

DuPont Performance Polymers Crastin® S600F20 NC010 PBT (Unverified Data**)

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

Material Notes:

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-S600F20-NC010-PBT-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.31 g/cc	0.0473 lb/in³	ISO 1183
Water Absorption	0.20 %	0.20 %	Equilibrium 50%RH; ISO 62, Similar to
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	0.40 %	0.40 %	Saturation, immersed; ISO 62, Similar to
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Linear Mold Shrinkage, Flow	0.020 cm/cm	0.020 in/in	Annealed; ISO 294-4
	0.017 cm/cm	0.017 in/in	ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Linear Mold Shrinkage, Transverse	0.021 cm/cm	0.021 in/in	Annealed; ISO 294-4
	0.016 cm/cm	0.016 in/in	ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Melt Flow	19.1 g/10 min	19.1 g/10 min	ISO 1133
	@Load 2.16 kg, Temperature 250 °C	@Load 4.76 lb, Temperature 482 °F	
Melt Index of Compound	20 g/10 min	20 g/10 min	cm³/10 min; ISO 1133
	@Load 2.16 kg, Temperature 250 °C	@Load 4.76 lb, Temperature 482 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	58.0 MPa	8410 psi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	40 %	40 %	nominal; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	>= 50 %	>= 50 %	

Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	50mm/min: ISO 527 Comments
Elongation at Yield	7.0 % @Temperature 23.0 °C	7.0 % @Temperature 73.4 °F	ISO 527
Tensile Modulus	0.242 GPa @Temperature 120 °C	35.1 ksi @Temperature 248 °F	DAM; ISO 527
	0.358 GPa @Temperature 90.0 °C	51.9 ksi @Temperature 194 °F	DAM; ISO 527
	0.545 GPa @Temperature 60.0 °C	79.0 ksi @Temperature 140 °F	DAM; ISO 527
	1.259 GPa @Temperature 40.0 °C	182.6 ksi @Temperature 104 °F	DAM; ISO 527
	2.60 GPa @Temperature 23.0 °C	377 ksi @Temperature 73.4 °F	ISO 527
	2.682 GPa @Temperature 0.000 °C	389.0 ksi @Temperature 32.0 °F	DAM; ISO 527
	2.965 GPa @Temperature -20.0 °C	430.0 ksi @Temperature -4.00 °F	DAM; ISO 527
	3.291 GPa @Temperature -40.0 °C	477.3 ksi @Temperature -40.0 °F	DAM; ISO 527
Flexural Strength	85.0 MPa @Temperature 23.0 °C	12300 psi @Temperature 73.4 °F	ISO 178
Flexural Modulus	2.20 GPa @Temperature 23.0 °C	319 ksi @Temperature 73.4 °F	ISO 178
Izod Impact, Notched (ISO)	4.50 kJ/m² @Temperature 23.0 °C	2.14 ft-lb/in² @Temperature 73.4 °F	ISO 180/1A
Izod Impact, Unnotched (ISO)	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	ISO 180/1U
Charpy Impact Unnotched	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	ISO 179/1eU
	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	ISO 179/1eU

Mechanical Properties	Metric 0.300 J/cm²	English 1.04 ft-lb/in²	Comments
Charpy Impact, Notched	@Temperature -30.0 °C	@Temperature -22.0 °F	ISO 179/1eA
	0.500 J/cm²	2.38 ft-lb/in²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Creep Modulus, 1 hour	2600 MPa	377000 psi	ISO 899
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Creep Modulus, 1000 hours	1800 MPa	261000 psi	ISO 899
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	500 µm/m-°C	278 µin/in-°F	ASTM E 831
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
	500 µm/m-°C	278 µin/in-°F	ISO 11359-1/-2
	@Temperature -40.0 - 23.0 °C	@Temperature -40.0 - 73.4 °F	
	500 µm/m-°C	278 µin/in-°F	ISO 11359-1/-2
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
	500 µm/m-°C	278 µin/in-°F	ISO 11359-1/-2
	@Temperature 55.0 - 160 °C	@Temperature 131 - 320 °F	
CTE, linear, Transverse to Flow	90.0 µm/m-°C	50.0 µin/in-°F	ISO 11359-1/-2
	@Temperature -40.0 - 23.0 °C	@Temperature -40.0 - 73.4 °F	
	120 µm/m-°C	66.7 µin/in-°F	ISO 11359-1/-2
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
	130 µm/m-°C	72.2 µin/in-°F	ASTM E 831
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
	200 µm/m-°C	111 µin/in-°F	ISO 11359-1/-2
	@Temperature 55.0 - 160 °C	@Temperature 131 - 320 °F	
Melting Point	225 °C	437 °F	10°C/min; ISO 11357-1/-3

Thermal Properties <small>Deflection Temperature at 0.46 MPa (0.07 psi)</small>	115 °C Metric	239 °F English	ISO 75-1/-2 Comments
	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
Glass Transition Temp, Tg	55.0 °C	131 °F	10°C/min; ISO 11357-1/-2
UL RTI, Electrical	130 °C	266 °F	UL 746B
	@Thickness 3.00 mm	@Thickness 0.118 in	
	130 °C	266 °F	UL 746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	130 °C	266 °F	UL 746B
	@Thickness 6.00 mm	@Thickness 0.236 in	
	130 °C	266 °F	UL 746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
UL RTI, Mechanical with Impact	115 °C	239 °F	UL 746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	115 °C	239 °F	UL 746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	115 °C	239 °F	UL 746B
	@Thickness 3.00 mm	@Thickness 0.118 in	
	115 °C	239 °F	UL 746B
	@Thickness 6.00 mm	@Thickness 0.236 in	
UL RTI, Mechanical without Impact	120 °C	248 °F	UL 746B
	@Thickness 3.00 mm	@Thickness 0.118 in	
	120 °C	248 °F	UL 746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	120 °C	248 °F	UL 746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	120 °C	248 °F	UL 746B
	@Thickness 6.00 mm	@Thickness 0.236 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00 \times 10^{15}$ ohm-cm	$\geq 1.00 \times 10^{15}$ ohm-cm	IEC 60093
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Surface Resistance	$\geq 1.00 \times 10^{12}$ ohm	$\geq 1.00 \times 10^{12}$ ohm	IEC 60093
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Dielectric Constant	3.2	3.2	IEC 60250
	@Frequency 1.00e+6 Hz, Temperature 23.0 °C	@Frequency 1.00e+6 Hz, Temperature 73.4 °F	
	3.8	3.8	
Dielectric Strength	@Frequency 100 Hz, Temperature 23.0 °C	@Frequency 100 Hz, Temperature 73.4 °F	IEC 60250
	3.8	3.8	
	@Frequency 50.0 Hz, Temperature 23.0 °C	@Frequency 50.0 Hz, Temperature 73.4 °F	
Dissipation Factor	26.0 kV/mm	660 kV/in	IEC 60243-1
	@Thickness 1.00 mm, Temperature 23.0 °C	@Thickness 0.0394 in, Temperature 73.4 °F	
Comparative Tracking Index	0.0020	0.0020	IEC 60250
	@Frequency 100 Hz, Temperature 23.0 °C	@Frequency 100 Hz, Temperature 73.4 °F	
	0.0020	0.0020	
Dissipation Factor	@Frequency 50.0 Hz, Temperature 23.0 °C	@Frequency 50.0 Hz, Temperature 73.4 °F	IEC 60250
	0.020	0.020	
	@Frequency 1.00e+6 Hz, Temperature 23.0 °C	@Frequency 1.00e+6 Hz, Temperature 73.4 °F	
Comparative Tracking Index	250 V	250 V	UL 746A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Comparative Tracking Index	600 V	600 V	IEC 60112
	@Temperature 23.0 °C	@Temperature 73.4 °F	

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