

Crastin® S600F10 NC010

THERMOPLASTIC POLYESTER RESIN

DuPont Performance Polymers

Message:

Unreinforced High Viscosity Polybutylene Terephthalate Developed for Extrusion and Injection Molding

General Information			
UL YellowCard	E41938-257807		
Additive	Mold Release		
Uses	Profiles		
Agency Ratings	UL Unspecified Rating		
Forms	Pellets		
Processing Method	Coating		
	Extrusion		
	Injection Molding		
	Profile Extrusion		
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 (ISO 11403-1)		
	Shear Stress vs. Shear Rate (ISO 11403-1)		
	Viscosity vs. Shear Rate (ISO 11403-2)		
Part Marking Code (ISO 11469)	>PBT<		
Resin ID (ISO 1043)	PBT		
Physical	Nominal Value	Unit	Test Method
Density	1.30	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (250°C/2.16 kg)	10	g/10 min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.6	%	
Flow	1.7	%	
Water Absorption			ISO 62
23°C, 24 hr, 2.00 mm	0.50	%	
Equilibrium, 23°C, 2.00 mm, 50% RH	0.20	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2600	MPa	ISO 527-2
Tensile Stress (Yield)	57.0	MPa	ISO 527-2

Tensile Strain (Yield)	4.0	%	ISO 527-2
Nominal Tensile Strain at Break	> 50	%	ISO 527-2
Tensile Creep Modulus			ISO 899-1
1 hr	2600	MPa	
1000 hr	1800	MPa	
Flexural Modulus	2300	MPa	ISO 178
Flexural Stress	85.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	4.0	kJ/m ²	
23°C	5.0	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Notched Izod Impact Strength			ISO 180/1A
-30°C	5.0	kJ/m ²	
23°C	5.0	kJ/m ²	
Unnotched Izod Impact Strength			ISO 180/1U
-30°C	130	kJ/m ²	
23°C	No Break		
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	115	°C	ISO 75-2/B
0.45 MPa, Annealed	180	°C	ISO 75-2/B
1.8 MPa, Unannealed	50.0	°C	ISO 75-2/A
1.8 MPa, Annealed	60.0	°C	ISO 75-2/A
Glass Transition Temperature ¹	55.0	°C	ISO 11357-2
Vicat Softening Temperature	175	°C	ISO 306/B50
Melting Temperature ²	223	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow	1.1E-4	cm/cm/°C	
Transverse	1.2E-4	cm/cm/°C	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms · cm	IEC 60093
Electric Strength			IEC 60243-1
--	26	kV/mm	
1.00 mm ³	26	kV/mm	
2.00 mm ⁴	15	kV/mm	
Relative Permittivity			IEC 60250
100 Hz	3.80		
1 MHz	3.20		

Dissipation Factor			IEC 60250
100 Hz	2.0E-3		
1 MHz	0.020		
Comparative Tracking Index	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flammability Classification			IEC 60695-11-10, -20
0.800 mm	HB		
1.50 mm	HB		
Oxygen Index	22	%	ISO 4589-2
Fill Analysis	Nominal Value	Unit	Test Method
Melt Density	1.11	g/cm ³	
Specific Heat Capacity of Melt	2100	J/kg/°C	
Thermal Conductivity of Melt	0.21	W/m/K	
Emission of Organic Compounds	145	µgC/g	VDA 277
Odor	3		VDA 270
NOTE			
1.	10°C/min		
2.	10°C/min		
3.	Short Time		
4.	20 sec		

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