DuPont™ Crastin® PBT

thermoplastic polyester resin

Crastin® SK602 NC010

Crastin® SK602 NC010 is a 15% glass fiber reinforced, lubricated polybutylene terephthalate resin for injection molding.

Property	Test Method	Units	Value
Identification			
Resin Identification	ISO 1043		PBT-GF15
Part Marking Code	ISO 11469		>PBT-GF15<
Mechanical			
Stress at Break	ISO 527	MPa (kpsi)	109 (15.8)
Strain at Break	ISO 527	%	3.5
Tensile Modulus	ISO 527	MPa (kpsi)	5800 (840)
Tensile Creep Modulus	ISO 899	MPa (kpsi)	
1h			5300 (769)
1000h			4300 (624)
Flexural Modulus	ISO 178	MPa (kpsi)	5200 (750)
Flexural Strength	ISO 178	MPa (kpsi)	160 (23.2)
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m^2	
-40°C (-40°F)			7
-30°C (-22°F)			7
23°C (73°F)			7
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m^2	
-40°C (-40°F)			40
-30°C (-22°F)			45
23°C (73°F)			45

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	ISO 75f	°C (°F)	
0.45MPa			220 (428)
1.80MPa			200 (392)
Melting Temperature	ISO 11357-1/-3	°C (°F)	
10°C/min			225 (437)
CLTE, Normal	ISO 11359-1/-2	E-4/C (E-4/F)	
23 - 55°C (73 - 130°F)			1.10 (0.61)
CLTE, Parallel	ISO 11359-1/-2	E-4/C (E-4/F)	
23 - 55°C (73 - 130°F)			0.50 (0.28)
Vicat Softening Temperature	ISO 306	°C (°F)	
10N			221 (429)
50N			205 (401)
Hot Ball Pressure Test	VDE 0470	°C	
Plate 3mm			210
Electrical			
Surface Resistivity	IEC 60093	ohm	1E15
Relative Permittivity	IEC 60250		
1E2 Hz			4.1
1E6 Hz			3.5
Volume Resistivity	IEC 60093	ohm m	>1E13
Dissipation Factor	IEC 60250	E-4	
1E2 Hz			20
1E6 Hz			200
Electric Strength	IEC 60243-1	kV/mm (V/mil)	
1.0mm			27 (685)
20s, Plate 2mm			17 (431)

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Electrical			
Electrolytical Corrosion	IEC 60426		
Plate 4mm			A1
CTI	IEC 60112	V	350
CTI	UL 746A	V	
3.0mm			250
CTI M	IEC 60112		
Plate 4mm			200 M
Flammability			
Flammability Classification	IEC 60695-11-10		
1.5mm			HB
Flammability Classification	UL94		
1.5mm			HB
Oxygen Index	ISO 4589-1/-2	%	19
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			60
Temperature Index			
RTI, Electrical	UL 746B	°C	
0.75mm			130
RTI, Impact	UL 746B	°C	
0.75mm			115
RTI, Strength	UL 746B	°C	
0.75mm			120

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Property	Test Method	Units	Value
Other			
Density	ISO 1183	kg/m^3 (g/cm^3)	1410 (1.41)
Ball Indention Hardness	ISO 2039-1	MPa (kpsi)	
H 961/30			175 (25)
Water Absorption	ISO 62, Similar to	%	
Equilibrium 50%RH			0.17
Saturation, immersed			0.42
Molding Shrinkage	ISO 294-4	%	
Normal, 2.0mm			1.1
Parallel, 2.0mm			0.4
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			500
90MPa, 5x0.30mm			12
90MPa, 5x0.50mm			39
90MPa, 5x0.75mm			82
90MPa, 5x1.00mm			132

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