

## BASF Ultradur B 4406 G4 Q113 20% Glass Filled PBT

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , Polybutylene Terephthalate (PBT), Glass Fiber Filled, Flame Retardant

### Material Notes:

Ultradur B4406 G4 Q113 is an UL V0 injection molding PBT grade with 20% glass fiber reinforcement.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_BASF-Ultradur-B-4406-G4-Q113-20-Glass-Filled-PBT.php](http://www.lookpolymers.com/polymer_BASF-Ultradur-B-4406-G4-Q113-20-Glass-Filled-PBT.php)

| Physical Properties                | Metric  | English   | Comments              |
|------------------------------------|---|---|-----------------------|
| Density                            | 1.58 g/cc   | 0.0571 lb/in <sup>3</sup>                           | ISO 1183              |
| Water Absorption                   | 0.40 %  | 0.40 %  | ISO 62                |
| Moisture Absorption at Equilibrium | 0.20 %  | 0.20 %  | 23°C/50% R.H.; ISO 62 |
| Viscosity Test                     | 112 cm <sup>3</sup> /g                              | 112 cm <sup>3</sup> /g                              | Viscosity number      |
| Linear Mold Shrinkage              | 0.0030 cm/cm  | 0.0030 in/in  | ASTM Data; MD         |
| Melt Flow                          | 11 g/10 min<br>@Load 2.16 kg,<br>Temperature 250 °C | 11 g/10 min<br>@Load 4.76 lb,<br>Temperature 482 °F | ISO 1133              |

| Mechanical Properties      | Metric  | English   | Comments              |
|----------------------------|---|---|-----------------------|
| Tensile Strength at Break  | 117 MPa   | 17000 psi   | 0.2 in/min; ASTM Test |
| Tensile Strength, Ultimate | 117 MPa   | 17000 psi   | 5mm/min; ISO 527      |
| Elongation at Break        | 2.2 %   | 2.2 %   | 5mm/min; ISO 527      |
|                            | 2.2 %   | 2.2 %   |                       |
| Tensile Modulus            | 8.28 GPa  | 1200 ksi  | ASTM Test             |
|                            | 8.35 GPa  | 1210 ksi  | 1mm/min; ISO 527      |
| Izod Impact, Notched       | 0.530 J/cm<br>@Thickness 3.17 mm                | 0.993 ft-lb/in<br>@Thickness 0.125 in               | ASTM Test             |
| Charpy Impact Unnotched    | 3.60 J/cm <sup>2</sup>                          | 17.1 ft-lb/in <sup>2</sup>                          | ISO 179               |
|                            | 5.00 J/cm <sup>2</sup><br>@Temperature -30.0 °C | 23.8 ft-lb/in <sup>2</sup><br>@Temperature -22.0 °F | ISO 179               |
| Charpy Impact, Notched     | 0.600 J/cm <sup>2</sup>                         | 2.86 ft-lb/in <sup>2</sup>                          | ISO 179               |
|                            | NB  | NB  | ISO 179               |

| Mechanical Properties                          | @Temperature -30.0 °C<br>Metric                 | @Temperature -22.0 °F<br>English                  | Comments        |
|--|---|---|-----------------|
| <b>Thermal Properties</b>                      | <b>Metric</b>                                   | <b>English</b>                                    | <b>Comments</b> |
| CTE, linear                                    | 30.0 µm/m-°C<br>@Temperature -30.0 -<br>30.0 °C | 16.7 µin/in-°F<br>@Temperature -22.0 -<br>86.0 °F | ASTM Test       |
| CTE, linear, Parallel to Flow                  | 50.0 µm/m-°C                                    | 27.8 µin/in-°F                                    | ISO 11359       |
| Melting Point                                  | 223 °C  | 433 °F  | 10 K/min        |
|  | 223 °C  | 433 °F  | ASTM Test       |
| Deflection Temperature at 0.46 MPa<br>(66 psi) | 215 °C  | 419 °F  | ASTM Test       |
|  | 215 °C  | 419 °F  | ISO 75          |
| Deflection Temperature at 1.8 MPa<br>(264 psi) | 177 °C  | 351 °F  | ASTM Test       |
|  | 180 °C  | 356 °F  | ISO 75          |
| Flammability, UL94                             | V-0<br>@Thickness 1.60 mm                       | V-0<br>@Thickness 0.0630 in                       |                 |
|  | V-0<br>@Thickness 0.800 mm                      | V-0<br>@Thickness 0.0315 in                       |                 |
| <b>Electrical Properties</b>                   | <b>Metric</b>                                   | <b>English</b>                                    | <b>Comments</b> |
| Volume Resistivity                             | >= 1.00e+13 ohm-cm                              | >= 1.00e+13 ohm-cm                                | IEC 60093       |
| Surface Resistance                             | >= 1.00e+15 ohm                                 | >= 1.00e+15 ohm                                   | IEC 60093       |
| Dielectric Constant                            | 3.5<br>@Frequency 1.00e+6<br>Hz                 | 3.5<br>@Frequency 1.00e+6<br>Hz                   | IEC 60250       |
|  | 3.7<br>@Frequency 100 Hz                        | 3.7<br>@Frequency 100 Hz                          | IEC 60250       |
| Dissipation Factor                             | 0.0016<br>@Frequency 100 Hz                     | 0.0016<br>@Frequency 100 Hz                       | IEC 60250       |
|  | 0.017<br>@Frequency 1.00e+6<br>Hz               | 0.017<br>@Frequency 1.00e+6<br>Hz                 | IEC 60250       |
| Comparative Tracking Index                     | 200 V   | 200 V   | IEC 60112       |

| Processing Properties | Metric      | English     | Comments          |
|-----------------------|-------------|-------------|-------------------|
| Melt Temperature      | 265 °C      | 509 °F      | Injection molding |
| Injection Velocity    | 70.0 mm/sec | 2.76 in/sec | Injection molding |

| Descriptive Properties       | Value                                | Comments |
|------------------------------|--------------------------------------|----------|
| Color                        | Natural                              |          |
| Commercial Status            | North America and Europe             |          |
| Form                         | Pellets                              |          |
| Impact Modified              | No                                   |          |
| Primary Processing Technique | Injection Molding                    |          |
| Processing                   | Injection Molding                    |          |
| Special characteristic       | Flame retarding agent                |          |
|                              | Heat stabilized or stable to heat    |          |
|                              | Light stabilized or stable to light  |          |
|                              | Lubricant                            |          |
|                              | U.V. stabilized or stable to weather |          |

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