

## Teijin Panlite® BN-8120R Improved Mold Release, Carbon Fiber Reinforced, Flame Resistant Polycarbonate Resin

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, Carbon Fiber Reinforced

### Material Notes:

CF 20% reinforced grade, meeting UL 94 V-2. It has excellent strength, stiffness, heat resistance and electric conductivity. Other features are flame retardance, low molding shrinkage and dimensional accuracy. Applications: Mechanical, electric and electronic components that need stiffness and strength. Mechanical, electric and electronic components that need extremely high dimensional accuracy. Mechanical, electric and electronic components that need electric conductivity or antistatic property. Information provided by Teijin Chemicals Ltd.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Teijin-Panlite-BN-8120R-Improved-Mold-Release-Carbon-Fiber-Reinforced-Flame-Resistant-Polycarbonate-Resin.php](http://www.lookpolymers.com/polymer_Teijin-Panlite-BN-8120R-Improved-Mold-Release-Carbon-Fiber-Reinforced-Flame-Resistant-Polycarbonate-Resin.php)

| Physical Properties               | Metric                                       | English                                       | Comments                    |
|-----------------------------------|----------------------------------------------|-----------------------------------------------|-----------------------------|
| Density                           | 1.31 g/cc                                    | 0.0473 lb/in <sup>3</sup>                     | ISO 1183                    |
| Water Absorption                  | 0.14 %                                       | 0.14 %                                        | in water, 23°C, 24h; ISO 62 |
| Linear Mold Shrinkage             | 0.00020 - 0.0020 cm/cm<br>@Thickness 4.00 mm | 0.00020 - 0.0020 in/in<br>@Thickness 0.157 in |                             |
| Linear Mold Shrinkage, Transverse | 0.0030 - 0.0050 cm/cm<br>@Thickness 4.00 mm  | 0.0030 - 0.0050 in/in<br>@Thickness 0.157 in  |                             |

| Mechanical Properties     | Metric                  | English                    | Comments          |
|---------------------------|-------------------------|----------------------------|-------------------|
| Tensile Strength at Break | 135 MPa                 | 19600 psi                  | 50mm/min; ISO 527 |
| Elongation at Break       | 1.5 %                   | 1.5 %                      | 50mm/min; ISO 527 |
| Tensile Modulus           | 13.0 GPa                | 1890 ksi                   | 1mm/min; ISO 527  |
| Flexural Strength         | 185 MPa                 | 26800 psi                  | 2mm/min; ISO 178  |
| Flexural Modulus          | 11.5 GPa                | 1670 ksi                   | 2mm/min; ISO 178  |
| Charpy Impact Unnotched   | 2.30 J/cm <sup>2</sup>  | 10.9 ft-lb/in <sup>2</sup> | ISO 179           |
| Charpy Impact, Notched    | 0.700 J/cm <sup>2</sup> | 3.33 ft-lb/in <sup>2</sup> | ISO 179           |

| Thermal Properties | Metric                               | English                                | Comments  |
|--------------------|--------------------------------------|----------------------------------------|-----------|
| CTE, linear        | 20.0 µm/m-°C<br>@Temperature 20.0 °C | 11.1 µin/in-°F<br>@Temperature 68.0 °F | ISO 11359 |
|                    | 60.0 µm/m-°C                         | 33.3 µin/in-°F                         |           |

| CTE, linear, Transverse to Flow<br>Thermal Properties | Metric<br>@ Temperature 20.0 °C | English<br>@ Temperature 68.0 °F | ISO 11359<br>Comments |
|-------------------------------------------------------|---------------------------------|----------------------------------|-----------------------|
| Deflection Temperature at 0.46 MPa (66 psi)           | 149 °C                          | 300 °F                           | ISO 75                |
| Deflection Temperature at 1.8 MPa (264 psi)           | 147 °C                          | 297 °F                           | ISO 75                |
| Vicat Softening Point                                 | 151 °C                          | 304 °F                           | 50°C/hr, 50N; ISO 306 |
| UL RTI, Electrical                                    | 80.0 °C<br>@Thickness 1.47 mm   | 176 °F<br>@Thickness 0.0579 in   | UL 746B               |
| UL RTI, Mechanical with Impact                        | 80.0 °C<br>@Thickness 1.47 mm   | 176 °F<br>@Thickness 0.0579 in   | UL 746B               |
| UL RTI, Mechanical without Impact                     | 80.0 °C<br>@Thickness 1.47 mm   | 176 °F<br>@Thickness 0.0579 in   | UL 746B               |
| Flammability, UL94                                    | V-2<br>@Thickness 0.750 mm      | V-2<br>@Thickness 0.0295 in      |                       |
|                                                       | V-0<br>@Thickness 1.50 mm       | V-0<br>@Thickness 0.0591 in      |                       |

| Electrical Properties | Metric           | English          | Comments  |
|-----------------------|------------------|------------------|-----------|
| Volume Resistivity    | 0.10 - 10 ohm-cm | 0.10 - 10 ohm-cm | IEC 60093 |
| Surface Resistance    | 1.0 - 100 ohm    | 1.0 - 100 ohm    | IEC 60093 |

## Contact Songhan Plastic Technology Co.,Ltd.

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