

DuPont Performance Polymers Crastin® HR5315HF NC010 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 Crastin HR5315HF is a 15% glass reinforced PBT with high flow (HF) moderately toughened hydrolysis resistant (HR) resin. Excellent balance of properties between terminal pullout and information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Crastin-HR5315HF-NC010-Polybutylene-Terephthalate-PBT-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.14 g/cc	0.0412 lb/in ³	
	1.37 g/cc	0.0495 lb/in ³	ISO 1183
Water Absorption	0.40 %	0.40 %	Sim. to ISO 62
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Moisture Absorption	0.150 %	0.150 %	Sim. to ISO 62
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Viscosity	55190 cP	55190 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 260 °C	@Shear Rate 5000 1/s, Temperature 500 °F	
	63820 cP	63820 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 250 °C	@Shear Rate 5000 1/s, Temperature 482 °F	
	74630 cP	74630 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 240 °C	@Shear Rate 5000 1/s, Temperature 464 °F	
	167300 cP	167300 cP	ISO 11403-1 -2
	@Shear Rate 500 1/s, Temperature 260 °C	@Shear Rate 500 1/s, Temperature 500 °F	
195800 cP	195800 cP	ISO 11403-1 -2	
@Shear Rate 500 1/s, Temperature 250 °C	@Shear Rate 500 1/s, Temperature 482 °F		
231200 cP	231200 cP	ISO 11403-1 -2	
@Shear Rate 500 1/s, Temperature 240 °C	@Shear Rate 500 1/s, Temperature 464 °F		

Physical Properties	95 cm ² /g Metric	95 cm ² /g English	ISO 307 1157 1628 Comments
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

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	115	115	ISO 2039-2
Tensile Strength at Break	95.0 MPa	13800 psi	ISO 527-1/-2
Tensile Stress	9.14 MPa	1330 psi	ISO 11403-1 -2
	@Strain 0.550 %, Temperature 150 °C	@Strain 0.550 %, Temperature 302 °F	
	9.58 MPa	1390 psi	ISO 11403-1 -2
	@Strain 0.390 %, Temperature 90.0 °C	@Strain 0.390 %, Temperature 194 °F	
	18.33 MPa	2659 psi	ISO 11403-1 -2
	@Strain 0.430 %, Temperature 40.0 °C	@Strain 0.430 %, Temperature 104 °F	
	20.5 MPa	2970 psi	ISO 11403-1 -2
	@Strain 0.360 %, Temperature 23.0 °C	@Strain 0.360 %, Temperature 73.4 °F	
	22.0 MPa	3190 psi	ISO 11403-1 -2
	@Strain 1.71 %, Temperature 150 °C	@Strain 1.71 %, Temperature 302 °F	
	25.93 MPa	3761 psi	ISO 11403-1 -2
	@Strain 1.20 %, Temperature 90.0 °C	@Strain 1.20 %, Temperature 194 °F	
	29.54 MPa	4284 psi	ISO 11403-1 -2
	@Strain 2.90 %, Temperature 150 °C	@Strain 2.90 %, Temperature 302 °F	
	34.29 MPa	4973 psi	ISO 11403-1 -2
	@Strain 4.13 %, Temperature 150 °C	@Strain 4.13 %, Temperature 302 °F	
	37.28 MPa	5407 psi	ISO 11403-1 -2
	@Strain 2.01 %, Temperature 90.0 °C	@Strain 2.01 %, Temperature 194 °F	
	41.59 MPa	6032 psi	ISO 11403-1 -2
	@Strain 8.81 %,	@Strain 8.81 %,	

Mechanical Properties	Temperature 150 °C Metric	Temperature 302 °F English	Comments
	42.9 MPa @Strain 1.14 %, Temperature 40.0 °C	6220 psi @Strain 1.14 %, Temperature 104 °F	ISO 11403-1 -2
	46.08 MPa @Strain 2.98 %, Temperature 90.0 °C	6683 psi @Strain 2.98 %, Temperature 194 °F	ISO 11403-1 -2
	55.57 MPa @Strain 1.06 %, Temperature 23.0 °C	8060 psi @Strain 1.06 %, Temperature 73.4 °F	ISO 11403-1 -2
	57.4 MPa @Strain 1.72 %, Temperature 40.0 °C	8330 psi @Strain 1.72 %, Temperature 104 °F	ISO 11403-1 -2
	64.13 MPa @Strain 1.17 %, Temperature 0.000 °C	9301 psi @Strain 1.17 %, Temperature 32.0 °F	ISO 11403-1 -2
	69.5 MPa @Strain 2.41 %, Temperature 40.0 °C	10100 psi @Strain 2.41 %, Temperature 104 °F	ISO 11403-1 -2
	72.53 MPa @Strain 1.48 %, Temperature 23.0 °C	10520 psi @Strain 1.48 %, Temperature 73.4 °F	ISO 11403-1 -2
	73.93 MPa @Strain 1.26 %, Temperature -40.0 °C	10720 psi @Strain 1.26 %, Temperature -40.0 °F	ISO 11403-1 -2
	81.35 MPa @Strain 1.54 %, Temperature -20.0 °C	11800 psi @Strain 1.54 %, Temperature -4.00 °F	ISO 11403-1 -2
	83.86 MPa @Strain 1.61 %, Temperature 0.000 °C	12160 psi @Strain 1.61 %, Temperature 32.0 °F	ISO 11403-1 -2
	88.48 MPa @Strain 2.02 %, Temperature 23.0 °C	12830 psi @Strain 2.02 %, Temperature 73.4 °F	ISO 11403-1 -2
	100.33 MPa @Strain 2.09 %, Temperature 0.000 °C	14552 psi @Strain 2.09 %, Temperature 32.0 °F	ISO 11403-1 -2
	102.47 MPa	14862 psi	

Mechanical Properties	Metric	English	ISO 11403-1 -2 Comments
	@Strain 2.03 %, Temperature -20.0 °C	@Strain 2.03 %, Temperature -4.00 °F	
	108.32 MPa	15711 psi	
	@Strain 1.89 %, Temperature -40.0 °C	@Strain 1.89 %, Temperature -40.0 °F	ISO 11403-1 -2
	114.02 MPa	16537 psi	
	@Strain 2.69 %, Temperature 0.000 °C	@Strain 2.69 %, Temperature 32.0 °F	ISO 11403-1 -2
	120.82 MPa	17523 psi	
	@Strain 2.59 %, Temperature -20.0 °C	@Strain 2.59 %, Temperature -4.00 °F	ISO 11403-1 -2
	135.83 MPa	19701 psi	
	@Strain 3.28 %, Temperature -20.0 °C	@Strain 3.28 %, Temperature -4.00 °F	ISO 11403-1 -2
	136.63 MPa	19817 psi	
	@Strain 2.53 %, Temperature -40.0 °C	@Strain 2.53 %, Temperature -40.0 °F	ISO 11403-1 -2
	10.0 MPa	1450 psi	
	@Strain 0.210 %, Time 360000 sec	@Strain 0.210 %, Time 100 hour	isochronous; ISO 11403-1 -2
	10.0 MPa	1450 psi	
	@Strain 0.240 %, Time 3.60e+6 sec	@Strain 0.240 %, Time 1000 hour	isochronous; ISO 11403-1 -2
	10.0 MPa	1450 psi	
	@Strain 0.180 %, Time 3600 sec	@Strain 0.180 %, Time 1.00 hour	isochronous; ISO 11403-1 -2
	10.0 MPa	1450 psi	
	@Strain 0.190 %, Time 36000 sec	@Strain 0.190 %, Time 10.0 hour	isochronous; ISO 11403-1 -2
Elongation at Break	3.0 %	3.0 %	ISO 527-1/-2
Tensile Modulus	5.20 GPa	754 ksi	ISO 527-1/-2
	1.484 GPa	215.2 ksi	
	@Temperature 170 °C	@Temperature 338 °F	Dynamic; ISO 11403-1 -2
	1.917 GPa	278.0 ksi	
	@Temperature 120 °C	@Temperature 248 °F	ISO 11403-1 -2
	1.985 GPa	287.9 ksi	

Mechanical Properties	Metric @ Temperature 110 °C	English @ Temperature 230 °F	Dynamic; ISO 11403-1 -2 Comments
	3.807 GPa @Temperature 40.0 °C	552.2 ksi @Temperature 104 °F	ISO 11403-1 -2
	5.113 GPa @Temperature 30.0 °C	741.6 ksi @Temperature 86.0 °F	Dynamic; ISO 11403-1 -2
	5.524 GPa @Temperature -20.0 °C	801.2 ksi @Temperature -4.00 °F	Dynamic; ISO 11403-1 -2
	5.899 GPa @Temperature -40.0 °C	855.6 ksi @Temperature -40.0 °F	ISO 11403-1 -2
	6.295 GPa @Temperature -70.0 °C	913.0 ksi @Temperature -94.0 °F	Dynamic; ISO 11403-1 -2
	6.753 GPa @Temperature -100 °C	979.4 ksi @Temperature -148 °F	Dynamic; ISO 11403-1 -2
Flexural Strength	150 MPa	21800 psi	ISO 178
Flexural Modulus	4.70 GPa	682 ksi	ISO 178
Shear Modulus	0.6414 GPa @Temperature 110 °C	93.03 ksi @Temperature 230 °F	Dynamic; ISO 11403-1 -2
	0.8763 GPa @Temperature 70.0 °C	127.1 ksi @Temperature 158 °F	Dynamic; ISO 11403-1 -2
	1.70 GPa @Temperature 20.0 °C	247 ksi @Temperature 68.0 °F	Dynamic; ISO 11403-1 -2
	1.893 GPa @Temperature -40.0 °C	274.5 ksi @Temperature -40.0 °F	Dynamic; ISO 11403-1 -2
	2.049 GPa @Temperature -70.0 °C	297.2 ksi @Temperature -94.0 °F	Dynamic; ISO 11403-1 -2
	2.199 GPa @Temperature -100 °C	318.9 ksi @Temperature -148 °F	Dynamic; ISO 11403-1 -2

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