

## DuPont Performance Polymers Crastin® HR5330HFS NC010 Polybutylene Terephthalate (PBT) (Unverified Data\*\*)

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , Polybutylene Terephthalate (PBT), 30% Glass Fiber Filled

### Material Notes:

30% Glass Reinforced Polybutylene Terephthalate with Improved Processing Crastin HR5330HFS is a 30% glass fiber reinforced moderately toughened hydrolysis resistant polybutylene terephthalate for injection molding. Information provided by DuPont Performance Polymers

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_DuPont-Performance-Polymers-Crastin-HR5330HFS-NC010-Polybutylene-Terephthalate-PBT-nbspUnverified-Data.php](http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Crastin-HR5330HFS-NC010-Polybutylene-Terephthalate-PBT-nbspUnverified-Data.php)

| Physical Properties | Metric                                                  | English                                                 | Comments                |
|---------------------|---------------------------------------------------------|---------------------------------------------------------|-------------------------|
| Density             | 1.50 g/cc                                               | 0.0542 lb/in <sup>3</sup>                               | ISO 1183                |
| Water Absorption    | 0.35 %<br>@Thickness 2.00 mm                            | 0.35 %<br>@Thickness 0.0787 in                          | Sim. to ISO 62          |
| Moisture Absorption | 0.150 %<br>@Thickness 2.00 mm                           | 0.150 %<br>@Thickness 0.0787 in                         | Sim. to ISO 62          |
| Viscosity           | 230000 cP<br>@Temperature 250 °C                        | 230000 cP<br>@Temperature 482 °F                        | @ 1000 sec-1; ISO 11443 |
|                     | 68400 cP<br>@Shear Rate 5000 1/s,<br>Temperature 270 °C | 68400 cP<br>@Shear Rate 5000 1/s,<br>Temperature 518 °F | ISO 11403-1 -2          |
|                     | 81500 cP<br>@Shear Rate 5000 1/s,<br>Temperature 260 °C | 81500 cP<br>@Shear Rate 5000 1/s,<br>Temperature 500 °F | ISO 11403-1 -2          |
|                     | 98700 cP<br>@Shear Rate 5000 1/s,<br>Temperature 250 °C | 98700 cP<br>@Shear Rate 5000 1/s,<br>Temperature 482 °F | ISO 11403-1 -2          |
|                     | 211600 cP<br>@Shear Rate 500 1/s,<br>Temperature 270 °C | 211600 cP<br>@Shear Rate 500 1/s,<br>Temperature 518 °F | ISO 11403-1 -2          |
|                     | 253100 cP<br>@Shear Rate 500 1/s,<br>Temperature 260 °C | 253100 cP<br>@Shear Rate 500 1/s,<br>Temperature 500 °F | ISO 11403-1 -2          |
|                     | 300300 cP<br>@Shear Rate 500 1/s,<br>Temperature 250 °C | 300300 cP<br>@Shear Rate 500 1/s,<br>Temperature 482 °F | ISO 11403-1 -2          |

| Linear Mold Shrinkage, Flow<br>Physical Properties | 0.0030 cm/cm<br>Metric                               | 0.0030 in/in<br>English                              | ISO 294-4 2577<br>Comments       |
|----------------------------------------------------|------------------------------------------------------|------------------------------------------------------|----------------------------------|
| Linear Mold Shrinkage, Transverse                  | 0.010 cm/cm                                          | 0.010 in/in                                          | ISO 294-4 2577                   |
| Melt Flow                                          | 7.5 g/10 min<br>@Load 2.16 kg,<br>Temperature 250 °C | 7.5 g/10 min<br>@Load 4.76 lb,<br>Temperature 482 °F | cm <sup>3</sup> /10min; ISO 1133 |

| Mechanical Properties     | Metric                                                | English                                             | Comments       |
|---------------------------|-------------------------------------------------------|-----------------------------------------------------|----------------|
| Tensile Strength at Break | 130 MPa                                               | 18900 psi                                           | ISO 527-1/-2   |
| Tensile Stress            | 8.01 MPa<br>@Strain 0.240 %,<br>Temperature 150 °C    | 1160 psi<br>@Strain 0.240 %,<br>Temperature 302 °F  | ISO 11403-1 -2 |
|                           | 10.04 MPa<br>@Strain 0.210 %,<br>Temperature 90.0 °C  | 1456 psi<br>@Strain 0.210 %,<br>Temperature 194 °F  | ISO 11403-1 -2 |
|                           | 23.3 MPa<br>@Strain 0.330 %,<br>Temperature 40.0 °C   | 3380 psi<br>@Strain 0.330 %,<br>Temperature 104 °F  | ISO 11403-1 -2 |
|                           | 26.61 MPa<br>@Strain 1.05 %,<br>Temperature 150 °C    | 3859 psi<br>@Strain 1.05 %,<br>Temperature 302 °F   | ISO 11403-1 -2 |
|                           | 32.96 MPa<br>@Strain 0.360 %,<br>Temperature 23.0 °C  | 4780 psi<br>@Strain 0.360 %,<br>Temperature 73.4 °F | ISO 11403-1 -2 |
|                           | 33.14 MPa<br>@Strain 0.830 %,<br>Temperature 90.0 °C  | 4807 psi<br>@Strain 0.830 %,<br>Temperature 194 °F  | ISO 11403-1 -2 |
|                           | 37.33 MPa<br>@Strain 1.98 %,<br>Temperature 150 °C    | 5414 psi<br>@Strain 1.98 %,<br>Temperature 302 °F   | ISO 11403-1 -2 |
|                           | 43.6 MPa<br>@Strain 2.96 %,<br>Temperature 150 °C     | 6320 psi<br>@Strain 2.96 %,<br>Temperature 302 °F   | ISO 11403-1 -2 |
|                           | 43.81 MPa<br>@Strain 0.440 %,<br>Temperature 0.000 °C | 6354 psi<br>@Strain 0.440 %,<br>Temperature 32.0 °F | ISO 11403-1 -2 |
|                           | 49.22 MPa<br>@Strain 1.53 %,                          | 7139 psi<br>@Strain 1.53 %,                         | ISO 11403-1 -2 |

| Mechanical Properties | Temperature 90.0 °C<br>Metric            | Temperature 194 °F<br>English            | Comments       |
|-----------------------|------------------------------------------|------------------------------------------|----------------|
|                       | 57.24 MPa                                | 8302 psi                                 |                |
|                       | @Strain 0.960 %,<br>Temperature 40.0 °C  | @Strain 0.960 %,<br>Temperature 104 °F   | ISO 11403-1 -2 |
|                       | 59.41 MPa                                | 8617 psi                                 |                |
|                       | @Strain 2.26 %,<br>Temperature 90.0 °C   | @Strain 2.26 %,<br>Temperature 194 °F    | ISO 11403-1 -2 |
|                       | 65.44 MPa                                | 9491 psi                                 |                |
|                       | @Strain 0.660 %,<br>Temperature -20.0 °C | @Strain 0.660 %,<br>Temperature -4.00 °F | ISO 11403-1 -2 |
|                       | 66.81 MPa                                | 9690 psi                                 |                |
|                       | @Strain 0.790 %,<br>Temperature 23.0 °C  | @Strain 0.790 %,<br>Temperature 73.4 °F  | ISO 11403-1 -2 |
|                       | 74.56 MPa                                | 10810 psi                                |                |
|                       | @Strain 0.790 %,<br>Temperature 0.000 °C | @Strain 0.790 %,<br>Temperature 32.0 °F  | ISO 11403-1 -2 |
|                       | 76.98 MPa                                | 11170 psi                                |                |
|                       | @Strain 1.51 %,<br>Temperature 40.0 °C   | @Strain 1.51 %,<br>Temperature 104 °F    | ISO 11403-1 -2 |
|                       | 84.73 MPa                                | 12290 psi                                |                |
|                       | @Strain 0.790 %,<br>Temperature -40.0 °C | @Strain 0.790 %,<br>Temperature -40.0 °F | ISO 11403-1 -2 |
|                       | 91.45 MPa                                | 13260 psi                                |                |
|                       | @Strain 1.21 %,<br>Temperature 23.0 °C   | @Strain 1.21 %,<br>Temperature 73.4 °F   | ISO 11403-1 -2 |
|                       | 91.85 MPa                                | 13320 psi                                |                |
|                       | @Strain 2.14 %,<br>Temperature 40.0 °C   | @Strain 2.14 %,<br>Temperature 104 °F    | ISO 11403-1 -2 |
|                       | 103.45 MPa                               | 15004 psi                                |                |
|                       | @Strain 1.19 %,<br>Temperature 0.000 °C  | @Strain 1.19 %,<br>Temperature 32.0 °F   | ISO 11403-1 -2 |
|                       | 110.95 MPa                               | 16092 psi                                |                |
|                       | @Strain 1.68 %,<br>Temperature 23.0 °C   | @Strain 1.68 %,<br>Temperature 73.4 °F   | ISO 11403-1 -2 |
|                       | 121.04 MPa                               | 17555 psi                                |                |
|                       | @Strain 1.33 %,<br>Temperature -20.0 °C  | @Strain 1.33 %,<br>Temperature -4.00 °F  | ISO 11403-1 -2 |
|                       | 122.73 MPa                               | 17801 psi                                |                |

| Mechanical Properties | Metric                               | English                              | Comments       |
|-----------------------|--------------------------------------|--------------------------------------|----------------|
|                       | @Strain 1.21 %, Temperature -40.0 °C | @Strain 1.21 %, Temperature -40.0 °F | ISO 11403-1 -2 |
|                       | 128.42 MPa                           | 18626 psi                            |                |
|                       | @Strain 1.66 %, Temperature 0.000 °C | @Strain 1.66 %, Temperature 32.0 °F  | ISO 11403-1 -2 |
|                       | 159.43 MPa                           | 23123 psi                            |                |
|                       | @Strain 2.06 %, Temperature -20.0 °C | @Strain 2.06 %, Temperature -4.00 °F | ISO 11403-1 -2 |
|                       | 168.02 MPa                           | 24369 psi                            |                |
|                       | @Strain 1.85 %, Temperature -40.0 °C | @Strain 1.85 %, Temperature -40.0 °F | ISO 11403-1 -2 |
|                       | 198.29 MPa                           | 28760 psi                            |                |
|                       | @Strain 2.50 %, Temperature -40.0 °C | @Strain 2.50 %, Temperature -40.0 °F | ISO 11403-1 -2 |
| Elongation at Break   | 3.1 %                                | 3.1 %                                | ISO 527-1/-2   |
| Tensile Modulus       | 8.50 GPa                             | 1230 ksi                             | ISO 527-1/-2   |
| Flexural Strength     | 195 MPa                              | 28300 psi                            | ISO 178        |
| Secant Modulus        | 3.76 GPa                             | 545 ksi                              |                |
|                       | @Strain 2.64 %, Temperature 40.0 °C  | @Strain 2.64 %, Temperature 104 °F   | ISO 11403-1 -2 |
|                       | 4.83 GPa                             | 701 ksi                              |                |
|                       | @Strain 1.71 %, Temperature 40.0 °C  | @Strain 1.71 %, Temperature 104 °F   | ISO 11403-1 -2 |
|                       | 5.91 GPa                             | 857 ksi                              |                |
|                       | @Strain 2.05 %, Temperature 23.0 °C  | @Strain 2.05 %, Temperature 73.4 °F  | ISO 11403-1 -2 |
|                       | 5.9625 GPa                           | 864.80 ksi                           |                |
|                       | @Strain 0.960 %, Temperature 40.0 °C | @Strain 0.960 %, Temperature 104 °F  | ISO 11403-1 -2 |
|                       | 6.98 GPa                             | 1010 ksi                             |                |
|                       | @Strain 2.05 %, Temperature 0.000 °C | @Strain 2.05 %, Temperature 32.0 °F  | ISO 11403-1 -2 |
|                       | 7.06 GPa                             | 1020 ksi                             |                |
|                       | @Strain 0.330 %, Temperature 40.0 °C | @Strain 0.330 %, Temperature 104 °F  | ISO 11403-1 -2 |
|                       | 7.25 GPa                             | 1050 ksi                             |                |

| Mechanical Properties   | Metric<br>@Strain 1.36 %,<br>Temperature 23.0 °C | English<br>@Strain 1.36 %,<br>Temperature 73.4 °F | ISO 11403-1 -2<br>Comments |
|-------------------------|--------------------------------------------------|---------------------------------------------------|----------------------------|
|                         | 7.33 GPa                                         | 1060 ksi                                          |                            |
|                         | @Strain 2.30 %,<br>Temperature -20.0 °C          | @Strain 2.30 %,<br>Temperature -4.00 °F           | ISO 11403-1 -2             |
|                         | 8.40 GPa                                         | 1220 ksi                                          |                            |
|                         | @Strain 1.34 %,<br>Temperature 0.000 °C          | @Strain 1.34 %,<br>Temperature 32.0 °F            | ISO 11403-1 -2             |
|                         | 8.46 GPa                                         | 1230 ksi                                          |                            |
|                         | @Strain 0.790 %,<br>Temperature 23.0 °C          | @Strain 0.790 %,<br>Temperature 73.4 °F           | ISO 11403-1 -2             |
|                         | 8.68 GPa                                         | 1260 ksi                                          |                            |
|                         | @Strain 2.06 %,<br>Temperature -40.0 °C          | @Strain 2.06 %,<br>Temperature -40.0 °F           | ISO 11403-1 -2             |
|                         | 9.10 GPa                                         | 1320 ksi                                          |                            |
|                         | @Strain 1.33 %,<br>Temperature -20.0 °C          | @Strain 1.33 %,<br>Temperature -4.00 °F           | ISO 11403-1 -2             |
|                         | 9.16 GPa                                         | 1330 ksi                                          |                            |
|                         | @Strain 0.360 %,<br>Temperature 23.0 °C          | @Strain 0.360 %,<br>Temperature 73.4 °F           | ISO 11403-1 -2             |
|                         | 9.44 GPa                                         | 1370 ksi                                          |                            |
|                         | @Strain 0.790 %,<br>Temperature 0.000 °C         | @Strain 0.790 %,<br>Temperature 32.0 °F           | ISO 11403-1 -2             |
|                         | 9.92 GPa                                         | 1440 ksi                                          |                            |
|                         | @Strain 0.660 %,<br>Temperature -20.0 °C         | @Strain 0.660 %,<br>Temperature -4.00 °F          | ISO 11403-1 -2             |
|                         | 9.96 GPa                                         | 1440 ksi                                          |                            |
|                         | @Strain 0.440 %,<br>Temperature 0.000 °C         | @Strain 0.440 %,<br>Temperature 32.0 °F           | ISO 11403-1 -2             |
|                         | 10.143 GPa                                       | 1471.1 ksi                                        |                            |
|                         | @Strain 1.21 %,<br>Temperature -40.0 °C          | @Strain 1.21 %,<br>Temperature -40.0 °F           | ISO 11403-1 -2             |
|                         | 10.7 GPa                                         | 1560 ksi                                          |                            |
|                         | @Strain 0.790 %,<br>Temperature -40.0 °C         | @Strain 0.790 %,<br>Temperature -40.0 °F          | ISO 11403-1 -2             |
| Charpy Impact Unnotched | 7.00 J/cm²                                       | 33.3 ft-lb/in²                                    | ISO 179/1eU                |
| Charpy Impact, Notched  | 1.30 J/cm²                                       | 6.19 ft-lb/in²                                    | ISO 179/1eA                |
|                         |                                                  |                                                   |                            |

| Mechanical Properties | 1.00 J/cm²<br>Metric  | 4.76 ft-lb/in²<br>English | ISO 179/1eA<br>Comments |
|-----------------------|-----------------------|---------------------------|-------------------------|
|                       | @Temperature -40.0 °C | @Temperature -40.0 °F     |                         |

**Contact Songhan Plastic Technology Co.,Ltd.**

Website : [www.lookpolymers.com](http://www.lookpolymers.com)  
Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)  
Tel : +86 021-51131842  
Mobile : +86 13061808058  
Skype : lookpolymers  
Address : United North Road 215,Fengxian District, Shanghai City,China