

## SABIC Innovative Plastics Ultem HATX100 PEI+PCE (Asia Pacific)

Category : Polymer , Thermoplastic , Polyetherimide (PEI) , Polyetherimide (PEI) + PCE

### Material Notes:

Higher impact, high flow Polyetherimide blend. ECO Conforming. For medical devices and pharmaceutical applications. Healthcare management of change, biocompatible (ISO 10993 or USP Class VI), food contact compliant. This data was supplied by SABIC-IP for the Asia Pacific region.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Ultem-HATX100-PEIPCE-Asia-Pacific.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Ultem-HATX100-PEIPCE-Asia-Pacific.php)

| Physical Properties                | Metric   | English  | Comments   |
|------------------------------------|--|--|--|
| Specific Gravity                   | 1.21 g/cc  | 1.21 g/cc  | ASTM D 792   |
| Density                            | 1.21 g/cc  | 0.0437 lb/in <sup>3</sup>  | ISO 1183   |
| Moisture Absorption at Equilibrium | 0.25 %   | 0.25 %   | 23 <sup>o</sup> C / 50% RH; ISO 62                   |
| Water Absorption at Saturation     | 0.50 %<br>@Temperature 23.0 <sup>o</sup> C                       | 0.50 %<br>@Temperature 73.4 <sup>o</sup> F                       | ISO 62   |
| Linear Mold Shrinkage, Flow        | 0.0050 - 0.0070 cm/cm<br>@Thickness 3.20 mm                      | 0.0050 - 0.0070 in/in<br>@Thickness 0.126 in                     | SABIC Method   |
| Melt Flow                          | 6.0 g/10 min<br>@Load 6.60 kg,<br>Temperature 295 <sup>o</sup> C | 6.0 g/10 min<br>@Load 14.6 lb,<br>Temperature 563 <sup>o</sup> F | ASTM D 1238  |
|                                    | 35 g/10 min<br>@Load 5.00 kg,<br>Temperature 220 <sup>o</sup> C  | 35 g/10 min<br>@Load 11.0 lb,<br>Temperature 428 <sup>o</sup> F  | [cm <sup>3</sup> /10 min] Melt Volume Rate; ISO 1133 |

| Mechanical Properties     | Metric   | English  | Comments                     |
|---------------------------|----------|----------|------------------------------|
| Tensile Strength at Break | 55.0 MPa | 7980 psi | 5 mm/min; ISO 527            |
|                           | 58.0 MPa | 8410 psi | Type I, 5 mm/min; ASTM D 638 |
| Tensile Strength, Yield   | 65.0 MPa | 9430 psi | 5 mm/min; ISO 527            |
|                           | 68.0 MPa | 9860 psi | Type I, 5 mm/min; ASTM D 638 |
| Elongation at Break       | 30 %     | 30 %     | 5 mm/min; ISO 527            |
|                           | 80 %     | 80 %     | Type I, 5 mm/min; ASTM D 638 |
| Elongation at Yield       | 7.0 %    | 7.0 %    | 5 mm/min; ISO 527            |

| Mechanical Properties      | 20 %<br>Metric            | 20 %<br>English           | Type I, 5 mm/min; ASTM D 638<br>Comments         |
|----------------------------|---------------------------|---------------------------|--|
| Tensile Modulus            | 2.00 GPa                  | 290 ksi                   | 5 mm/min; ASTM D 638                             |
|                            | 2.35 GPa                  | 341 ksi                   | 1 mm/min; ISO 527                                |
| Flexural Yield Strength    | 90.0 MPa                  | 13100 psi                 | 2 mm/min; ISO 178                                |
|                            | 106 MPa                   | 15400 psi                 | 1.3 mm/min, 50 mm span; ASTM D 790               |
| Flexural Modulus           | 2.00 GPa                  | 290 ksi                   | 1.3 mm/min, 50 mm span; ASTM D 790               |
|                            | 2.40 GPa                  | 348 ksi                   | 2 mm/min; ISO 178                                |
| Izod Impact, Notched       | 4.27 J/cm                 | 8.00 ft-lb/in             | ASTM D 256                                       |
|                            | @Temperature 23.0<br>Â°C  | @Temperature 73.4 Â°F     |  |
| Izod Impact, Unnotched     | 20.82 J/cm                | 39.00 ft-lb/in            | ASTM D 4812                                      |
|                            | @Temperature 23.0<br>Â°C  | @Temperature 73.4 Â°F     |  |
| Izod Impact, Notched (ISO) | 13.0 kJ/mÂ²               | 6.19 ft-lb/inÂ²           | 80*10*4; ISO 180/1A                              |
|                            | @Temperature -30.0<br>Â°C | @Temperature -22.0<br>Â°F |  |
| Charpy Impact, Notched     | 15.0 kJ/mÂ²               | 7.14 ft-lb/inÂ²           | 80*10*4; ISO 180/1A                              |
|                            | @Temperature 23.0<br>Â°C  | @Temperature 73.4 Â°F     |  |
| Charpy Impact, Notched     | 1.90 J/cmÂ²               | 9.04 ft-lb/inÂ²           | V-notch Edgew 80*10*4 sp=62mm;<br>ISO 179/1eA    |
|                            | @Temperature 23.0<br>Â°C  | @Temperature 73.4 Â°F     |  |
| Impact Test                | 25.0 J                    | 18.4 ft-lb                | Instrumented Impact Total Energy;<br>ASTM D 3763 |
|                            | @Temperature 23.0<br>Â°C  | @Temperature 73.4 Â°F     |  |

| Thermal Properties              | Metric                           | English                         | Comments    |
|---------------------------------|----------------------------------|---------------------------------|-------------|
| CTE, linear, Parallel to Flow   | 60.0 Âµm/m-Â°C                   | 33.3 Âµin/in-Â°F                | ASTM E 831  |
|                                 | @Temperature -40.0 -<br>40.0 Â°C | @Temperature -40.0 -<br>104 Â°F |             |
| CTE, linear, Transverse to Flow | 60.0 Âµm/m-Â°C                   | 33.3 Âµin/in-Â°F                | ISO 11359-2 |
|                                 | @Temperature -40.0 -<br>40.0 Â°C | @Temperature -40.0 -<br>104 Â°F |             |
| CTE, linear, Transverse to Flow | 60.0 Âµm/m-Â°C                   | 33.3 Âµin/in-Â°F                | ASTM E 831  |

| Thermal Properties                             | Metric<br>@Temperature -40.0 -<br>40.0 Â°C | English<br>@Temperature -40.0 -<br>104 Â°F | Comments                         |
|--|--|--|----------------------------------|
|  | 60.0 Âµm/m-Â°C                             | 33.3 Âµin/in-Â°F                           | ISO 11359-2                      |
|  | @Temperature -40.0 -<br>40.0 Â°C           | @Temperature -40.0 -<br>104 Â°F            |                                  |
| Deflection Temperature at 1.8 MPa<br>(264 psi) | 150 Â°C                                    | 302 Â°F                                    | Flatw 80*10*4 sp=64mm; ISO 75/Af |
|  | 157 Â°C                                    | 315 Â°F                                    | unannealed; ASTM D 648           |
|  | @Thickness 6.40 mm                         | @Thickness 0.252 in                        |                                  |
| Vicat Softening Point                          | 170 Â°C                                    | 338 Â°F                                    | Rate B/50; ASTM D 1525           |
|  | 170 Â°C                                    | 338 Â°F                                    | Rate B/50; ISO 306               |
|  | 175 Â°C                                    | 347 Â°F                                    | Rate B/120; ISO 306              |
| Flammability, UL94                             | HB   | HB   | UL 94                            |
|  | @Thickness 0.760 mm                        | @Thickness 0.0299 in                       |                                  |

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