

DuPont Performance Polymers Crastin® HR5330HFS BK591 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 Hydrolysis Resistant Polybutylene Terephthalate 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-BK591-Polybutylene-Terephthalate-PBT-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.50 g/cc	0.0542 lb/in ³	ISO 1183
Water Absorption	0.35 % @Thickness 2.00 mm	0.35 % @Thickness 0.0787 in	Sim. to ISO 62
Moisture Absorption	0.150 % @Thickness 2.00 mm	0.150 % @Thickness 0.0787 in	Sim. to ISO 62
Viscosity	230000 cP @Temperature 250 °C	230000 cP @Temperature 482 °F	@ 1000 sec-1; ISO 11443
Linear Mold Shrinkage, Flow	0.0030 cm/cm	0.0030 in/in	ISO 294-4 2577
Linear Mold Shrinkage, Transverse	0.010 cm/cm	0.010 in/in	ISO 294-4 2577
Melt Flow	8.5 g/10 min @Load 2.16 kg, Temperature 250 °C	8.5 g/10 min @Load 4.76 lb, Temperature 482 °F	cm ³ /10min; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	120 MPa	17400 psi	ISO 527-1/-2
Tensile Stress	8.01 MPa @Strain 0.240 %, Temperature 150 °C	1160 psi @Strain 0.240 %, Temperature 302 °F	ISO 11403-1 -2
	10.04 MPa @Strain 0.210 %, Temperature 90.0 °C	1456 psi @Strain 0.210 %, Temperature 194 °F	ISO 11403-1 -2
	23.3 MPa @Strain 0.330 %, Temperature 40.0 °C	3380 psi @Strain 0.330 %, Temperature 104 °F	ISO 11403-1 -2

Mechanical Properties	26.61 MPa Metric	3859 psi English	Comments ISO 11403-1 -2
	@Strain 1.05 %, Temperature 150 °C	@Strain 1.05 %, Temperature 302 °F	
	32.96 MPa	4780 psi	ISO 11403-1 -2
	@Strain 0.360 %, Temperature 23.0 °C	@Strain 0.360 %, Temperature 73.4 °F	
	33.14 MPa	4807 psi	ISO 11403-1 -2
	@Strain 0.830 %, Temperature 90.0 °C	@Strain 0.830 %, Temperature 194 °F	
	37.33 MPa	5414 psi	ISO 11403-1 -2
	@Strain 1.98 %, Temperature 150 °C	@Strain 1.98 %, Temperature 302 °F	
	43.6 MPa	6320 psi	ISO 11403-1 -2
	@Strain 2.96 %, Temperature 150 °C	@Strain 2.96 %, Temperature 302 °F	
	43.81 MPa	6354 psi	ISO 11403-1 -2
	@Strain 0.440 %, Temperature 0.000 °C	@Strain 0.440 %, Temperature 32.0 °F	
	49.22 MPa	7139 psi	ISO 11403-1 -2
	@Strain 1.53 %, Temperature 90.0 °C	@Strain 1.53 %, Temperature 194 °F	
	57.24 MPa	8302 psi	ISO 11403-1 -2
	@Strain 0.960 %, Temperature 40.0 °C	@Strain 0.960 %, Temperature 104 °F	
	59.41 MPa	8617 psi	ISO 11403-1 -2
	@Strain 2.26 %, Temperature 90.0 °C	@Strain 2.26 %, Temperature 194 °F	
	65.44 MPa	9491 psi	ISO 11403-1 -2
	@Strain 0.660 %, Temperature -20.0 °C	@Strain 0.660 %, Temperature -4.00 °F	
	66.81 MPa	9690 psi	ISO 11403-1 -2
	@Strain 0.790 %, Temperature 23.0 °C	@Strain 0.790 %, Temperature 73.4 °F	
	74.56 MPa	10810 psi	ISO 11403-1 -2
	@Strain 0.790 %, Temperature 0.000 °C	@Strain 0.790 %, Temperature 32.0 °F	
	76.98 MPa	11170 psi	ISO 11403-1 -2
	@Strain 1.51 %,	@Strain 1.51 %,	

Mechanical Properties	Temperature 40.0 °C Metric	Temperature 104 °F English	Comments
	84.73 MPa @Strain 0.790 %, Temperature -40.0 °C	12290 psi @Strain 0.790 %, Temperature -40.0 °F	ISO 11403-1 -2
	91.45 MPa @Strain 1.21 %, Temperature 23.0 °C	13260 psi @Strain 1.21 %, Temperature 73.4 °F	ISO 11403-1 -2
	91.85 MPa @Strain 2.14 %, Temperature 40.0 °C	13320 psi @Strain 2.14 %, Temperature 104 °F	ISO 11403-1 -2
	103.45 MPa @Strain 1.19 %, Temperature 0.000 °C	15004 psi @Strain 1.19 %, Temperature 32.0 °F	ISO 11403-1 -2
	110.95 MPa @Strain 1.68 %, Temperature 23.0 °C	16092 psi @Strain 1.68 %, Temperature 73.4 °F	ISO 11403-1 -2
	121.04 MPa @Strain 1.33 %, Temperature -20.0 °C	17555 psi @Strain 1.33 %, Temperature -4.00 °F	ISO 11403-1 -2
	122.73 MPa @Strain 1.21 %, Temperature -40.0 °C	17801 psi @Strain 1.21 %, Temperature -40.0 °F	ISO 11403-1 -2
	128.42 MPa @Strain 1.66 %, Temperature 0.000 °C	18626 psi @Strain 1.66 %, Temperature 32.0 °F	ISO 11403-1 -2
	159.43 MPa @Strain 2.06 %, Temperature -20.0 °C	23123 psi @Strain 2.06 %, Temperature -4.00 °F	ISO 11403-1 -2
	168.02 MPa @Strain 1.85 %, Temperature -40.0 °C	24369 psi @Strain 1.85 %, Temperature -40.0 °F	ISO 11403-1 -2
	198.29 MPa @Strain 2.50 %, Temperature -40.0 °C	28760 psi @Strain 2.50 %, Temperature -40.0 °F	ISO 11403-1 -2
Elongation at Break	3.2 %	3.2 %	ISO 527-1/-2
Tensile Modulus	8.50 GPa	1230 ksi	ISO 527-1/-2
Flexural Strength	182 MPa	26400 psi	ISO 178

Mechanical Properties	Metric	English	Comments
Secant Modulus	@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	
	@Strain 1.36 %, Temperature 23.0 °C	@Strain 1.36 %, Temperature 73.4 °F	ISO 11403-1 -2
	7.33 GPa	1060 ksi	
	@Strain 2.30 %, Temperature -20.0 °C	@Strain 2.30 %, Temperature -4.00 °F	ISO 11403-1 -2
	8.40 GPa	1220 ksi	
	@Strain 1.34 %, Temperature 0.000 °C	@Strain 1.34 %, Temperature 32.0 °F	ISO 11403-1 -2
	8.46 GPa	1230 ksi	
	@Strain 0.790 %, Temperature 23.0 °C	@Strain 0.790 %, Temperature 73.4 °F	ISO 11403-1 -2
	8.68 GPa	1260 ksi	
	@Strain 2.06 %, Temperature -40.0 °C	@Strain 2.06 %, Temperature -40.0 °F	ISO 11403-1 -2
	9.10 GPa	1320 ksi	
	@Strain 1.33 %, Temperature -20.0 °C	@Strain 1.33 %, Temperature -4.00 °F	ISO 11403-1 -2
	9.16 GPa	1330 ksi	

Mechanical Properties	Metric @Strain 0.360 %, Temperature 23.0 °C	English @Strain 0.360 %, Temperature 73.4 °F	ISO 11403-1 -2 Comments
	9.44 GPa	1370 ksi	
	@Strain 0.790 %, Temperature 0.000 °C	@Strain 0.790 %, Temperature 32.0 °F	ISO 11403-1 -2
	9.92 GPa	1440 ksi	
	@Strain 0.660 %, Temperature -20.0 °C	@Strain 0.660 %, Temperature -4.00 °F	ISO 11403-1 -2
	9.96 GPa	1440 ksi	
	@Strain 0.440 %, Temperature 0.000 °C	@Strain 0.440 %, Temperature 32.0 °F	ISO 11403-1 -2
	10.143 GPa	1471.1 ksi	
	@Strain 1.21 %, Temperature -40.0 °C	@Strain 1.21 %, Temperature -40.0 °F	ISO 11403-1 -2
	10.7 GPa	1560 ksi	
	@Strain 0.790 %, Temperature -40.0 °C	@Strain 0.790 %, Temperature -40.0 °F	ISO 11403-1 -2
Charpy Impact Unnotched	6.50 J/cm ²	30.9 ft-lb/in ²	ISO 179/1eU
Charpy Impact, Notched	1.20 J/cm ²	5.71 ft-lb/in ²	ISO 179/1eA
	0.950 J/cm ²	4.52 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Thermal Properties	Metric	English	Comments
Melting Point	225 °C	437 °F	10°C/min; ISO 11357-1/-3
Deflection Temperature at 1.8 MPa (264 psi)	207 °C	405 °F	ISO 75-1/-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	IEC 60093
Dielectric Strength	34.0 kV/mm	864 kV/in	IEC 60243-1
Comparative Tracking Index	525 V	525 V	IEC 60112

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