

DuPont Performance Polymers Crastin® HR5315HFS BK591 Polybutylene Terephthalate (PBT) (Unverified Data**)

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , Polybutylene Terephthalate (PBT), 20% Glass Fiber Filled

Material Notes:

15% Glass Reinforced Hydrolysis Resistant Polybutylene Terephthalate with Improved Processing Crastin HR5315HFS is a 15% 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-HR5315HFS-BK591-Polybutylene-Terephthalate-PBT-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.38 g/cc	0.0499 lb/in ³	ISO 1183
Water Absorption	0.40 % @Thickness 2.00 mm	0.40 % @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	175000 cP @Temperature 250 °C	175000 cP @Temperature 482 °F	@ 1000 sec-1; ISO 11443
Linear Mold Shrinkage, Flow	0.0050 cm/cm	0.0050 in/in	ISO 294-4 2577
Linear Mold Shrinkage, Transverse	0.011 cm/cm	0.011 in/in	ISO 294-4 2577
Melt Flow	13.5 g/10 min @Load 2.16 kg, Temperature 250 °C	13.5 g/10 min @Load 4.76 lb, Temperature 482 °F	cm ³ /10min; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	95.0 MPa	13800 psi	ISO 527-1/-2
Tensile Stress	3.53 MPa @Strain 0.200 %, Temperature 150 °C	512 psi @Strain 0.200 %, Temperature 302 °F	ISO 11403-1 -2
	4.50 MPa @Strain 0.180 %, Temperature 90.0 °C	653 psi @Strain 0.180 %, Temperature 194 °F	ISO 11403-1 -2
	9.81 MPa @Strain 0.250 %,	1420 psi @Strain 0.250 %,	ISO 11403-1 -2

Mechanical Properties	Temperature 40.0 °C Metric	Temperature 104 °F English	Comments
	17.03 MPa	2470 psi	
	@Strain 0.280 %, Temperature 0.000 °C	@Strain 0.280 %, Temperature 32.0 °F	ISO 11403-1 -2
	18.3 MPa	2650 psi	
	@Strain 1.47 %, Temperature 150 °C	@Strain 1.47 %, Temperature 302 °F	ISO 11403-1 -2
	19.02 MPa	2759 psi	
	@Strain 0.350 %, Temperature 23.0 °C	@Strain 0.350 %, Temperature 73.4 °F	ISO 11403-1 -2
	23.6 MPa	3420 psi	
	@Strain 0.350 %, Temperature -40.0 °C	@Strain 0.350 %, Temperature -40.0 °F	ISO 11403-1 -2
	23.63 MPa	3427 psi	
	@Strain 1.18 %, Temperature 90.0 °C	@Strain 1.18 %, Temperature 194 °F	ISO 11403-1 -2
	27.2 MPa	3950 psi	
	@Strain 3.06 %, Temperature 150 °C	@Strain 3.06 %, Temperature 302 °F	ISO 11403-1 -2
	32.14 MPa	4662 psi	
	@Strain 4.77 %, Temperature 150 °C	@Strain 4.77 %, Temperature 302 °F	ISO 11403-1 -2
	37.94 MPa	5503 psi	
	@Strain 2.48 %, Temperature 90.0 °C	@Strain 2.48 %, Temperature 194 °F	ISO 11403-1 -2
	38.76 MPa	5622 psi	
	@Strain 1.14 %, Temperature 40.0 °C	@Strain 1.14 %, Temperature 104 °F	ISO 11403-1 -2
	45.25 MPa	6563 psi	
	@Strain 3.90 %, Temperature 90.0 °C	@Strain 3.90 %, Temperature 194 °F	ISO 11403-1 -2
	46.09 MPa	6685 psi	
	@Strain 0.790 %, Temperature -20.0 °C	@Strain 0.790 %, Temperature -4.00 °F	ISO 11403-1 -2
	50.49 MPa	7323 psi	
	@Strain 0.890 %, Temperature 0.000 °C	@Strain 0.890 %, Temperature 32.0 °F	ISO 11403-1 -2
	51.42 MPa	7458 psi	

Mechanical Properties	Metric	English	ISO 11403-1 -2 Comments
	@Strain 1.02 %, Temperature 23.0 °C	@Strain 1.02 %, Temperature 73.4 °F	
	56.18 MPa	8148 psi	
	@Strain 1.97 %, Temperature 40.0 °C	@Strain 1.97 %, Temperature 104 °F	ISO 11403-1 -2
	63.58 MPa	9222 psi	
	@Strain 1.03 %, Temperature -40.0 °C	@Strain 1.03 %, Temperature -40.0 °F	ISO 11403-1 -2
	67.81 MPa	9835 psi	
	@Strain 2.86 %, Temperature 40.0 °C	@Strain 2.86 %, Temperature 104 °F	ISO 11403-1 -2
	71.17 MPa	10320 psi	
	@Strain 1.33 %, Temperature 0.000 °C	@Strain 1.33 %, Temperature 32.0 °F	ISO 11403-1 -2
	73.66 MPa	10680 psi	
	@Strain 1.64 %, Temperature 23.0 °C	@Strain 1.64 %, Temperature 73.4 °F	ISO 11403-1 -2
	77.15 MPa	11190 psi	
	@Strain 1.40 %, Temperature -20.0 °C	@Strain 1.40 %, Temperature -4.00 °F	ISO 11403-1 -2
	87.37 MPa	12670 psi	
	@Strain 2.28 %, Temperature 23.0 °C	@Strain 2.28 %, Temperature 73.4 °F	ISO 11403-1 -2
	90.3 MPa	13100 psi	
	@Strain 1.87 %, Temperature 0.000 °C	@Strain 1.87 %, Temperature 32.0 °F	ISO 11403-1 -2
	90.59 MPa	13140 psi	
	@Strain 1.56 %, Temperature -40.0 °C	@Strain 1.56 %, Temperature -40.0 °F	ISO 11403-1 -2
	99.89 MPa	14490 psi	
	@Strain 1.98 %, Temperature -20.0 °C	@Strain 1.98 %, Temperature -4.00 °F	ISO 11403-1 -2
	112.87 MPa	16370 psi	
	@Strain 2.10 %, Temperature -40.0 °C	@Strain 2.10 %, Temperature -40.0 °F	ISO 11403-1 -2
	119.15 MPa	17281 psi	
	@Strain 2.71 %, Temperature -20.0 °C	@Strain 2.71 %, Temperature -4.00 °F	ISO 11403-1 -2

Mechanical Properties	Metric	English	Comments 2
Tensile Modulus	5.00 GPa	725 ksi	ISO 527-1/-2
Flexural Strength	143 MPa	20700 psi	ISO 178
Secant Modulus	2.00 GPa	290 ksi	ISO 11403-1 -2
	@Strain 3.60 %, Temperature 40.0 °C	@Strain 3.60 %, Temperature 104 °F	
	2.70 GPa	392 ksi	ISO 11403-1 -2
	@Strain 2.24 %, Temperature 40.0 °C	@Strain 2.24 %, Temperature 104 °F	
	3.38 GPa	491 ksi	ISO 11403-1 -2
	@Strain 2.76 %, Temperature 23.0 °C	@Strain 2.76 %, Temperature 73.4 °F	
	3.40 GPa	493 ksi	ISO 11403-1 -2
	@Strain 1.14 %, Temperature 40.0 °C	@Strain 1.14 %, Temperature 104 °F	
	3.87 GPa	562 ksi	ISO 11403-1 -2
	@Strain 3.30 %, Temperature -20.0 °C	@Strain 3.30 %, Temperature -4.00 °F	
	3.924 GPa	569.1 ksi	ISO 11403-1 -2
	@Strain 0.250 %, Temperature 40.0 °C	@Strain 0.250 %, Temperature 104 °F	
	4.28 GPa	621 ksi	ISO 11403-1 -2
	@Strain 1.85 %, Temperature 23.0 °C	@Strain 1.85 %, Temperature 73.4 °F	
	4.38 GPa	635 ksi	ISO 11403-1 -2
	@Strain 2.31 %, Temperature 0.000 °C	@Strain 2.31 %, Temperature 32.0 °F	
	4.86 GPa	705 ksi	ISO 11403-1 -2
	@Strain 2.20 %, Temperature -20.0 °C	@Strain 2.20 %, Temperature -4.00 °F	
	5.04 GPa	731 ksi	ISO 11403-1 -2
	@Strain 1.02 %, Temperature 23.0 °C	@Strain 1.02 %, Temperature 73.4 °F	
	5.09 GPa	738 ksi	ISO 11403-1 -2
	@Strain 2.49 %, Temperature -40.0 °C	@Strain 2.49 %, Temperature -40.0 °F	

Mechanical Properties	5.22 GPa Metric	756 ksi English	Comments ISO 11403-1 -2
	@Strain 1.49 %, Temperature 0.000 °C	@Strain 1.49 %, Temperature 32.0 °F	
	5.43 GPa	788 ksi	
	@Strain 0.350 %, Temperature 23.0 °C	@Strain 0.350 %, Temperature 73.4 °F	ISO 11403-1 -2
	5.51 GPa	799 ksi	
	@Strain 1.40 %, Temperature -20.0 °C	@Strain 1.40 %, Temperature -4.00 °F	ISO 11403-1 -2
	5.67 GPa	823 ksi	
	@Strain 0.890 %, Temperature 0.000 °C	@Strain 0.890 %, Temperature 32.0 °F	ISO 11403-1 -2
	5.68 GPa	824 ksi	
	@Strain 1.73 %, Temperature -40.0 °C	@Strain 1.73 %, Temperature -40.0 °F	ISO 11403-1 -2
	5.83 GPa	846 ksi	
	@Strain 0.790 %, Temperature -20.0 °C	@Strain 0.790 %, Temperature -4.00 °F	ISO 11403-1 -2
	6.08 GPa	882 ksi	
	@Strain 0.280 %, Temperature 0.000 °C	@Strain 0.280 %, Temperature 32.0 °F	ISO 11403-1 -2
	6.17 GPa	895 ksi	
	@Strain 1.03 %, Temperature -40.0 °C	@Strain 1.03 %, Temperature -40.0 °F	ISO 11403-1 -2
	6.74 GPa	978 ksi	
	@Strain 0.350 %, Temperature -40.0 °C	@Strain 0.350 %, Temperature -40.0 °F	ISO 11403-1 -2
Charpy Impact Unnotched	5.70 J/cm ²	27.1 ft-lb/in ²	ISO 179/1eU
Charpy Impact, Notched	1.10 J/cm ²	5.23 ft-lb/in ²	ISO 179/1eA
	0.600 J/cm ²	2.86 ft-lb/in ²	
	@Temperature -30.0 °C	@Temperature -22.0 °F	ISO 179/1eA

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	35.0 kV/mm	889 kV/in	IEC 60243-1

Electrical Properties	Metric	English	Comments
Dissipation Factor	@Frequency 100 Hz	@Frequency 100 Hz	IEC 60253

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