

DuPont™ Crastin® PBT

thermoplastic polyester resin

Crastin® S620F20 NC010

Crastin® S620F20 NC010 is an unreinforced, nucleated, medium viscosity polybutylene terephthalate resin for fast 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)	59 (8.6)
Strain at Break	ISO 527	%	
50mm/min			>50
Nominal Strain at Break	ISO 527	%	30
Yield Strain	ISO 527	%	8
Tensile Modulus	ISO 527	MPa (kpsi)	2600 (377)
Tensile Creep Modulus	ISO 899	MPa (kpsi)	
1h			2600 (377)
1000h			1800 (261)
Flexural Strength	ISO 178	MPa (kpsi)	88 (12.8)
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m ²	
-30°C (-22°F)			3.5
23°C (73°F)			4.5
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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Property	Test Method	Units	Value
Thermal			
Deflection Temperature 0.45MPa	ISO 75f	°C (°F)	145 (293)
0.45MPa, Annealed			180 (356)
1.80MPa			60 (140)
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)
Thermal Conductivity	DIN 51046	W/m K (Btu in/h ft ² F)	0.25 (1.7)
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 1E2 Hz	IEC 60250		3.8
1E6 Hz			3.2
Volume Resistivity	IEC 60093	ohm m	>1E13
Dissipation Factor 1E2 Hz	IEC 60250	E-4	20
1E6 Hz			200

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Electrical			
Electric Strength	IEC 60243-1	kV/mm (V/mil)	
1.0mm			26 (660)
20s, Plate 2mm			15 (380)
Electrolytical Corrosion	IEC 60426		
Plate 4mm			A1
CTI	IEC 60112	V	600
CTI	UL 746A	V	
3.0mm			250
CTI M	IEC 60112		
Plate 4mm			350 M
Flammability			
Flammability Classification	IEC 60695-11-10		
1.5mm			HB
Flammability Classification	UL94		
1.5mm			HB
Oxygen Index	ISO 4589-1/-2	%	22
Glow Wire Flammability Index	IEC 60695-2-1	°C	
3.0mm			750
High Amperage Arc Ignition Resistance	UL 746A	arcs	
1.5mm			60
3.0mm			60
6.0mm			60
Hot Wire Ignition	UL 746A	s	
1.5mm			15
3.0mm			15
6.0mm			30

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Property	Test Method	Units	Value
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
Other			
Density	ISO 1183	kg/m ³ (g/cm ³)	1310 (1.31)
Ball Indentation Hardness H 358/30	ISO 2039-1	MPa (kpsi)	139 (20)
Water Absorption Equilibrium 50%RH Saturation, immersed	ISO 62, Similar to	%	0.2 0.4
Molding Shrinkage Normal, 2.0mm Parallel, 2.0mm	ISO 294-4	%	1.6 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	
100MPa, 7 x 2mm			425
90MPa, 5x0.30mm			10
90MPa, 5x0.50mm			37
90MPa, 5x0.75mm			78
90MPa, 5x1.00mm			124

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