

DuPont™ Crastin® PBT

thermoplastic polyester resin

Crastin® T841FR NC010

Crastin® T841FR NC010 is a 10% glass fiber reinforced, improved impact, flame retardant polybutylene terephthalate resin for injection molding.

Property	Test Method	Units	Value
Identification			
Resin Identification	ISO 1043		PBTC-GF10FR(17)
Part Marking Code	ISO 11469		>PBTC-GF10FR(17)<
Mechanical			
Stress at Break	ISO 527	MPa (kpsi)	68 (9.9)
Strain at Break	ISO 527	%	4.7
Tensile Modulus	ISO 527	MPa (kpsi)	4000 (580)
Tensile Creep Modulus	ISO 899	MPa (kpsi)	
1h			3000 (435)
1000h			2000 (290)
Flexural Strength	ISO 178	MPa (kpsi)	110 (16.0)
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m ²	
-30°C (-22°F)			5
23°C (73°F)			8.5
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m ²	
-30°C (-22°F)			40
23°C (73°F)			46
Thermal			
Deflection Temperature	ISO 75f	°C (°F)	
0.45MPa			200 (392)
1.80MPa			170 (340)
Melting Temperature	ISO 11357-1/-3	°C (°F)	
10°C/min			205 (401)

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			
CLTE, Normal 23 - 55°C (73 - 130°F)	ISO 11359-1/-2	E-4/C (E-4/F)	1.4 (0.78)
CLTE, Parallel 23 - 55°C (73 - 130°F)	ISO 11359-1/-2	E-4/C (E-4/F)	0.7 (0.39)
Thermal Conductivity	DIN 51046	W/m K (Btu in/h ft² F)	0.25 (0.95)
Vicat Softening Temperature 10N, 50°C/h	ISO 306	°C (°F)	200 (390)
50N, 50°C/h			180 (355)
Hot Ball Pressure Test Plate 3mm	VDE 0470	°C (°F)	180 (355)
Electrical			
Surface Resistivity	IEC 60093	ohm	>1E14
Relative Permittivity 50Hz	IEC 60250		4
1E2 Hz			4
1E6 Hz			3.8
Volume Resistivity	IEC 60093	ohm m	>1E13
Dissipation Factor 50Hz	IEC 60250	E-4	100
1E2 Hz			100
1E6 Hz			180
Electric Strength 1.0mm	IEC 60243-1	kV/mm (V/mil)	27 (685)
20s, 2.0mm			16 (405)
Electrolytical Corrosion Plate 4mm	IEC 60426		A1
CTI	IEC 60112	V	250
CTI	UL 746A	V	275
CTI M Plate 4mm	IEC 60112	V	175 M

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Property	Test Method	Units	Value
Flammability			
Flammability Classification 1.5mm	IEC 60695-11-10		V-0
Flammability Classification 1.5mm	UL94		V-0
Oxygen Index	ISO 4589-1/-2	%	30
Glow Wire Flammability Index 3.0mm	IEC 60695-2-1	°C	960
High Amperage Arc Ignition Resistance 1.5mm	UL 746A	arcs	120
3.0mm			127
6.0mm			120
Hot Wire Ignition 1.5mm	UL 746A	s	38
3.0mm			79
6.0mm			119
Temperature Index			
RTI, Electrical 1.5mm	UL 746B	°C	130
RTI, Impact 1.5mm	UL 746B	°C	120
3.0mm			130
RTI, Strength 1.5mm	UL 746B	°C	130
Temperature Index, Tensile Strength 5000h	IEC 60216	°C (°F)	155 (311)
20000h			140 (284)

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Other			
Density	ISO 1183	kg/m ³ (g/cm ³)	1540 (1.54)
Ball Indention Hardness H 358/30	ISO 2039-1	MPa (kpsi)	120 (17.4)
Water Absorption Equilibrium 50%RH Saturation, immersed	ISO 62, Similar to	%	0.15 0.35
Molding Shrinkage Normal, 2.0mm Parallel, 2.0mm	ISO 294-4	%	1.2 0.8
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
Drying Temperature		°C (°F)	110-130 (230-265)
Processing Moisture Content		%	<0.04
Snake Flow		mm (in)	
100MPa, 7 x 2mm			440 (17.3)
90MPa, 5x0.30mm			13 (0.5)
90MPa, 5x0.50mm			44 (1.7)
90MPa, 5x0.75mm			87 (3.4)
90MPa, 5x1.00mm			137 (5.4)

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