PBT+PC) resin is an environmental responsible, sustainable, and low carbon footprint resin. It is a 10% mineral filled resin with high modulus and ductile (HMD) characteristics. Xenoy iQ4840 offers a good balance of impact and ductility, excellent pull strength, good fatigue, provides Class A surface which is paintable, and excellent processibility. It is currently used in painted automotive doorhandles.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Xenoy-IQ4840-PBTPC-Asia-Pacific.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Xenoy-IQ4840-PBTPC-Asia-Pacific.php)

| Physical Properties            | Metric                                                | English                                               | Comments                                |
|--------------------------------|-------------------------------------------------------|-------------------------------------------------------|-----------------------------------------|
| Specific Gravity               | 1.30 g/cc                                             | 1.30 g/cc                                             | ASTM D792                               |
| Density                        | 1.30 g/cc                                             | 0.0470 lb/in <sup>3</sup>                             | ISO 1183                                |
| Moisture Absorption            | 0.0800 %                                              | 0.0800 %                                              | 23Â°C / 50% RH; ISO 62                  |
| Water Absorption at Saturation | 0.28 %                                                | 0.28 %                                                | ISO 62                                  |
| Linear Mold Shrinkage, Flow    | 0.0070 - 0.0090 cm/cm<br>@Thickness 3.20 mm           | 0.0070 - 0.0090 in/in<br>@Thickness 0.126 in          | SABIC Method                            |
| Melt Flow                      | 7.0 g/10 min<br>@Load 5.00 kg,<br>Temperature 250 Â°C | 7.0 g/10 min<br>@Load 11.0 lb,<br>Temperature 482 Â°F | ASTM D1238                              |
| Melt Index of Compound         | 13 g/10 min<br>@Load 5.00 kg,<br>Temperature 265 Â°C  | 13 g/10 min<br>@Load 11.0 lb,<br>Temperature 509 Â°F  | MVR [cm <sup>3</sup> /10 min]; ISO 1133 |

| Mechanical Properties     | Metric   | English  | Comments                    |
|---------------------------|----------|----------|-----------------------------|
| Tensile Strength at Break | 54.0 MPa | 7830 psi | 5 mm/min; ISO 527           |
|                           | 60.0 MPa | 8700 psi | Type I, 5 mm/min; ASTM D638 |
| Tensile Strength, Yield   | 58.0 MPa | 8410 psi | 5 mm/min; ISO 527           |
|                           | 59.0 MPa | 8560 psi | Type I, 5 mm/min; ASTM D638 |
| Elongation at Break       | 120 %    | 120 %    | 5 mm/min; ISO 527           |
|                           | 130 %    | 130 %    | Type I, 5 mm/min; ASTM D638 |
| Elongation at Yield       | 3.8 %    | 3.8 %    | 5 mm/min; ISO 527           |
|                           | 3.9 %    | 3.9 %    | Type I, 5 mm/min; ASTM D638 |

| Mechanical Properties      | Metric                 | English                | Comments                           |
|----------------------------|------------------------|------------------------|------------------------------------|
| Tensile Modulus            | 3.80 GPa               | 550 ksi                | 1 mm/min; ISO 527                  |
|                            | 4.00 GPa               | 580 ksi                | 5 mm/min; ASTM D638                |
| Flexural Yield Strength    | 96.0 MPa               | 13900 psi              | 2 mm/min; ISO 178                  |
|                            | 104 MPa                | 15100 psi              | 1.3 mm/min, 50 mm span; ASTM D790  |
| Flexural Modulus           | 3.45 GPa               | 500 ksi                | 2 mm/min; ISO 178                  |
|                            | 3.50 GPa               | 508 ksi                | 1.3 mm/min, 50 mm span; ASTM D790  |
| Izod Impact, Notched       | 2.50 J/cm              | 4.68 ft-lb/in          | ASTM D256                          |
|                            | 0.900 J/cm             | 1.69 ft-lb/in          | ASTM D256                          |
|                            | @Temperature -30.0 Â°C | @Temperature -22.0 Â°F |                                    |
| Izod Impact, Notched (ISO) | 20.0 kJ/mÂ²            | 9.52 ft-lb/inÂ²        | 80*10*4; ISO 180/1A                |
|                            | 8.00 kJ/mÂ²            | 3.81 ft-lb/inÂ²        | 80*10*4; ISO 180/1A                |
|                            | @Temperature -30.0 Â°C | @Temperature -22.0 Â°F |                                    |
| Charpy Impact, Notched     | 2.30 J/cmÂ²            | 10.9 ft-lb/inÂ²        | Edgew 80*10*4 sp=62mm; ISO 179/1eA |
|                            | 65.0 J                 | 47.9 ft-lb             | ASTM D3763                         |
|                            | @Temperature 23.0 Â°C  | @Temperature 73.4 Â°F  |                                    |

| Thermal Properties                | Metric                        | English                      | Comments    |
|-----------------------------------|-------------------------------|------------------------------|-------------|
| CTE, linear, Parallel to Flow     | 46.0 Âµm/m-Â°C                | 25.6 Âµin/in-Â°F             | ISO 11359-2 |
|                                   | @Temperature -40.0 - 40.0 Â°C | @Temperature -40.0 - 104 Â°F |             |
|                                   | 46.0 Âµm/m-Â°C                | 25.6 Âµin/in-Â°F             | ASTM E 831  |
|                                   | @Temperature -40.0 - 40.0 Â°C | @Temperature -40.0 - 104 Â°F |             |
| CTE, linear, Transverse to Flow   | 63.0 Âµm/m-Â°C                | 35.0 Âµin/in-Â°F             | ISO 11359-2 |
|                                   | @Temperature -40.0 - 40.0 Â°C | @Temperature -40.0 - 104 Â°F |             |
|                                   | 63.0 Âµm/m-Â°C                | 35.0 Âµin/in-Â°F             | ASTM E 831  |
|                                   | @Temperature -40.0 - 40.0 Â°C | @Temperature -40.0 - 104 Â°F |             |
| Deflection Temperature at 1.8 MPa | 94.0 Â°C                      | 201 Â°F                      |             |

| (264 psi)<br>Thermal Properties | Metric             | English             | Flatw 80*10*4 sp=64mm; ISO 75/Af<br>Comments |
|---------------------------------|--------------------|---------------------|----------------------------------------------|
|                                 | 98.0 Â°C           | 208 Â°F             |                                              |
|                                 | @Thickness 3.20 mm | @Thickness 0.126 in | unannealed; ASTM D648                        |
| Vicat Softening Point           | 127 Â°C            | 261 Â°F             | Rate B/50; ASTM D1525                        |
|                                 | 128 Â°C            | 262 Â°F             | Rate B/50; ISO 306                           |
|                                 | 128 Â°C            | 262 Â°F             | Rate B/120; ISO 306                          |

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