

## SABIC Innovative Plastics XYLEX HX7409HP PC+POLYESTER

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate/PET Polyester Blend , Polyester, TP , Polyethylene Terephthalate (PET)

### Material Notes:

Low flow, polycarbonate/Polyester alloy; contains mold release. For medical devices and pharmaceutical applications. Healthcare management of change (MoC), biocompatible (ISO 10993 or USP Class VI), food contact compliant. EtO and gamma sterilizable.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-XYLEX-HX7409HP-PCPOLYESTER.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-XYLEX-HX7409HP-PCPOLYESTER.php)

| Physical Properties               | Metric   | English  | Comments                                |
|-----------------------------------|--|--|---|
| Specific Gravity                  | 1.20 g/cc  | 1.20 g/cc  | ASTM D792                               |
| Density                           | 1.20 g/cc  | 0.0434 lb/in <sup>3</sup>  | ISO 1183                                |
| Moisture Absorption               | 0.0700 %   | 0.0700 %   | 23 <sup>o</sup> C / 50% RH; ISO 62      |
| Water Absorption at Saturation    | 0.28 %   | 0.28 %   | ISO 62                                  |
| Linear Mold Shrinkage, Flow       | 0.0060 - 0.0080 cm/cm<br>@Thickness 3.20 mm                      | 0.0060 - 0.0080 in/in<br>@Thickness 0.126 in                     | SABIC Method                            |
| Linear Mold Shrinkage, Transverse | 0.0060 - 0.0080 cm/cm<br>@Thickness 3.20 mm                      | 0.0060 - 0.0080 in/in<br>@Thickness 0.126 in                     | SABIC Method                            |
| Melt Flow                         | 3.0 g/10 min<br>@Load 2.16 kg,<br>Temperature 265 <sup>o</sup> C | 3.0 g/10 min<br>@Load 4.76 lb,<br>Temperature 509 <sup>o</sup> F | ASTM D1238                              |
| Melt Index of Compound            | 15 g/10 min<br>@Load 10.0 kg,<br>Temperature 265 <sup>o</sup> C  | 15 g/10 min<br>@Load 22.0 lb,<br>Temperature 509 <sup>o</sup> F  | MVR [cm <sup>3</sup> /10 min]; ISO 1133 |

| Mechanical Properties     | Metric   | English  | Comments                     |
|---------------------------|----------|----------|------------------------------|
| Tensile Strength at Break | 65.0 MPa | 9430 psi | Type I, 50 mm/min; ASTM D638 |
|                           | 65.0 MPa | 9430 psi | 50 mm/min; ISO 527           |
| Tensile Strength, Yield   | 60.0 MPa | 8700 psi | 50 mm/min; ISO 527           |
|                           | 62.0 MPa | 8990 psi | Type I, 50 mm/min; ASTM D638 |
| Elongation at Break       | 110 %    | 110 %    | Type I, 50 mm/min; ASTM D638 |
|                           | 135 %    | 135 %    | 50 mm/min; ISO 527           |
| Elongation at Yield       | 6.0 %    | 6.0 %    | Type I, 50 mm/min; ASTM D638 |
|                           | 6.0 %    | 6.0 %    | 50 mm/min; ISO 527           |

| Mechanical Properties      | Metric                   | English                    | Comments                           |
|----------------------------|--------------------------|----------------------------|------------------------------------|
| Tensile Modulus            | 2.30 GPa                 | 333 ksi                    | 50 mm/min; ASTM D638               |
|                            | 2.40 GPa                 | 348 ksi                    | 1 mm/min; ISO 527                  |
| Flexural Yield Strength    | 93.0 MPa                 | 13500 psi                  | 2 mm/min; ISO 178                  |
|                            | 95.0 MPa                 | 13800 psi                  | 1.3 mm/min, 50 mm span; ASTM D790  |
| Flexural Modulus           | 2.18 GPa                 | 316 ksi                    | 2 mm/min; ISO 178                  |
|                            | 2.28 GPa                 | 331 ksi                    | 1.3 mm/min, 50 mm span; ASTM D790  |
| Izod Impact, Notched       | 10.0 J/cm                | 18.7 ft-lb/in              | ASTM D256                          |
|                            | 0.800 J/cm               | 1.50 ft-lb/in              | ASTM D256                          |
|                            | @Temperature -30.0<br>°C | @Temperature -22.0<br>°F   |                                    |
| Izod Impact, Notched (ISO) | 15.0 kJ/m <sup>2</sup>   | 7.14 ft-lb/in <sup>2</sup> | 80*10*4; ISO 180/1A                |
|                            | 6.00 kJ/m <sup>2</sup>   | 2.86 ft-lb/in <sup>2</sup> | 80*10*4; ISO 180/1A                |
|                            | @Temperature -30.0<br>°C | @Temperature -22.0<br>°F   |                                    |
|                            | 78.0 kJ/m <sup>2</sup>   | 37.1 ft-lb/in <sup>2</sup> | 63.5*12.7*3.2; ISO 180/4A          |
|                            | @Temperature 23.0<br>°C  | @Temperature 73.4 °F       |                                    |
| Charpy Impact, Notched     | 2.20 J/cm <sup>2</sup>   | 10.5 ft-lb/in <sup>2</sup> | Edgew 80*10*4 sp=62mm; ISO 179/1eA |
| Dart Drop, Total Energy    | 85.0 J                   | 62.7 ft-lb                 | ASTM D3763                         |
|                            | @Temperature 23.0<br>°C  | @Temperature 73.4 °F       |                                    |

| Thermal Properties              | Metric                          | English                        | Comments    |
|---------------------------------|---------------------------------|--------------------------------|-------------|
| CTE, linear, Parallel to Flow   | 70.0 μm/m-°C                    | 38.9 μin/in-°F                 | ASTM E 831  |
|                                 | @Temperature -40.0 -<br>95.0 °C | @Temperature -40.0 -<br>203 °F |             |
|                                 | 70.0 μm/m-°C                    | 38.9 μin/in-°F                 | ISO 11359-2 |
|                                 | @Temperature -40.0 -<br>40.0 °C | @Temperature -40.0 -<br>104 °F |             |
| CTE, linear, Transverse to Flow | 70.0 μm/m-°C                    | 38.9 μin/in-°F                 | ASTM E 831  |
|                                 | @Temperature -40.0 -<br>95.0 °C | @Temperature -40.0 -<br>203 °F |             |
|                                 | 70.0 μm/m-°C                    | 38.9 μin/in-°F                 |             |

| Thermal Properties                             | Metric<br>@ Temperature -40.0 -<br>40.0 Â°C | English<br>@ Temperature -40.0 -<br>104 Â°F | ISO 11359-2<br>Comments            |
|--|---|---|------------------------------------|
| Deflection Temperature at 0.46 MPa<br>(66 psi) | 122 Â°C                                     | 252 Â°F                                     | Edgew 120*10*4 sp=100mm; ISO 75/Be |
|  | 122 Â°C<br>@Thickness 3.20 mm               | 252 Â°F<br>@Thickness 0.126 in              | unannealed; ASTM D648              |
| Deflection Temperature at 1.8 MPa<br>(264 psi) | 111 Â°C                                     | 232 Â°F                                     | Edgew 120*10*4 sp=100mm; ISO 75/Ae |
|  | 111 Â°C<br>@Thickness 3.20 mm               | 232 Â°F<br>@Thickness 0.126 in              | unannealed; ASTM D648              |
| Vicat Softening Point                          | 127 Â°C                                     | 261 Â°F                                     | Rate B/50; ISO 306                 |
|  | 129 Â°C                                     | 264 Â°F                                     | Rate B/120; ISO 306                |
|  | 130 Â°C                                     | 266 Â°F                                     | Rate B/50; ASTM D1525              |

| Optical Properties    | Metric | English | Comments            |
|-----------------------|--------|---------|---------------------|
| Transmission, Visible | 79 %   | 79 %    | 2.54 mm; ASTM D1003 |

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