

## LATI Larpeek 50 PEEK

Category : Polymer , Thermoplastic , Polyketone , Polyetheretherketone (PEEK) , Polyetheretherketone, PEEK, Unreinforced

### Material Notes:

Polyetheretherketone (PEEK). Unfilled. Very good chemical resistance. Very good thermal properties. Low smoke density and low toxicity index. Availability: Africa & Middle East; Asia Pacific; Europe; Latin America; North America Information provided by Lati Industria Termoplastici S.p.A.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_LATI-Larpeek-50-PEEK.php](http://www.lookpolymers.com/polymer_LATI-Larpeek-50-PEEK.php)

| Physical Properties               | Metric                | English                   | Comments |
|-----------------------------------|-----------------------|---------------------------|----------|
| Density                           | 1.30 g/cc             | 0.0470 lb/in <sup>3</sup> |          |
| Linear Mold Shrinkage, Flow       | 0.0085 - 0.0125 cm/cm | 0.0085 - 0.0125 in/in     |          |
| Linear Mold Shrinkage, Transverse | 0.0095 - 0.0135 cm/cm | 0.0095 - 0.0135 in/in     |          |

| Mechanical Properties     | Metric                | English               | Comments |
|---------------------------|-----------------------|-----------------------|----------|
| Tensile Strength at Break | 30.0 MPa              | 4350 psi              |          |
|                           | @Temperature 150 Â°C  | @Temperature 302 Â°F  |          |
|                           | 50.0 MPa              | 7250 psi              |          |
|                           | @Temperature 120 Â°C  | @Temperature 248 Â°F  |          |
|                           | 60.0 MPa              | 8700 psi              |          |
|                           | @Temperature 90.0 Â°C | @Temperature 194 Â°F  |          |
|                           | 75.0 MPa              | 10900 psi             |          |
|                           | @Temperature 60.0 Â°C | @Temperature 140 Â°F  |          |
|                           | 85.0 MPa              | 12300 psi             |          |
|                           | @Temperature 23.0 Â°C | @Temperature 73.4 Â°F |          |
| Elongation at Break       | 30 %                  | 30 %                  |          |
|                           | @Temperature 23.0 Â°C | @Temperature 73.4 Â°F |          |
|                           | 30 %                  | 30 %                  |          |
|                           | @Temperature 60.0 Â°C | @Temperature 140 Â°F  |          |
|                           | 30 %                  | 30 %                  |          |

| Mechanical Properties            | @Temperature 90.0<br>Metric<br>°C | @Temperature 194 °F<br>English | Comments |
|----------------------------------|-----------------------------------|--------------------------------|----------|
|                                  | 35 %                              | 35 %                           |          |
|                                  | @Temperature 120 °C               | @Temperature 248 °F            |          |
|                                  | 45 %                              | 45 %                           |          |
|                                  | @Temperature 150 °C               | @Temperature 302 °F            |          |
| Elongation at Yield              | 5.0 %                             | 5.0 %                          |          |
|                                  | @Temperature 23.0<br>°C           | @Temperature 73.4 °F           |          |
|                                  | 5.0 %                             | 5.0 %                          |          |
|                                  | @Temperature 60.0<br>°C           | @Temperature 140 °F            |          |
|                                  | 5.0 %                             | 5.0 %                          |          |
|                                  | @Temperature 90.0<br>°C           | @Temperature 194 °F            |          |
|                                  | 6.0 %                             | 6.0 %                          |          |
|                                  | @Temperature 120 °C               | @Temperature 248 °F            |          |
|                                  | 8.0 %                             | 8.0 %                          |          |
|                                  | @Temperature 150 °C               | @Temperature 302 °F            |          |
| Tensile Modulus                  | 3.00 GPa                          | 435 ksi                        |          |
|                                  | @Temperature 150 °C               | @Temperature 302 °F            |          |
|                                  | 3.40 GPa                          | 493 ksi                        |          |
|                                  | @Temperature 120 °C               | @Temperature 248 °F            |          |
|                                  | 3.45 GPa                          | 500 ksi                        |          |
|                                  | @Temperature 90.0<br>°C           | @Temperature 194 °F            |          |
|                                  | 3.50 GPa                          | 508 ksi                        |          |
|                                  | @Temperature 23.0<br>°C           | @Temperature 73.4 °F           |          |
|                                  | 3.50 GPa                          | 508 ksi                        |          |
|                                  | @Temperature 60.0<br>°C           | @Temperature 140 °F            |          |
| Charpy Impact Unnotched          | NB                                | NB                             |          |
| Charpy Impact, Notched           | 0.800 J/cm <sup>2</sup>           | 3.81 ft-lb/in <sup>2</sup>     |          |
| Coefficient of Friction, Dynamic | 0.26                              | 0.26                           |          |

| Mechanical Properties<br>Coefficient of Friction, Static | Metric<br>U.S.                               | English<br>U.S.  | Comments |
|--|--|--|----------|
| K (wear) Factor  | 15.0 x 10 <sup>-8</sup> mm <sup>3</sup> /N-M | 7.45 x 10 <sup>-10</sup> in <sup>3</sup> -<br>min/ft-lb-hr |          |

| Thermal Properties                             | Metric                        | English                          | Comments |
|--|-------------------------------|----------------------------------|----------|
| Maximum Service Temperature, Air               | 200 Å°C                       | 392 Å°F                          |          |
| Deflection Temperature at 0.46 MPa<br>(66 psi) | 190 Å°C                       | 374 Å°F                          |          |
| Deflection Temperature at 1.8 MPa<br>(264 psi) | 155 Å°C                       | 311 Å°F                          |          |
| Vicat Softening Point                          | >= 300 Å°C<br>@Load 5.00 kg   | >= 572 Å°F<br>@Load 11.0 lb      |          |
| Flammability, UL94                             | V-1<br>@Thickness 0.750 mm    | V-1<br>@Thickness 0.0295 in      |          |
|  | V-0<br>@Thickness 3.00 mm     | V-0<br>@Thickness 0.118 in       |          |
|  | V-0<br>@Thickness 1.50 mm     | V-0<br>@Thickness 0.0591 in      |          |
| Glow Wire Test                                 | 875 Å°C<br>@Thickness 1.00 mm | 1610 Å°F<br>@Thickness 0.0394 in | GWIT     |
|  | 960 Å°C<br>@Thickness 2.00 mm | 1760 Å°F<br>@Thickness 0.0787 in | GWFI/GWT |

| Processing Properties | Metric                           | English                          | Comments |
|-----------------------|----------------------------------|----------------------------------|----------|
| Melt Temperature      | 360 - 390 Å°C                    | 680 - 734 Å°F                    |          |
| Mold Temperature      | 170 - 200 Å°C                    | 338 - 392 Å°F                    |          |
| Drying Temperature    | 120 - 150 Å°C<br>@Time 10800 sec | 248 - 302 Å°F<br>@Time 3.00 hour |          |

| Descriptive Properties   | Value  | Comments |
|--------------------------|--------|----------|
| ISO Shrinkage - Pressure | 60 MPa |          |

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