

Crastin® ST830FRUV NC010

THERMOPLASTIC POLYESTER RESIN

DuPont Performance Polymers

Message:

Unreinforced, Flame Retardant, UV Stabilized, Polybutylene Terephthalate

General Information			
UL YellowCard	E41938-257840		
Additive	UV stabilizer		
	Flame retardancy		
Features	UV Stabilized		
	Flame retardancy		
RoHS Compliance	Contact manufacturer		
Processing Method	Injection molding		
Multi-Point Data	Isothermal Stress vs. Strain (ISO 11403-1)		
	Secant Modulus vs. Strain (ISO 11403-1)		
Part Marking Code (ISO 11469)	>PBT-HIFR(17)		
Resin ID (ISO 1043)	PBT-HIFR(17)		
Physical	Nominal Value	Unit	Test Method
Density	1.37	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (250°C/5.0 kg)	3.0	g/10 min	ISO 1133
Molding Shrinkage			ISO 294-4
Transverse flow	1.6	%	ISO 294-4
Flow	2.0	%	ISO 294-4
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2200	MPa	ISO 527-2
Tensile Stress (Yield)	41.0	MPa	ISO 527-2
Tensile Strain (Yield)	9.0	%	ISO 527-2
Nominal Tensile Strain at Break	45	%	ISO 527-2
Flexural Modulus	2100	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-40°C	10	kJ/m ²	ISO 179/1eA
-30°C	10	kJ/m ²	ISO 179/1eA
23°C	65	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-40°C	350	kJ/m ²	ISO 179/1eU

-30°C	350	kJ/m ²	ISO 179/1eU
23°C	No Break		ISO 179/1eU
Notched Izod Impact			ISO 180/1A
-40°C	10	kJ/m ²	ISO 180/1A
-30°C	10	kJ/m ²	ISO 180/1A
23°C	70	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength			ISO 180/1U
-40°C	220	kJ/m ²	ISO 180/1U
-30°C	220	kJ/m ²	ISO 180/1U
23°C	No Break		ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	125	°C	ISO 75-2/B
1.8 MPa, not annealed	55.0	°C	ISO 75-2/A
Melting Temperature ¹	225	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow	1.9E-4	cm/cm/°C	ISO 11359-2
Lateral	1.9E-4	cm/cm/°C	ISO 11359-2
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	36	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	3.50		IEC 60250
1 MHz	3.40		IEC 60250
Dissipation Factor			IEC 60250
100 Hz	1.1E-3		IEC 60250
1 MHz	0.024		IEC 60250
Comparative Tracking Index	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94, IEC 60695-11-10, -20
0.9 mm	V-0		UL 94, IEC 60695-11-10, -20
1.5 mm	V-0		UL 94, IEC 60695-11-10, -20
Oxygen Index	27	%	ISO 4589-2
FMVSS Flammability	DNI		FMVSS 302
Melt Temperature, Optimum	250	°C	
Mold Temperature, Optimum	80	°C	
Back Pressure	As low as possible		
Drying Recommended	yes		
Hold Pressure Time	3.00	s/mm	

Fill Analysis	Nominal Value	Unit
Melt Density	1.17	g/cm ³
Ejection Temperature	170	°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	30 - 130	°C
Holding Pressure	60.0	MPa
NOTE		
1.	10°C/min	

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