

DuPont™ Crastin® PBT

thermoplastic polyester resin

Crastin® S600F20 NC010

Crastin® S600F20 NC010 is an unreinforced, medium viscosity polybutylene terephthalate resin for injection molding.

Property	Test Method	Units	Value
Identification			
Resin Identification	ISO 1043		PBT
Part Marking Code	ISO 11469		>PBT<
Mechanical			
Yield Stress	ISO 527	MPa (kpsi)	58 (8.4)
Strain at Break	ISO 527	%	
50mm/min			>50
Nominal Strain at Break	ISO 527	%	40
Yield Strain	ISO 527	%	7
Tensile Modulus	ISO 527	MPa (kpsi)	2600 (377)
Tensile Creep Modulus	ISO 899	MPa (kpsi)	
1000h			1800 (261)
Flexural Modulus	ISO 178	MPa (kpsi)	2200 (320)
Flexural Strength	ISO 178	MPa (kpsi)	85 (12.3)
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m ²	
-30°C (-22°F)			4
23°C (73°F)			5
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m ²	
-30°C (-22°F)			NB
23°C (73°F)			NB

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc.
 ISO Mechanical properties measured at 4.0mm, ISO Electrical properties measured at 2.0mm, and all ASTM properties measured at 3.2mm.
 Test temperatures are 23°C unless otherwise stated.

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Thermal			
Deflection Temperature 0.45MPa	ISO 75f	°C (°F)	115 (239)
0.45MPa, Annealed			180 (356)
1.80MPa			50 (122)
1.80MPa, Annealed			60 (140)
Melting Temperature 10°C/min	ISO 11357-1/-3	°C (°F)	225 (437)
CLTE, Normal 23 - 55°C (73 - 130°F)	ISO 11359-1/-2	E-4/C (E-4/F)	1.3 (0.72)
CLTE, Parallel 23 - 55°C (73 - 130°F)	ISO 11359-1/-2	E-4/C (E-4/F)	1.3 (0.72)
Vicat Softening Temperature 10N, 50°C/h	ISO 306	°C (°F)	215 (420)
50N, 50°C/h			175 (350)
Hot Ball Pressure Test Plate 3mm	IEC 60309	°C (°F)	180 (355)
Electrical			
Surface Resistivity	IEC 60093	ohm	>1E12
Relative Permittivity	IEC 60250		
1E2 Hz			3.8
1E6 Hz			3.2
50Hz			3.8
Volume Resistivity	IEC 60093	ohm m	>1E13
Dissipation Factor	IEC 60250	E-4	
1E2 Hz			20
1E6 Hz			200
50Hz			20

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Electrical			
Electric Strength 1.0mm	IEC 60243-1	kV/mm (V/mil)	26 (660)
Electrolytical Corrosion 4.0mm	IEC 60426		A1
CTI	IEC 60112	V	600
CTI 3.0mm	UL 746A	V	250
Flammability			
Flammability Classification 1.5mm	IEC 60695-11-10		HB
Flammability Classification 1.5mm	UL94		HB
Oxygen Index	ISO 4589-1/-2	%	22
Glow Wire Flammability Index 3.0mm	IEC 60695-2-12	°C	750
High Amperage Arc Ignition Resistance 1.5mm	UL 746A	arcs	60
3.0mm			120
6.0mm			120
Hot Wire Ignition 1.5mm	UL 746A	s	15
3.0mm			15
6.0mm			60
Temperature Index			
RTI, Electrical 0.75mm	UL 746B	°C	130
RTI, Impact 0.75mm	UL 746B	°C	115
RTI, Strength 0.75mm	UL 746B	°C	120

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Other			
Density	ISO 1183	kg/m ³ (g/cm ³)	1310 (1.31)
Water Absorption	ISO 62, Similar to	%	
Equilibrium 50%RH			0.2
Saturation, immersed			0.4
Molding Shrinkage	ISO 294-4	%	
Normal, 2.0mm			1.6
Parallel, 2.0mm			1.7
Processing			
Melt Temperature Range		°C (°F)	240-260 (465-500)
Melt Temperature Optimum		°C (°F)	250 (480)
Mold Temperature Range		°C (°F)	30-130 (85-265)
Mold Temperature Optimum		°C (°F)	80 (175)
Drying Time, Dehumidified Dryer		h	2-4
Drying Temperature		°C (°F)	110-130 (230-265)
Processing Moisture Content		%	<0.04
Snake Flow		mm	
90MPa, 5x0.30mm			10
90MPa, 5x0.50mm			31
90MPa, 5x0.75mm			67
90MPa, 5x1.00mm			114

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