

DuPont Performance Polymers Crastin® S600F40 NC010 Polybutylene Terephthalate (PBT) (Unverified Data**)&

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

Material Notes:

Unreinforced Low Viscosity Polybutylene Terephthalate Crastin S600F40 NC010 is an unreinforced lubricated low 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-S600F40-NC010-Polybutylene-Terephthalate-PBT-nbspUnverified-Datal.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	75900 cP	75900 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 260 °C	@Shear Rate 5000 1/s, Temperature 500 °F	
	86676 cP	86676 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 250 °C	@Shear Rate 5000 1/s, Temperature 482 °F	
	99080 cP	99080 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 240 °C	@Shear Rate 5000 1/s, Temperature 464 °F	
	184900 cP	184900 cP	ISO 11403-1 -2
	@Shear Rate 500 1/s, Temperature 260 °C	@Shear Rate 500 1/s, Temperature 500 °F	
	235700 cP	235700 cP	ISO 11403-1 -2
@Shear Rate 500 1/s, Temperature 250 °C	@Shear Rate 500 1/s, Temperature 482 °F		
301100 cP	301100 cP	ISO 11403-1 -2	
@Shear Rate 500 1/s, Temperature 240 °C	@Shear Rate 500 1/s, Temperature 464 °F		
Viscosity Test	120 cm ³ /g	120 cm ³ /g	ISO 307 1157 1628

Physical Properties	Metric	English	Comments
Linear Mold Shrinkage, Transverse	0.018 cm/cm	0.018 in/in	ISO 294-4 2577
Melt Flow	32.9 g/10 min @Load 2.16 kg, Temperature 250 °C	32.9 g/10 min @Load 4.76 lb, Temperature 482 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Stress	29.24 MPa @Strain 1.10 %, Temperature 23.0 °C	4241 psi @Strain 1.10 %, Temperature 73.4 °F	ISO 11403-1 -2
	36.41 MPa @Strain 1.40 %, Temperature 23.0 °C	5281 psi @Strain 1.40 %, Temperature 73.4 °F	ISO 11403-1 -2
	41.88 MPa @Strain 1.40 %, Temperature -40.0 °C	6074 psi @Strain 1.40 %, Temperature -40.0 °F	ISO 11403-1 -2
	46.12 MPa @Strain 1.90 %, Temperature 23.0 °C	6689 psi @Strain 1.90 %, Temperature 73.4 °F	ISO 11403-1 -2
	49.47 MPa @Strain 1.70 %, Temperature -40.0 °C	7175 psi @Strain 1.70 %, Temperature -40.0 °F	ISO 11403-1 -2
	50.61 MPa @Strain 2.20 %, Temperature 23.0 °C	7341 psi @Strain 2.20 %, Temperature 73.4 °F	ISO 11403-1 -2
	64.81 MPa @Strain 2.40 %, Temperature -40.0 °C	9400 psi @Strain 2.40 %, Temperature -40.0 °F	ISO 11403-1 -2
	79.66 MPa @Strain 3.30 %, Temperature -40.0 °C	11550 psi @Strain 3.30 %, Temperature -40.0 °F	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	6.0 %	6.0 %	ISO 527-1/-2
Tensile Modulus	2.60 GPa	377 ksi	ISO 527-1/-2
Flexural Strength	85.0 MPa	12300 psi	ISO 178

Mechanical Properties	Metric	English	Comments
Secant Modulus	0.371 GPa	53.9 ksi	ISO 11403-1 -2
	@Strain 2.70 %, Temperature 100 °C	@Strain 2.70 %, Temperature 212 °F	
	0.426 GPa	61.8 ksi	ISO 11403-1 -2
	@Strain 2.70 %, Temperature 80.0 °C	@Strain 2.70 %, Temperature 176 °F	
	0.43735 GPa	63.433 ksi	ISO 11403-1 -2
	@Strain 1.00 %, Temperature 100 °C	@Strain 1.00 %, Temperature 212 °F	
	0.4985 GPa	72.30 ksi	ISO 11403-1 -2
	@Strain 1.00 %, Temperature 80.0 °C	@Strain 1.00 %, Temperature 176 °F	
	2.05 GPa	297 ksi	ISO 11403-1 -2
	@Strain 4.40 %, Temperature -40.0 °C	@Strain 4.40 %, Temperature -40.0 °F	
	2.18 GPa	317 ksi	ISO 11403-1 -2
	@Strain 2.40 %, Temperature 23.0 °C	@Strain 2.40 %, Temperature 73.4 °F	
	2.39 GPa	346 ksi	ISO 11403-1 -2
	@Strain 2.00 %, Temperature 23.0 °C	@Strain 2.00 %, Temperature 73.4 °F	
	2.60 GPa	377 ksi	ISO 11403-1 -2
	@Strain 1.40 %, Temperature 23.0 °C	@Strain 1.40 %, Temperature 73.4 °F	
	2.61 GPa	378 ksi	ISO 11403-1 -2
	@Strain 2.70 %, Temperature -40.0 °C	@Strain 2.70 %, Temperature -40.0 °F	
	2.66 GPa	386 ksi	ISO 11403-1 -2
	@Strain 1.10 %, Temperature 23.0 °C	@Strain 1.10 %, Temperature 73.4 °F	
	2.91 GPa	422 ksi	ISO 11403-1 -2
	@Strain 1.70 %, Temperature -40.0 °C	@Strain 1.70 %, Temperature -40.0 °F	
	2.99 GPa	434 ksi	ISO 11403-1 -2
	@Strain 1.40 %, Temperature -40.0 °C	@Strain 1.40 %, Temperature -40.0 °F	

Impact Notched (ISO) Mechanical Properties	4.00 kJ/m ² Metric	1.90 ft-lb/in ² English	ISO 180/1A Comments
Charpy Impact Unnotched	NB	NB	ISO 179/1eU
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	ISO 179/1eU
Charpy Impact, Notched	0.400 J/cm ²	1.90 ft-lb/in ²	ISO 179/1eA
	0.400 J/cm ² @Temperature -30.0 °C	1.90 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eA
Tensile Creep Modulus, 1 hour	2600 MPa @Time 3600 sec	377000 psi @Time 1.00 hour	ISO 899-1
Tensile Creep Modulus, 1000 hours	1800 MPa @Time 3.60e+6 sec	261000 psi @Time 1000 hour	ISO 899-1

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	110 µm/m-°C	61.1 µin/in-°F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	120 µm/m-°C	66.7 µin/in-°F	ISO 11359-1/-2
Specific Heat Capacity	2.11 J/g-°C	0.504 BTU/lb-°F	
Thermal Conductivity	0.210 W/m-K	1.46 BTU-in/hr-ft ² -°F	of melt
Melting Point	225 °C	437 °F	10°C/min; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	115 °C	239 °F	ISO 75-1/-2
	180 °C	356 °F	annealed; ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	50.0 °C	122 °F	ISO 75-1/-2
	60.0 °C	140 °F	annealed; ISO 75-1/-2
Vicat Softening Point	175 °C	347 °F	50°C/h 50N; ISO 306
Glass Transition Temp, Tg	55.0 °C	131 °F	10°C/min; ISO 11357-1/-2
Flammability, UL94	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	IEC 60695-11-10
	HB @Thickness 0.800 mm	HB @Thickness 0.0315 in	IEC 60695-11-10
Oxygen Index	22 %	22 %	ISO 4589-1/-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	IEC 60093
Dielectric Constant	3.2	3.2	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	3.8	3.8	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	26.0 kV/mm	660 kV/in	IEC 60243-1
Dissipation Factor	0.0020	0.0020	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dissipation Factor	0.020	0.020	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	600 V	600 V	IEC 60112

Descriptive Properties	Value	Comments
Additives	Release agent	
Delivery Form	Pellets	
Part Marking Code	>PBT<	ISO 11469
Processing	Injection Moulding	
Regional Availability	Asia Pacific	
	Europe	
	Global	

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