

Crastin® SK609 NC010

THERMOPLASTIC POLYESTER RESIN

DuPont Performance Polymers

Message:

50% Glass Reinforced Polybutylene Terephthalate

General Information			
UL YellowCard	E41938-257822		
Filler / Reinforcement	Glass fiber reinforced material, 50% filler by weight		
Additive	demoulding		
RoHS Compliance	Contact manufacturer		
Forms	Particle		
Processing Method	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)	>PBT-GF50		
Resin ID (ISO 1043)	PBT-GF50		
Physical	Nominal Value	Unit	Test Method
Density	1.72	g/cm³	ISO 1183
Molding Shrinkage			ISO 294-4
Transverse flow	1.1	%	ISO 294-4
Flow	0.30	%	ISO 294-4
Water Absorption			ISO 62
Saturated, 23°C, 2.00mm	0.20	%	ISO 62
Balance, 23°C, 2.00mm, 50% RH	0.10	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	16000	MPa	ISO 527-2
Tensile Stress (Break)	160	MPa	ISO 527-2
Tensile Strain (Break)	1.7	%	ISO 527-2
Tensile Creep Modulus			ISO 899-1
1 hr	15000	MPa	ISO 899-1
1000 hr	11600	MPa	ISO 899-1
Flexural Modulus	15000	MPa	ISO 178
Flexural Stress	230	MPa	ISO 178

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	12	kJ/m ²	ISO 179/1eA
23°C	11	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	65	kJ/m ²	ISO 179/1eU
23°C	55	kJ/m ²	ISO 179/1eU
Notched Izod Impact			ISO 180/1A
-30°C	10	kJ/m ²	ISO 180/1A
23°C	10	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength			ISO 180/1U
-30°C	43	kJ/m ²	ISO 180/1U
23°C	43	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	222	°C	ISO 75-2/B
1.8 MPa, not annealed	210	°C	ISO 75-2/A
Vicat Softening Temperature	215	°C	ISO 306/B50
Melting Temperature ¹	224	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow	2.0E-5	cm/cm/°C	ISO 11359-2
Lateral	8.0E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	> 1.0E+15	ohms · cm	IEC 60093
Dielectric Strength	33	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	4.10		IEC 60250
1 MHz	3.90		IEC 60250
Dissipation Factor			IEC 60250
100 Hz	3.8E-3		IEC 60250
1 MHz	0.013		IEC 60250
Comparative Tracking Index	500	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Burning Rate ² (1.00 mm)	27	mm/min	ISO 3795
Flame Rating			UL 94, IEC 60695-11-10, -20
0.75 mm	HB		UL 94, IEC 60695-11-10, -20
1.5 mm	HB		UL 94, IEC 60695-11-10, -20
Oxygen Index	20	%	ISO 4589-2
FMVSS Flammability	B		FMVSS 302
Specific Heat Capacity of Melt	1470	J/kg/°C	

Thermal Conductivity of Melt	0.36	W/m/K
Melt Temperature, Optimum	260	°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	1.60	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	250 - 270	°C
Mold Temperature	30 - 130	°C
Holding Pressure	60.0	MPa
NOTE		
1.	10°C/min	
2.	FMVSS 302	

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