

## SABIC Innovative Plastics LNP STAT-KON EEF42 PEI

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

### Material Notes:

LNP STAT-KON\* EEF42 is a compound based on Polyetherimide resin containing 10% Carbon Fiber, 20% Glass Fiber. Added features of this material include: Electrically Conductive.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-LNP-STAT-KON-EEF42-PEI.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-STAT-KON-EEF42-PEI.php)

| Physical Properties               | Metric                                   | English                                  | Comments                           |
|-----------------------------------|------------------------------------------|------------------------------------------|------------------------------------|
| Specific Gravity                  | 1.48 g/cc                                | 1.48 g/cc                                | ASTM D792                          |
| Density                           | 1.47 g/cc                                | 0.0531 lb/in <sup>3</sup>                | ASTM D792                          |
| Moisture Absorption               | 0.140 %                                  | 0.140 %                                  | 50% RH, 24 hrs; ASTM D570          |
|                                   | 0.220 %                                  | 0.220 %                                  | 23 <sup>0</sup> C / 50% RH; ISO 62 |
| Linear Mold Shrinkage, Flow       | 0.0010 - 0.0030 cm/cm<br>@Time 86400 sec | 0.0010 - 0.0030 in/in<br>@Time 24.0 hour | ASTM D955                          |
| Linear Mold Shrinkage, Transverse | 0.0030 - 0.0050 cm/cm<br>@Time 86400 sec | 0.0030 - 0.0050 in/in<br>@Time 24.0 hour | ASTM D955                          |

| Mechanical Properties     | Metric    | English   | Comments                          |
|---------------------------|-----------|-----------|-----------------------------------|
| Tensile Strength at Break | 179 MPa   | 26000 psi | 5 mm/min; ISO 527                 |
|                           | 183 MPa   | 26500 psi | Type I, 5 mm/min; ASTM D638       |
| Tensile Strength, Yield   | 179 MPa   | 26000 psi | 5 mm/min; ISO 527                 |
|                           | 191 MPa   | 27700 psi | Type I, 5 mm/min; ASTM D638       |
| Elongation at Break       | 1.5 %     | 1.5 %     | 5 mm/min; ISO 527                 |
|                           | 1.7 %     | 1.7 %     | Type I, 5 mm/min; ASTM D638       |
| Elongation at Yield       | 1.5 %     | 1.5 %     | 5 mm/min; ISO 527                 |
|                           | 1.7 %     | 1.7 %     | Type I, 5 mm/min; ASTM D638       |
| Tensile Modulus           | 13.99 GPa | 2029 ksi  | 1 mm/min; ISO 527                 |
|                           | 14.82 GPa | 2149 ksi  | 5 mm/min; ASTM D638               |
| Flexural Strength         | 248 MPa   | 36000 psi | ASTM D790                         |
|                           | 264 MPa   | 38300 psi | 1.3 mm/min, 50 mm span; ASTM D790 |

| Mechanical Properties        | Metric                             | English                             | Comments                          |
|------------------------------|------------------------------------|-------------------------------------|-----------------------------------|
| Flexural Yield Strength      | 26.4 MPa                           | 38300 psi                           | 1.3 mm/min, 50 mm span; ASTM D790 |
| Flexural Modulus             | 13.33 GPa                          | 1933 ksi                            | 2 mm/min; ISO 178                 |
|                              | 13.8 GPa                           | 2000 ksi                            | 1.3 mm/min, 50 mm span; ASTM D790 |
| Izod Impact, Notched         | 0.660 J/cm                         | 1.24 ft-lb/in                       | ASTM D256                         |
| Izod Impact, Unnotched       | 13.2 J/cm                          | 24.7 ft-lb/in                       | ASTM D4812                        |
| Izod Impact, Notched (ISO)   | 7.00 kJ/m <sup>2</sup>             | 3.33 ft-lb/in <sup>2</sup>          | 80*10*4; ISO 180/1A               |
| Izod Impact, Unnotched (ISO) | 28.0 kJ/m <sup>2</sup>             | 13.3 ft-lb/in <sup>2</sup>          | 80*10*4; ISO 180/1U               |
| Dart Drop, Total Energy      | 11.0 J<br>@Temperature 23.0<br>Â°C | 8.11 ft-lb<br>@Temperature 73.4 Â°F | ASTM D3763                        |
| Impact Test                  | 3.00 J                             | 2.21 ft-lb                          | Multiaxial Impact; ISO 6603       |

| Thermal Properties                             | Metric                                             | English                                             | Comments                         |
|------------------------------------------------|----------------------------------------------------|-----------------------------------------------------|----------------------------------|
| CTE, linear, Parallel to Flow                  | 38.0 Âµm/m-Â°C<br>@Temperature -40.0 -<br>40.0 Â°C | 21.1 Âµin/in-Â°F<br>@Temperature -40.0 -<br>104 Â°F | ASTM E 831                       |
| CTE, linear, Transverse to Flow                | 33.0 Âµm/m-Â°C<br>@Temperature -40.0 -<br>40.0 Â°C | 18.3 Âµin/in-Â°F<br>@Temperature -40.0 -<br>104 Â°F | ASTM E 831                       |
| Deflection Temperature at 0.46 MPa<br>(66 psi) | 214 Â°C                                            | 417 Â°F                                             | Flatw 80*10*4 sp=64mm; ISO 75/Bf |
|                                                | 213 Â°C<br>@Thickness 3.20 mm                      | 415 Â°F<br>@Thickness 0.126 in                      | unannealed; ASTM D648            |
| Deflection Temperature at 1.8 MPa<br>(264 psi) | 210 Â°C                                            | 410 Â°F                                             | Flatw 80*10*4 sp=64mm; ISO 75/Af |
|                                                | 209 Â°C<br>@Thickness 3.20 mm                      | 408 Â°F<br>@Thickness 0.126 in                      | unannealed; ASTM D648            |

| Electrical Properties | Metric             | English            | Comments  |
|-----------------------|--------------------|--------------------|-----------|
| Surface Resistance    | 1000 - 1.00e+6 ohm | 1000 - 1.00e+6 ohm | ASTM D257 |

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