

DuPont Performance Polymers Crastin® 6129 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 Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Crastin-6129-NC010-Polybutylene-Terephthalate-PBT-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.12 g/cc	0.0405 lb/in ³	
	1.32 g/cc	0.0477 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	123300 cP	123300 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 260 °C	@Shear Rate 5000 1/s, Temperature 500 °F	
	142200 cP	142200 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 250 °C	@Shear Rate 5000 1/s, Temperature 482 °F	
	165000 cP	165000 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 240 °C	@Shear Rate 5000 1/s, Temperature 464 °F	
	396400 cP	396400 cP	ISO 11403-1 -2
	@Shear Rate 500 1/s, Temperature 260 °C	@Shear Rate 500 1/s, Temperature 500 °F	
	505900 cP	505900 cP	ISO 11403-1 -2
@Shear Rate 500 1/s, Temperature 250 °C	@Shear Rate 500 1/s, Temperature 482 °F		
626100 cP	626100 cP	ISO 11403-1 -2	
@Shear Rate 10.0 1/s, Temperature 260 °C	@Shear Rate 10.0 1/s, Temperature 500 °F		
641900 cP	641900 cP	ISO 11403-1 -2	

Physical Properties	Metric @Shear Rate 500 1/s, Temperature 240 °C	English @Shear Rate 500 1/s, Temperature 464 °F	Comments
	918900 cP	918900 cP	
	@Shear Rate 10.0 1/s, Temperature 250 °C	@Shear Rate 10.0 1/s, Temperature 482 °F	ISO 11403-1 -2
	1.3929e+6 cP	1.3929e+6 cP	
	@Shear Rate 10.0 1/s, Temperature 240 °C	@Shear Rate 10.0 1/s, Temperature 464 °F	ISO 11403-1 -2
Viscosity Test	150 cm ³ /g	150 cm ³ /g	ISO 307 1157 1628
Linear Mold Shrinkage, Flow	0.017 cm/cm	0.017 in/in	ISO 294-4 2577
Linear Mold Shrinkage, Transverse	0.015 cm/cm	0.015 in/in	ISO 294-4 2577
Melt Flow	10 g/10 min	10 g/10 min	
	@Load 2.16 kg, Temperature 250 °C	@Load 4.76 lb, Temperature 482 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Stress	0.410 MPa	59.5 psi	
	@Strain 0.170 %, Temperature 150 °C	@Strain 0.170 %, Temperature 302 °F	ISO 11403-1 -2
	0.680 MPa	98.6 psi	
	@Strain 0.170 %, Temperature 90.0 °C	@Strain 0.170 %, Temperature 194 °F	ISO 11403-1 -2
	4.10 MPa	595 psi	
	@Strain 2.28 %, Temperature 150 °C	@Strain 2.28 %, Temperature 302 °F	ISO 11403-1 -2
	6.67 MPa	967 psi	
	@Strain 4.80 %, Temperature 150 °C	@Strain 4.80 %, Temperature 302 °F	ISO 11403-1 -2
	7.25 MPa	1050 psi	
	@Strain 2.25 %, Temperature 90.0 °C	@Strain 2.25 %, Temperature 194 °F	ISO 11403-1 -2
	8.25 MPa	1200 psi	
	@Strain 7.41 %, Temperature 150 °C	@Strain 7.41 %, Temperature 302 °F	ISO 11403-1 -2
	12.07 MPa	1751 psi	
	@Strain 4.64 %, Temperature 90.0 °C	@Strain 4.64 %, Temperature 194 °F	ISO 11403-1 -2

Mechanical Properties	13.63 MPa Metric	1977 psi English	Comments ISO 11403-1 -2
	@Strain 0.430 %, Temperature -40.0 °C	@Strain 0.430 %, Temperature -40.0 °F	
	14.34 MPa	2080 psi	
	@Strain 1.27 %, Temperature 40.0 °C	@Strain 1.27 %, Temperature 104 °F	ISO 11403-1 -2
	15.07 MPa	2186 psi	
	@Strain 7.13 %, Temperature 90.0 °C	@Strain 7.13 %, Temperature 194 °F	ISO 11403-1 -2
	16.61 MPa	2409 psi	
	@Strain 0.700 %, Temperature 23.0 °C	@Strain 0.700 %, Temperature 73.4 °F	ISO 11403-1 -2
	22.95 MPa	3329 psi	
	@Strain 0.820 %, Temperature -20.0 °C	@Strain 0.820 %, Temperature -4.00 °F	ISO 11403-1 -2
	24.96 MPa	3620 psi	
	@Strain 3.64 %, Temperature 40.0 °C	@Strain 3.64 %, Temperature 104 °F	ISO 11403-1 -2
	27.2 MPa	3950 psi	
	@Strain 1.04 %, Temperature 0.000 °C	@Strain 1.04 %, Temperature 32.0 °F	ISO 11403-1 -2
	29.39 MPa	4263 psi	
	@Strain 6.18 %, Temperature 40.0 °C	@Strain 6.18 %, Temperature 104 °F	ISO 11403-1 -2
	32.22 MPa	4673 psi	
	@Strain 8.75 %, Temperature 40.0 °C	@Strain 8.75 %, Temperature 104 °F	ISO 11403-1 -2
	45.2 MPa	6560 psi	
	@Strain 2.17 %, Temperature 23.0 °C	@Strain 2.17 %, Temperature 73.4 °F	ISO 11403-1 -2
	48.4 MPa	7020 psi	
	@Strain 1.69 %, Temperature -40.0 °C	@Strain 1.69 %, Temperature -40.0 °F	ISO 11403-1 -2
	51.39 MPa	7454 psi	
	@Strain 2.00 %, Temperature -20.0 °C	@Strain 2.00 %, Temperature -4.00 °F	ISO 11403-1 -2
	54.78 MPa	7945 psi	
	@Strain 2.40 %,	@Strain 2.40 %,	ISO 11403-1 -2

Mechanical Properties	Temperature 0.000 °C Metric	Temperature 32.0 °F English	Comments
	65.05 MPa @Strain 4.22 %, Temperature 0.000 °C	9435 psi @Strain 4.22 %, Temperature 32.0 °F	ISO 11403-1 -2
	70.55 MPa @Strain 3.31 %, Temperature -20.0 °C	10230 psi @Strain 3.31 %, Temperature -4.00 °F	ISO 11403-1 -2
	71.25 MPa @Strain 2.81 %, Temperature -40.0 °C	10330 psi @Strain 2.81 %, Temperature -40.0 °F	ISO 11403-1 -2
	77.04 MPa @Strain 5.18 %, Temperature -20.0 °C	11170 psi @Strain 5.18 %, Temperature -4.00 °F	ISO 11403-1 -2
	87.67 MPa @Strain 4.16 %, Temperature -40.0 °C	12720 psi @Strain 4.16 %, Temperature -40.0 °F	ISO 11403-1 -2
	95.86 MPa @Strain 5.77 %, Temperature -40.0 °C	13900 psi @Strain 5.77 %, Temperature -40.0 °F	ISO 11403-1 -2
Tensile Strength, Yield	58.0 MPa	8410 psi	ISO 527-1/-2
Elongation at Break	>= 50 %	>= 50 %	Nominal; ISO 527-1/-2
Elongation at Yield	5.0 %	5.0 %	ISO 527-1/-2
Tensile Modulus	2.60 GPa	377 ksi	ISO 527-1/-2
	0.251 GPa @Temperature 120 °C	36.4 ksi @Temperature 248 °F	ISO 11403-1 -2
	1.162 GPa @Temperature 40.0 °C	168.5 ksi @Temperature 104 °F	ISO 11403-1 -2
	3.024 GPa @Temperature -40.0 °C	438.6 ksi @Temperature -40.0 °F	ISO 11403-1 -2
Flexural Modulus	2.40 GPa	348 ksi	ISO 178
Shear Strength	0.006261 MPa @Shear Rate 10.0 1/s, Temperature 260 °C	0.9081 psi @Shear Rate 10.0 1/s, Temperature 500 °F	ISO 11403-1 -2
	0.009189 MPa	1.333 psi	

Mechanical Properties	@Shear Rate 10.0 1/s, Metric Temperature 250 °C	@Shear Rate 10.0 1/s, English Temperature 482 °F	ISO 11403-1 -2 Comments
	0.013929 MPa	2.0202 psi	
	@Shear Rate 10.0 1/s, Temperature 240 °C	@Shear Rate 10.0 1/s, Temperature 464 °F	ISO 11403-1 -2
	0.1982 MPa	28.74 psi	
	@Shear Rate 500 1/s, Temperature 260 °C	@Shear Rate 500 1/s, Temperature 500 °F	ISO 11403-1 -2
	0.2530 MPa	36.69 psi	
	@Shear Rate 500 1/s, Temperature 250 °C	@Shear Rate 500 1/s, Temperature 482 °F	ISO 11403-1 -2
	0.3209 MPa	46.55 psi	
	@Shear Rate 500 1/s, Temperature 240 °C	@Shear Rate 500 1/s, Temperature 464 °F	ISO 11403-1 -2
	0.6165 MPa	89.42 psi	
	@Shear Rate 5000 1/s, Temperature 260 °C	@Shear Rate 5000 1/s, Temperature 500 °F	ISO 11403-1 -2
	0.7110 MPa	103.1 psi	
	@Shear Rate 5000 1/s, Temperature 250 °C	@Shear Rate 5000 1/s, Temperature 482 °F	ISO 11403-1 -2
	0.8248 MPa	119.6 psi	
	@Shear Rate 5000 1/s, Temperature 240 °C	@Shear Rate 5000 1/s, Temperature 464 °F	ISO 11403-1 -2
Secant Modulus	0.43495 GPa	63.085 ksi	
	@Strain 7.01 %, Temperature 40.0 °C	@Strain 7.01 %, Temperature 104 °F	ISO 11403-1 -2
	0.686 GPa	99.5 ksi	
	@Strain 3.64 %, Temperature 40.0 °C	@Strain 3.64 %, Temperature 104 °F	ISO 11403-1 -2
	1.13 GPa	164 ksi	
	@Strain 1.27 %, Temperature 40.0 °C	@Strain 1.27 %, Temperature 104 °F	ISO 11403-1 -2
	1.81 GPa	262 ksi	
	@Strain 5.21 %, Temperature -40.0 °C	@Strain 5.21 %, Temperature -40.0 °F	ISO 11403-1 -2
	1.95 GPa	282 ksi	
	@Strain 3.80 %, Temperature -20.0 °C	@Strain 3.80 %, Temperature -4.00 °F	ISO 11403-1 -2

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