

Crastin® T841FR1 NC010

THERMOPLASTIC POLYESTER RESIN

DuPont Performance Polymers

Message:

10% Glass Reinforced, Flame Retardant, Toughened Polybutylene Terephthalate

General Information			
UL YellowCard	E41938-101687382		
Filler / Reinforcement	Glass fiber reinforced material, 10% filler by weight		
Additive	demoulding		
	Flame retardancy		
Features	Flame retardancy		
RoHS Compliance	Contact manufacturer		
Forms	Particle		
Processing Method	Sheet extrusion molding		
	Profile extrusion molding		
	Injection molding		
Multi-Point Data	Creep Modulus vs. Time (ISO 11403-1)		
	Isochronous Stress vs. Strain (ISO 11403-1)		
	Isothermal Stress vs. Strain (ISO 11403-1)		
	Secant Modulus vs. Strain (ISO 11403-1)		
	Shear Modulus vs. Temperature, Dynamic (ISO 11403-1)		
	Shear Stress vs. Shear Rate (ISO 11403-1)		
	Viscosity vs. Shear Rate (ISO 11403-2)		
Part Marking Code (ISO 11469)	>PBTC-GF10FR(17)		
Resin ID (ISO 1043)	PBTC-GF10FR(17)		
Physical	Nominal Value	Unit	Test Method
Density	1.54	g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Transverse flow	1.2	%	ISO 294-4
Flow	0.70	%	ISO 294-4
Water Absorption			ISO 62
Saturated, 23°C, 2.00mm	0.35	%	ISO 62
Balance, 23°C, 2.00mm, 50% RH	0.15	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3900	MPa	ISO 527-2
Tensile Stress (Break)	70.0	MPa	ISO 527-2

Tensile Strain (Break)	4.7	%	ISO 527-2
Tensile Creep Modulus			ISO 899-1
1 hr	3000	MPa	ISO 899-1
1000 hr	2000	MPa	ISO 899-1
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	5.0	kJ/m ²	ISO 179/1eA
23°C	8.5	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	40	kJ/m ²	ISO 179/1eU
23°C	46	kJ/m ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
1.8 MPa, not annealed	170	°C	ISO 75-2/A
8.0 MPa, not annealed	66.0	°C	ISO 75-2/C
Vicat Softening Temperature	180	°C	ISO 306/B50
Melting Temperature ¹	205	°C	ISO 11357-3
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+14	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Dielectric Strength	27	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	4.00		IEC 60250
1 MHz	3.80		IEC 60250
Dissipation Factor			IEC 60250
100 Hz	0.010		IEC 60250
1 MHz	0.018		IEC 60250
Comparative Tracking Index	250	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94, IEC 60695-11-10, -20
0.75 mm	V-0		UL 94, IEC 60695-11-10, -20
1.5 mm	V-0		UL 94, IEC 60695-11-10, -20
Oxygen Index	30	%	ISO 4589-2
FMVSS Flammability	DNI		FMVSS 302
Specific Heat Capacity of Melt	1970	J/kg/°C	
Thermal Conductivity of Melt	0.23	W/m/K	
Melt Temperature, Optimum	250	°C	
Mold Temperature, Optimum	110	°C	
Back Pressure	As low as possible		
Drying Recommended	yes		

Hold Pressure Time	3.00	s/mm	
Fill Analysis	Nominal Value	Unit	Test Method
Melt Density	1.31	g/cm ³	
Melt Viscosity (250°C, 1000 sec ⁻¹)	240000	mPa·s	ISO 11443
Ejection Temperature	150	°C	
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time - Desiccant Dryer	2.0 - 4.0	hr	
Suggested Max Moisture	0.040	%	
Processing (Melt) Temp	240 - 260	°C	
Mold Temperature	100 - 120	°C	
Holding Pressure	60.0	MPa	
NOTE			
1.	10°C/min		

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