DuPont™ Crastin® PBT

thermoplastic polyester resin

Crastin® T845FR NC010

Crastin® T845FR NC010 is a 30% glass fiber reinforced, improved impact, flame retadant polybutylene terephthalate resin for injection molding.

Property	Test Method	Units	Value
Identification			
Resin Identification	ISO 1043		PBTC-GF30FR(17)
Part Marking Code	ISO 11469		>PBTC-GF30FR(17)<
Mechanical			
Stress at Break	ISO 527	MPa (kpsi)	105 (15.2)
Strain at Break	ISO 527	%	3.5
Tensile Modulus	ISO 527	MPa (kpsi)	8200 (1190)
Tensile Creep Modulus	ISO 899	MPa (kpsi)	
1h			7800 (1131)
1000h			5200 (754)
Flexural Strength	ISO 178	MPa (kpsi)	170 (24.7)
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m^2	
-30°C (-22°F)			10
23°C (73°F)			11
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m^2	
-30°C (-22°F)			65
23°C (73°F)			60

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	ISO 75f	°C (°F)	
0.45MPa			205 (401)
1.80MPa			185 (365)
Melting Temperature	ISO 11357-1/-3	°C (°F)	
10°C/min			205 (401)
CLTE, Normal	ISO 11359-1/-2	E-4/C (E-4/F)	
23 - 55°C (73 - 130°F)			1.2 (0.65)
CLTE, Parallel	ISO 11359-1/-2	E-4/C (E-4/F)	
23 - 55°C (73 - 130°F)			0.3 (0.15)
Thermal Conductivity	DIN 51046	W/m K (Btu in/h ft^2 F)	0.3 (1.2)
Vicat Softening Temperature	ISO 306	°C (°F)	
10N, 50°C/h			205 (401)
50N, 50°C/h			190 (375)
Hot Ball Pressure Test	VDE 0470	°C (°F)	
Plate 3mm			180 (355)
Electrical			
Surface Resistivity	IEC 60093	ohm	>1E14
Relative Permittivity	IEC 60250		
1E2 Hz			4.2
1E6 Hz			4
50Hz			4.2
Volume Resistivity	IEC 60093	ohm m	>1E13
Dissipation Factor	IEC 60250	E-4	
1E2 Hz			130
1E6 Hz			170
50Hz			130

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Electrical			
Electric Strength	IEC 60243-1	kV/mm (V/mil)	
1.0mm			27 (685)
20s, 2.0mm			16 (405)
Electrolytical Corrosion	IEC 60426		
Plate 4mm			A1
CTI	IEC 60112	V	325
CTI	UL 746A	V	250
CTI M	IEC 60112	V	
Plate 4mm			175 M
Flammability			
Flammability Classification	IEC 60695-11-10		
1.5mm			V-0
Flammability Classification	UL94		
1.5mm			V-0
Oxygen Index	ISO 4589-1/-2	%	30
Glow Wire Flammability Index	IEC 60695-2-1	°C	
3.0mm			960
High Amperage Arc Ignition Resistance	UL 746A	arcs	
1.5mm			37
3.0mm			60
6.0mm			44
Hot Wire Ignition	UL 746A	s	
1.5mm			42
3.0mm			80
6.0mm			120

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Property	Test Method	Units	Value
Temperature Index			
RTI, Electrical	UL 746B	°C	
1.5mm			140
RTI, Impact	UL 746B	°C	
1.5mm			130
3.0mm			140
RTI, Strength	UL 746B	°C	
1.5mm			140
Temperature Index, Tensile Strength	IEC 60216	°C (°F)	
20000h			145 (293)
5000h			160 (320)
Other			
Density	ISO 1183	kg/m^3 (g/cm^3)	1670 (1.67)
Ball Indention Hardness	ISO 2039-1	MPa (kpsi)	
H 358/30			153 (22)
Water Absorption	ISO 62, Similar to	%	
Equilibrium 50%RH			0.1
Saturation, immersed			0.25
Molding Shrinkage	ISO 294-4	%	
Normal, 2.0mm			1.0
Parallel, 2.0mm			0.3
Processing			
Melt Temperature Range		°C (°F)	240-260 (465-500)
Melt Temperature Optimum		°C (°F)	240 (465)
Mold Temperature Range		°C (°F)	30-130 (85-265)
Mold Temperature Optimum		°C (°F)	80 (175)
Drying Time, Dehumidified Dryer		h	2-4

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Property	Test Method	Units	Value
Processing			
Drying Temperature		°C (°F)	110-130 (230-265)
Processing Moisture Content		%	<0.04
Snake Flow		mm (in)	
100MPa, 7 x 2mm			330 (13)
90MPa, 5x0.30mm			11 (0.4)
90MPa, 5x0.50mm			37 (1.5)
90MPa, 5x0.75mm			69 (2.7)
90MPa, 5x1.00mm			111 (4.4)

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