

DuPont Performance Polymers Crastin® S600F20UV WT660 Polybutylene Terephthalate (PBT)

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

Material Notes:

Unreinforced UV Stabilized Polybutylene Terephthalate Crastin S600F20 NC010 is an unreinforced lubricated medium 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-S600F20UV-WT660-Polybutylene-Terephthalate-PBT.php

Physical Properties	Metric	English	Comments
Density	1.11 g/cc	0.0401 lb/in ³	
	1.31 g/cc	0.0473 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	0.200 %	0.200 %	Sim. to ISO 62
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Viscosity	88500 cP	88500 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 260 °C	@Shear Rate 5000 1/s, Temperature 500 °F	
	98730 cP	98730 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 250 °C	@Shear Rate 5000 1/s, Temperature 482 °F	
	109800 cP	109800 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 240 °C	@Shear Rate 5000 1/s, Temperature 464 °F	
	239900 cP	239900 cP	ISO 11403-1 -2
	@Shear Rate 500 1/s, Temperature 260 °C	@Shear Rate 500 1/s, Temperature 500 °F	
	303800 cP	303800 cP	ISO 11403-1 -2
@Shear Rate 500 1/s, Temperature 250 °C	@Shear Rate 500 1/s, Temperature 482 °F		
Viscosity Test	384600 cP	384600 cP	ISO 11403-1 -2
	@Shear Rate 500 1/s, Temperature 240 °C	@Shear Rate 500 1/s, Temperature 464 °F	
Viscosity Test	130 cm ³ /g	130 cm ³ /g	ISO 307 1157 1628

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	19.1 g/10 min @Load 2.16 kg, Temperature 250 °C	19.1 g/10 min @Load 4.76 lb, Temperature 482 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Stress	2.81 MPa @Strain 1.14 %, Temperature 150 °C	408 psi @Strain 1.14 %, Temperature 302 °F	ISO 11403-1 -2
	2.88 MPa @Strain 0.190 %, Temperature 40.0 °C	418 psi @Strain 0.190 %, Temperature 104 °F	ISO 11403-1 -2
	4.32 MPa @Strain 1.04 %, Temperature 90.0 °C	627 psi @Strain 1.04 %, Temperature 194 °F	ISO 11403-1 -2
	6.84 MPa @Strain 4.36 %, Temperature 150 °C	992 psi @Strain 4.36 %, Temperature 302 °F	ISO 11403-1 -2
	9.06 MPa @Strain 7.90 %, Temperature 150 °C	1310 psi @Strain 7.90 %, Temperature 302 °F	ISO 11403-1 -2
	9.31 MPa @Strain 0.350 %, Temperature 23.0 °C	1350 psi @Strain 0.350 %, Temperature 73.4 °F	ISO 11403-1 -2
	11.7 MPa @Strain 3.92 %, Temperature 90.0 °C	1700 psi @Strain 3.92 %, Temperature 194 °F	ISO 11403-1 -2
	16.07 MPa @Strain 6.99 %, Temperature 90.0 °C	2331 psi @Strain 6.99 %, Temperature 194 °F	ISO 11403-1 -2
	17.7 MPa @Strain 0.630 %, Temperature 0.000 °C	2570 psi @Strain 0.630 %, Temperature 32.0 °F	ISO 11403-1 -2
	18.6 MPa @Strain 10.5 %, Temperature 90.0 °C	2700 psi @Strain 10.5 %, Temperature 194 °F	ISO 11403-1 -2

Mechanical Properties	21.96 MPa Metric	3185 psi English	Comments ISO 11403-1 -2
	@Strain 2.10 %, Temperature 40.0 °C	@Strain 2.10 %, Temperature 104 °F	
	25.21 MPa	3656 psi	ISO 11403-1 -2
	@Strain 0.790 %, Temperature -40.0 °C	@Strain 0.790 %, Temperature -40.0 °F	
	25.36 MPa	3678 psi	ISO 11403-1 -2
	@Strain 0.860 %, Temperature -20.0 °C	@Strain 0.860 %, Temperature -4.00 °F	
	30.59 MPa	4437 psi	ISO 11403-1 -2
	@Strain 5.18 %, Temperature 40.0 °C	@Strain 5.18 %, Temperature 104 °F	
	34.8 MPa	5050 psi	ISO 11403-1 -2
	@Strain 8.60 %, Temperature 40.0 °C	@Strain 8.60 %, Temperature 104 °F	
	42.45 MPa	6157 psi	ISO 11403-1 -2
	@Strain 1.89 %, Temperature 23.0 °C	@Strain 1.89 %, Temperature 73.4 °F	
	46.64 MPa	6765 psi	ISO 11403-1 -2
	@Strain 1.82 %, Temperature 0.000 °C	@Strain 1.82 %, Temperature 32.0 °F	
	53.41 MPa	7746 psi	ISO 11403-1 -2
	@Strain 1.85 %, Temperature -40.0 °C	@Strain 1.85 %, Temperature -40.0 °F	
	57.12 MPa	8285 psi	ISO 11403-1 -2
	@Strain 2.19 %, Temperature -20.0 °C	@Strain 2.19 %, Temperature -4.00 °F	
	66.69 MPa	9673 psi	ISO 11403-1 -2
	@Strain 3.74 %, Temperature 0.000 °C	@Strain 3.74 %, Temperature 32.0 °F	
	73.3 MPa	10600 psi	ISO 11403-1 -2
	@Strain 2.85 %, Temperature -40.0 °C	@Strain 2.85 %, Temperature -40.0 °F	
	78.69 MPa	11410 psi	ISO 11403-1 -2
	@Strain 4.18 %, Temperature -20.0 °C	@Strain 4.18 %, Temperature -4.00 °F	
	88.18 MPa	12790 psi	ISO 11403-1 -2
	@Strain 4.02 %,	@Strain 4.02 %,	

Mechanical Properties	Temperature -40.0 °C	Temperature -40.0 °F	Comments
	Metric	English	
	5.00 MPa	725 psi	
	@Strain 0.200 %, Time 36000 sec	@Strain 0.200 %, Time 10.0 hour	isochronous; ISO 11403-1 -2
	5.00 MPa	725 psi	
	@Strain 0.220 %, Time 360000 sec	@Strain 0.220 %, Time 100 hour	isochronous; ISO 11403-1 -2
	5.00 MPa	725 psi	
	@Strain 0.260 %, Time 3.60e+6 sec	@Strain 0.260 %, Time 1000 hour	isochronous; ISO 11403-1 -2
	5.00 MPa	725 psi	
	@Strain 0.190 %, Time 3600 sec	@Strain 0.190 %, Time 1.00 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 2.61 %, Time 3.60e+7 sec	@Strain 2.61 %, Time 10000 hour	isochronous; ISO 11403-1 -2
	30.0 MPa	4350 psi	
	@Strain 4.17 %, Time 3.60e+6 sec	@Strain 4.17 %, Time 1000 hour	isochronous; ISO 11403-1 -2
Tensile Strength, Yield	58.0 MPa	8410 psi	ISO 527-1/-2
Elongation at Break	30 %	30 %	Nominal; ISO 527-1/-2
Elongation at Yield	7.0 %	7.0 %	ISO 527-1/-2
Tensile Modulus	2.60 GPa	377 ksi	ISO 527-1/-2
	0.2273 GPa	32.97 ksi	
	@Temperature 135 °C	@Temperature 275 °F	Dynamic; ISO 11403-1 -2
	0.242 GPa	35.1 ksi	
	@Temperature 120 °C	@Temperature 248 °F	ISO 11403-1 -2
	0.4473 GPa	64.88 ksi	
	@Temperature 75.0 °C	@Temperature 167 °F	Dynamic; ISO 11403-1 -2
	1.259 GPa	182.6 ksi	
	@Temperature 40.0 °C	@Temperature 104 °F	ISO 11403-1 -2
	1.655 GPa	240.0 ksi	

Mechanical Properties	Metric @ Temperature 45.0 °C	English @ Temperature 113 °F	Dynamic; ISO 11403-1 -2 Comments
	2.621 GPa @Temperature 5.00 °C	380.1 ksi @Temperature 41.0 °F	Dynamic; ISO 11403-1 -2
	2.783 GPa @Temperature -20.0 °C	403.6 ksi @Temperature -4.00 °F	Dynamic; ISO 11403-1 -2
	3.004 GPa @Temperature -45.0 °C	435.7 ksi @Temperature -49.0 °F	Dynamic; ISO 11403-1 -2
	3.29 GPa @Temperature -60.0 °C	477 ksi @Temperature -76.0 °F	Dynamic; ISO 11403-1 -2
	3.291 GPa @Temperature -40.0 °C	477.3 ksi @Temperature -40.0 °F	ISO 11403-1 -2
Flexural Strength	85.0 MPa	12300 psi	ISO 178
Flexural Modulus	2.20 GPa	319 ksi	ISO 178
Secant Modulus	0.515 GPa @Strain 6.27 %, Temperature 40.0 °C	74.7 ksi @Strain 6.27 %, Temperature 104 °F	ISO 11403-1 -2
	1.05 GPa @Strain 2.10 %, Temperature 40.0 °C	152 ksi @Strain 2.10 %, Temperature 104 °F	ISO 11403-1 -2
	1.52 GPa @Strain 0.190 %, Temperature 40.0 °C	220 ksi @Strain 0.190 %, Temperature 104 °F	ISO 11403-1 -2
	1.90 GPa @Strain 4.96 %, Temperature -40.0 °C	276 ksi @Strain 4.96 %, Temperature -40.0 °F	ISO 11403-1 -2
	2.25 GPa @Strain 1.89 %, Temperature 23.0 °C	326 ksi @Strain 1.89 %, Temperature 73.4 °F	ISO 11403-1 -2
	2.45 GPa @Strain 3.22 %, Temperature -40.0 °C	356 ksi @Strain 3.22 %, Temperature -40.0 °F	ISO 11403-1 -2

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