

DuPont Performance Polymers Crastin® HR5315HF NC010 PBT (Unverified Data**)

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

Material Notes:

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 impact resistance. Developed for USCAR Class 3 and 4 environments. Information provided by DuPont Performance Polymers

Order this product through the following link:

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

Physical Properties	Metric	English	Comments
Density	1.37 g/cc	0.0495 lb/in ³	ISO 1183
Filler Content	15 %	15 %	
Water Absorption	0.15 %	0.15 %	Equilibrium 50%RH; ISO 62, Similar to
	@Thickness 1.00 mm, Temperature 23.0 °C	@Thickness 0.0394 in, Temperature 73.4 °F	
	0.40 %	0.40 %	Saturation, immersed; ISO 62, Similar to
	@Thickness 1.00 mm, Temperature 23.0 °C	@Thickness 0.0394 in, Temperature 73.4 °F	
Linear Mold Shrinkage, Flow	0.0050 cm/cm	0.0050 in/in	ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Linear Mold Shrinkage, Transverse	0.011 cm/cm	0.011 in/in	ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Melt Index of Compound	18 g/10 min	18 g/10 min	cm ³ /10 min; ISO 1133
	@Load 2.16 kg, Temperature 250 °C	@Load 4.76 lb, Temperature 482 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	115	115	ISO 2039/2
Tensile Strength at Break	40.0 MPa	5800 psi	ISO 527
	@Temperature 150 °C	@Temperature 302 °F	
	45.0 MPa	6530 psi	ISO 527
	@Temperature 120 °C	@Temperature 248 °F	
	95.0 MPa	13800 psi	ISO 527

Mechanical Properties	@Temperature 23.0 °C Metric	@Temperature 73.4 °F English	Comments
	110 MPa	16000 psi	ISO 527
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Tensile Stress	9.67 MPa	1400 psi	
	@Strain 0.530 %, Temperature 120 °C	@Strain 0.530 %, Temperature 248 °F	DAM; ISO 11403-1/-2
	12.1 MPa	1750 psi	
	@Strain 0.520 %, Temperature 60.0 °C	@Strain 0.520 %, Temperature 140 °F	DAM; ISO 11403-1/-2
	15.3 MPa	2220 psi	
	@Strain 0.310 %, Temperature 23.0 °C	@Strain 0.310 %, Temperature 73.4 °F	DAM; ISO 11403-1/-2
	16.3 MPa	2360 psi	
	@Strain 1.06 %, Temperature 120 °C	@Strain 1.06 %, Temperature 248 °F	DAM; ISO 11403-1/-2
	21.6 MPa	3130 psi	
	@Strain 1.59 %, Temperature 120 °C	@Strain 1.59 %, Temperature 248 °F	DAM; ISO 11403-1/-2
	22.5 MPa	3260 psi	
	@Strain 1.04 %, Temperature 60.0 °C	@Strain 1.04 %, Temperature 140 °F	DAM; ISO 11403-1/-2
	26.0 MPa	3770 psi	
	@Strain 2.12 %, Temperature 120 °C	@Strain 2.12 %, Temperature 248 °F	DAM; ISO 11403-1/-2
	29.2 MPa	4240 psi	
	@Strain 2.65 %, Temperature 120 °C	@Strain 2.65 %, Temperature 248 °F	DAM; ISO 11403-1/-2
	29.5 MPa	4280 psi	
	@Strain 0.620 %, Temperature 23.0 °C	@Strain 0.620 %, Temperature 73.4 °F	DAM; ISO 11403-1/-2
	31.0 MPa	4500 psi	
	@Strain 1.56 %, Temperature 60.0 °C	@Strain 1.56 %, Temperature 140 °F	DAM; ISO 11403-1/-2
	31.5 MPa	4570 psi	
	@Strain 3.18 %, Temperature 120 °C	@Strain 3.18 %, Temperature 248 °F	DAM; ISO 11403-1/-2
	33.2 MPa	4820 psi	

Mechanical Properties	Metric @Strain 3.71 %, Temperature 120 °C	English @Strain 3.71 %, Temperature 248 °F	DAM; ISO 11403-1/-2 Comments
	34.2 MPa	4960 psi	
	@Strain 4.24 %, Temperature 120 °C	@Strain 4.24 %, Temperature 248 °F	DAM; ISO 11403-1/-2
	35.0 MPa	5080 psi	
	@Strain 4.77 %, Temperature 120 °C	@Strain 4.77 %, Temperature 248 °F	DAM; ISO 11403-1/-2
	35.5 MPa	5150 psi	
	@Strain 5.30 %, Temperature 120 °C	@Strain 5.30 %, Temperature 248 °F	DAM; ISO 11403-1/-2
	37.5 MPa	5440 psi	
	@Strain 2.08 %, Temperature 60.0 °C	@Strain 2.08 %, Temperature 140 °F	DAM; ISO 11403-1/-2
	42.5 MPa	6160 psi	
	@Strain 0.930 %, Temperature 23.0 °C	@Strain 0.930 %, Temperature 73.4 °F	DAM; ISO 11403-1/-2
	43.3 MPa	6280 psi	
	@Strain 2.60 %, Temperature 60.0 °C	@Strain 2.60 %, Temperature 140 °F	DAM; ISO 11403-1/-2
	47.7 MPa	6920 psi	
	@Strain 3.12 %, Temperature 60.0 °C	@Strain 3.12 %, Temperature 140 °F	DAM; ISO 11403-1/-2
	50.0 MPa	7250 psi	
	@Strain 3.64 %, Temperature 60.0 °C	@Strain 3.64 %, Temperature 140 °F	DAM; ISO 11403-1/-2
	51.2 MPa	7430 psi	
	@Strain 4.16 %, Temperature 60.0 °C	@Strain 4.16 %, Temperature 140 °F	DAM; ISO 11403-1/-2
	51.9 MPa	7530 psi	
	@Strain 4.68 %, Temperature 60.0 °C	@Strain 4.68 %, Temperature 140 °F	DAM; ISO 11403-1/-2
	54.0 MPa	7830 psi	
	@Strain 1.24 %, Temperature 23.0 °C	@Strain 1.24 %, Temperature 73.4 °F	DAM; ISO 11403-1/-2
	64.2 MPa	9310 psi	
	@Strain 1.55 %, Temperature 23.0 °C	@Strain 1.55 %, Temperature 73.4 °F	DAM; ISO 11403-1/-2

Mechanical Properties	72.6 MPa Metric	10500 psi English	Comments DAM; ISO 11403-1/-2
	@Strain 1.86 %, Temperature 23.0 °C	@Strain 1.86 %, Temperature 73.4 °F	
	78.9 MPa	11400 psi	DAM; ISO 11403-1/-2
	@Strain 2.17 %, Temperature 23.0 °C	@Strain 2.17 %, Temperature 73.4 °F	
	83.4 MPa	12100 psi	DAM; ISO 11403-1/-2
	@Strain 2.48 %, Temperature 23.0 °C	@Strain 2.48 %, Temperature 73.4 °F	
	86.4 MPa	12500 psi	DAM; ISO 11403-1/-2
	@Strain 2.79 %, Temperature 23.0 °C	@Strain 2.79 %, Temperature 73.4 °F	
	88.3 MPa	12800 psi	DAM; ISO 11403-1/-2
	@Strain 3.10 %, Temperature 23.0 °C	@Strain 3.10 %, Temperature 73.4 °F	
Elongation at Break	2.0 %	2.0 %	ISO 527
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	3.0 %	3.0 %	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	6.0 %	6.0 %	ISO 527
	@Temperature 120 °C	@Temperature 248 °F	
	8.0 %	8.0 %	ISO 527
	@Temperature 150 °C	@Temperature 302 °F	
Tensile Modulus	2.10 GPa	305 ksi	ISO 527
	@Temperature 150 °C	@Temperature 302 °F	
	2.30 GPa	334 ksi	ISO 527
	@Temperature 120 °C	@Temperature 248 °F	
	5.20 GPa	754 ksi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	6.00 GPa	870 ksi	ISO 527
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Flexural Strength	45.0 MPa	6530 psi	ISO 178
	@Temperature 150 °C	@Temperature 302 °F	
	60.0 MPa	8700 psi	

Mechanical Properties	Metric @ Temperature 120 °C	English @ Temperature 248 °F	ISO 178 Comments
	150 MPa	21800 psi	ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	170 MPa	24700 psi	ISO 178
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Flexural Modulus	1.70 GPa	247 ksi	ISO 178
	@Temperature 150 °C	@Temperature 302 °F	
	2.00 GPa	290 ksi	ISO 178
	@Temperature 120 °C	@Temperature 248 °F	
	4.70 GPa	682 ksi	ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	5.80 GPa	841 ksi	ISO 178
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Izod Impact, Notched (ISO)	6.00 kJ/m²	2.86 ft-lb/in²	ISO 180/1A
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	10.0 kJ/m²	4.76 ft-lb/in²	ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	10.0 kJ/m²	4.76 ft-lb/in²	ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Unnotched (ISO)	30.0 kJ/m²	14.3 ft-lb/in²	ISO 180/1U
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	40.0 kJ/m²	19.0 ft-lb/in²	ISO 180/1U
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	45.0 kJ/m²	21.4 ft-lb/in²	ISO 180/1U
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	3.00 J/cm²	14.3 ft-lb/in²	ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	6.00 J/cm²	28.6 ft-lb/in²	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.700 J/cm²	3.33 ft-lb/in²	ISO 179/1eA

Mechanical Properties	@Temperature -30.0 °C Metric	@Temperature -22.0 °F English	Comments
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