

DuPont Performance Polymers Crastin® S600F10 NC010 Polybutylene Terephthalate (PBT) (Unverified Data**)&

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT)

Material Notes:

Unreinforced High Viscosity Polybutylene Terephthalate Developed for Extrusion and Injection Molding Crastin S600F10 NC010 is an unreinforced lubricated medium high viscosity polybutylene terephthalate resin 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-S600F10-NC010-Polybutylene-Terephthalate-PBT-nbspUnverified-Datal.php

Physical Properties	Metric	English	Comments
Density	1.11 g/cc	0.0401 lb/in ³	
	1.30 g/cc	0.0470 lb/in ³	ISO 1183
Water Absorption	0.50 %	0.50 %	Sim. to ISO 62
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Moisture Absorption	0.200 %	0.200 %	Sim. to ISO 62
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Viscosity	116000 cP	116000 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 260 °C	@Shear Rate 5000 1/s, Temperature 500 °F	
	148000 cP	148000 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 250 °C	@Shear Rate 5000 1/s, Temperature 482 °F	
	194000 cP	194000 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 240 °C	@Shear Rate 5000 1/s, Temperature 464 °F	
	279000 cP	279000 cP	ISO 11403-1 -2
	@Shear Rate 500 1/s, Temperature 260 °C	@Shear Rate 500 1/s, Temperature 500 °F	
369000 cP	369000 cP	ISO 11403-1 -2	
@Shear Rate 500 1/s, Temperature 250 °C	@Shear Rate 500 1/s, Temperature 482 °F		
496000 cP	496000 cP	ISO 11403-1 -2	
@Shear Rate 500 1/s, Temperature 240 °C	@Shear Rate 500 1/s, Temperature 464 °F		

Linear Mold Shrinkage, Flow Physical Properties	0.017 cm/cm Metric	0.017 in/in English	ISO 294-4 2577 Comments
Linear Mold Shrinkage, Transverse	0.016 cm/cm	0.016 in/in	ISO 294-4 2577
Melt Flow	10.1 g/10 min @Load 2.16 kg, Temperature 250 °C	10.1 g/10 min @Load 4.76 lb, Temperature 482 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Stress	5.910 MPa @Strain 3.58031 %, Temperature 150 °C	857.1 psi @Strain 3.58031 %, Temperature 302 °F	ISO 11403-1 -2
	10.46 MPa @Strain 2.84 %, Temperature 90.0 °C	1517 psi @Strain 2.84 %, Temperature 194 °F	ISO 11403-1 -2
	12.81 MPa @Strain 14.3213 %, Temperature 150 °C	1858 psi @Strain 14.3213 %, Temperature 302 °F	ISO 11403-1 -2
	14.44 MPa @Strain 25.0622 %, Temperature 150 °C	2095 psi @Strain 25.0622 %, Temperature 302 °F	ISO 11403-1 -2
	19.98 MPa @Strain 1.85 %, Temperature 40.0 °C	2898 psi @Strain 1.85 %, Temperature 104 °F	ISO 11403-1 -2
	20.87 MPa @Strain 9.55 %, Temperature 90.0 °C	3027 psi @Strain 9.55 %, Temperature 194 °F	ISO 11403-1 -2
	23.459 MPa @Strain 0.768184 %, Temperature -40.0 °C	3402.4 psi @Strain 0.768184 %, Temperature -40.0 °F	ISO 11403-1 -2
	23.89 MPa @Strain 16.78 %, Temperature 90.0 °C	3465 psi @Strain 16.78 %, Temperature 194 °F	ISO 11403-1 -2
	24.579 MPa @Strain 0.8588 %, Temperature 0.000 °C	3564.9 psi @Strain 0.8588 %, Temperature 32.0 °F	ISO 11403-1 -2
	24.63 MPa @Strain 23.49 %, Temperature 90.0 °C	3572 psi @Strain 23.49 %, Temperature 194 °F	ISO 11403-1 -2

Mechanical Properties	31.6 MPa Metric	4580 psi English	Comments ISO 11403-1 -2
	@Strain 1.33 %, Temperature 23.0 °C	@Strain 1.33 %, Temperature 73.4 °F	
	35.26 MPa	5114 psi	ISO 11403-1 -2
	@Strain 7.41 %, Temperature 40.0 °C	@Strain 7.41 %, Temperature 104 °F	
	39.33 MPa	5704 psi	ISO 11403-1 -2
	@Strain 12.94 %, Temperature 40.0 °C	@Strain 12.94 %, Temperature 104 °F	
	40.12 MPa	5819 psi	ISO 11403-1 -2
	@Strain 18.47 %, Temperature 40.0 °C	@Strain 18.47 %, Temperature 104 °F	
	49.3 MPa	7150 psi	ISO 11403-1 -2
	@Strain 2.28 %, Temperature 23.0 °C	@Strain 2.28 %, Temperature 73.4 °F	
	54.0 MPa	7830 psi	ISO 11403-1 -2
	@Strain 3.23 %, Temperature 23.0 °C	@Strain 3.23 %, Temperature 73.4 °F	
	54.50 MPa	7905 psi	ISO 11403-1 -2
	@Strain 2.147 %, Temperature 0.000 °C	@Strain 2.147 %, Temperature 32.0 °F	
	69.28 MPa	10050 psi	ISO 11403-1 -2
	@Strain 3.4352 %, Temperature 0.000 °C	@Strain 3.4352 %, Temperature 32.0 °F	
	74.71 MPa	10840 psi	ISO 11403-1 -2
	@Strain 3.07274 %, Temperature -40.0 °C	@Strain 3.07274 %, Temperature -40.0 °F	
	93.67 MPa	13590 psi	ISO 11403-1 -2
	@Strain 5.37729 %, Temperature -40.0 °C	@Strain 5.37729 %, Temperature -40.0 °F	
	5.00 MPa	725 psi	isochronous; ISO 11403-1 -2
	@Strain 0.280 %, Time 3.60e+6 sec	@Strain 0.280 %, Time 1000 hour	
	5.00 MPa	725 psi	isochronous; ISO 11403-1 -2
	@Strain 0.220 %, Time 360000 sec	@Strain 0.220 %, Time 100 hour	
	5.00 MPa	725 psi	isochronous; ISO 11403-1 -2
	@Strain 0.195 %,	@Strain 0.195 %,	

Mechanical Properties	Time 3600 sec Metric	Time 1.00 hour English	Comments
	5.00 MPa	725 psi	
	@Strain 0.202 %, Time 36000 sec	@Strain 0.202 %, Time 10.0 hour	isochronous; ISO 11403-1 -2
	5.00 MPa	725 psi	
	@Strain 0.397 %, Time 3.60e+7 sec	@Strain 0.397 %, Time 10000 hour	isochronous; ISO 11403-1 -2
	20.0 MPa	2900 psi	
	@Strain 0.820 %, Time 3600 sec	@Strain 0.820 %, Time 1.00 hour	isochronous; ISO 11403-1 -2
	20.0 MPa	2900 psi	
	@Strain 2.61 %, Time 3.60e+7 sec	@Strain 2.61 %, Time 10000 hour	isochronous; ISO 11403-1 -2
	25.0 MPa	3630 psi	
	@Strain 1.17 %, Time 36000 sec	@Strain 1.17 %, Time 10.0 hour	isochronous; ISO 11403-1 -2
	25.0 MPa	3630 psi	
	@Strain 1.34 %, Time 360000 sec	@Strain 1.34 %, Time 100 hour	isochronous; ISO 11403-1 -2
	25.0 MPa	3630 psi	
	@Strain 2.03 %, Time 3.60e+6 sec	@Strain 2.03 %, Time 1000 hour	isochronous; ISO 11403-1 -2
Tensile Strength, Yield	57.0 MPa	8270 psi	ISO 527-1/-2
Elongation at Break	>= 50 %	>= 50 %	Nominal; ISO 527-1/-2
Elongation at Yield	4.0 %	4.0 %	ISO 527-1/-2
Tensile Modulus	2.60 GPa	377 ksi	ISO 527-1/-2
Flexural Strength	85.0 MPa	12300 psi	ISO 178
Flexural Modulus	2.30 GPa	334 ksi	ISO 178
Shear Modulus	0.0640 GPa	9.28 ksi	Dynamic; ISO 11403-1 -2
	@Temperature 160 °C	@Temperature 320 °F	
	0.0900 GPa	13.1 ksi	Dynamic; ISO 11403-1 -2
	@Temperature 120 °C	@Temperature 248 °F	
	0.187 GPa	27.1 ksi	Dynamic; ISO 11403-1 -2
	@Temperature 70.0 °C	@Temperature 158 °F	

Mechanical Properties	0.869 GPa Metric	126 ksi English	Comments ISO 11403-1 -2
	@Temperature 20.0 °C	@Temperature 68.0 °F	
	0.959 GPa	139 ksi	Dynamic; ISO 11403-1 -2
	@Temperature -20.0 °C	@Temperature -4.00 °F	
	1.07 GPa	155 ksi	Dynamic; ISO 11403-1 -2
	@Temperature -50.0 °C	@Temperature -58.0 °F	
Secant Modulus	0.094872 GPa	13.760 ksi	ISO 11403-1 -2
	@Strain 22.0028 %, Temperature 100 °C	@Strain 22.0028 %, Temperature 212 °F	
	0.164 GPa	23.8 ksi	ISO 11403-1 -2
	@Strain 11.0014 %, Temperature 100 °C	@Strain 11.0014 %, Temperature 212 °F	
	0.270 GPa	39.1 ksi	ISO 11403-1 -2
	@Strain 14.77 %, Temperature 40.0 °C	@Strain 14.77 %, Temperature 104 °F	
	0.30625 GPa	44.418 ksi	ISO 11403-1 -2
	@Strain 2.72 %, Temperature 100 °C	@Strain 2.72 %, Temperature 212 °F	
	0.476 GPa	69.0 ksi	ISO 11403-1 -2
	@Strain 7.41 %, Temperature 40.0 °C	@Strain 7.41 %, Temperature 104 °F	
	1.08 GPa	157 ksi	ISO 11403-1 -2
	@Strain 1.85 %, Temperature 40.0 °C	@Strain 1.85 %, Temperature 104 °F	
	1.55 GPa	225 ksi	ISO 11403-1 -2
	@Strain 6.14547 %, Temperature -40.0 °C	@Strain 6.14547 %, Temperature -40.0 °F	
	1.82 GPa	265 ksi	ISO 11403-1 -2
	@Strain 3.8646 %, Temperature 0.000 °C	@Strain 3.8646 %, Temperature 32.0 °F	
	2.16 GPa	314 ksi	ISO 11403-1 -2
	@Strain 2.28 %, Temperature 23.0 °C	@Strain 2.28 %, Temperature 73.4 °F	
	2.38 GPa	345 ksi	ISO 11403-1 -2
	@Strain 1.33 %, Temperature 23.0 °C	@Strain 1.33 %, Temperature 73.4 °F	

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