

## Polyram PlusTek PA310G8BK10 Nylon 6.6 for injection Molding, 40% Glass Fiber Reinforced, Heat Stabilized

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66 , 40% Glass Fiber Filled

### Material Notes:

Heat stabilized, 40% Glass fiber reinforced Nylon 6.6 for injection molding applications. Approved and listed by NSF/ANSI 61 International. Information provided by Polyram.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Polyram-PlusTek-PA310G8BK10-Nylon-66-for-injection-Molding-40-Glass-Fiber-Reinforced-Heat-Stabilized.php](http://www.lookpolymers.com/polymer_Polyram-PlusTek-PA310G8BK10-Nylon-66-for-injection-Molding-40-Glass-Fiber-Reinforced-Heat-Stabilized.php)

| Physical Properties                | Metric                | English                   | Comments       |
|------------------------------------|-----------------------|---------------------------|----------------|
| Density                            | 1.48 g/cc             | 0.0535 lb/in <sup>3</sup> | ISO 1183       |
| Moisture Absorption at Equilibrium | 1.5 %                 | 1.5 %                     | 50% RH; ISO 62 |
| Water Absorption at Saturation     | 4.7 %                 | 4.7 %                     | ISO 62         |
| Linear Mold Shrinkage              | 0.0020 - 0.0060 cm/cm | 0.0020 - 0.0060 in/in     | ISO 2577       |

| Mechanical Properties      | Metric                 | English                    | Comments |
|----------------------------|------------------------|----------------------------|----------|
| Hardness, Rockwell R       | 122                    | 122                        |          |
| Tensile Strength, Yield    | 210 MPa                | 30500 psi                  | ISO 527  |
| Elongation at Break        | 2.0 %                  | 2.0 %                      | ISO 527  |
| Tensile Modulus            | 12.165 GPa             | 1764.4 ksi                 | ISO 527  |
| Flexural Strength          | 320 MPa                | 46400 psi                  | ISO 178  |
| Flexural Modulus           | 13.5 GPa               | 1960 ksi                   | ISO 178  |
| Izod Impact, Notched (ISO) | 12.0 kJ/m <sup>2</sup> | 5.71 ft-lb/in <sup>2</sup> | ISO 180  |
|                            | @Temperature -30.0 °C  | @Temperature -22.0 °F      |          |
|                            | 13.0 kJ/m <sup>2</sup> | 6.19 ft-lb/in <sup>2</sup> | ISO 180  |
|                            | @Temperature 23.0 °C   | @Temperature 73.4 °F       |          |
| Charpy Impact Unnotched    | 7.50 J/cm <sup>2</sup> | 35.7 ft-lb/in <sup>2</sup> | ISO 179  |
|                            | @Temperature -30.0 °C  | @Temperature -22.0 °F      |          |
|                            | 9.00 J/cm <sup>2</sup> | 42.8 ft-lb/in <sup>2</sup> | ISO 179  |
|                            | @Temperature 23.0 °C   | @Temperature 73.4 °F       |          |
| Charpy Impact, Notched     | 1.10 J/cm <sup>2</sup> | 5.23 ft-lb/in <sup>2</sup> | ISO 179  |

| Mechanical Properties | @Temperature -30.0 °C<br>Metric | @Temperature -22.0 °F<br>English | Comments |
|-----------------------|---------------------------------|----------------------------------|----------|
|                       | 1.35 J/cm <sup>2</sup>          | 6.42 ft-lb/in <sup>2</sup>       | ISO 179  |
|                       | @Temperature 23.0 °C            | @Temperature 73.4 °F             |          |

| Thermal Properties                          | Metric             | English             | Comments              |
|---|--------------------|---------------------|-----------------------|
| Melting Point                               | 256 °C             | 493 °F              | ISO 11357             |
| Maximum Service Temperature, Air            | 120 °C             | 248 °F              | Continuous use        |
|   | 240 °C             | 464 °F              | Short peaks operation |
| Deflection Temperature at 0.46 MPa (66 psi) | 260 °C             | 500 °F              | ISO 75                |
| Deflection Temperature at 1.8 MPa (264 psi) | 240 °C             | 464 °F              | ISO 75                |
| Flammability, UL94                          | HB                 | HB                  |                       |
|   | @Thickness 3.00 mm | @Thickness 0.118 in |                       |
| Flame Spread                                | 10 mm/min          | 0.39 in/min         | FMVSS302              |

| Electrical Properties | Metric                | English               | Comments  |
|-----------------------|-----------------------|-----------------------|-----------|
| Volume Resistivity    | 1.00e+15 ohm-cm       | 1.00e+15 ohm-cm       | IEC 60093 |
| Surface Resistance    | 1.00e+12 ohm          | 1.00e+12 ohm          | IEC 60093 |
| Dielectric Constant   | 3.5                   | 3.5                   | IEC 60250 |
|                       | @Frequency 1.00e+6 Hz | @Frequency 1.00e+6 Hz |           |
| Dielectric Strength   | 90.0 kV/mm            | 2290 kV/in            | IEC 60250 |

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