

Celanex® 2300 GV1/20

Polybutylene Terephthalate

Celanese Corporation

Message:

Chemical abbreviation according to ISO 1043-1: PBT
Moulding compound ISO 7792- PBT, MGHR, 08-070N, GF20
Polybutylene terephthalate, 20 % glass fibre reinforced.
Flammability UL 94 HB minimum thickness 1.2 mm.
Recognition by Underwriters Laboratories, USA (UL)

General Information			
UL YellowCard	E42337-234650		
Filler / Reinforcement	Glass fiber reinforced material, 20% filler by weight		
Features	General		
Uses	General		
RoHS Compliance	Contact manufacturer		
Multi-Point Data	Isochronous Stress vs. Strain (ISO 11403-1)		
	Isothermal Stress vs. Strain (ISO 11403-1)		
	Shear Modulus vs. Temperature (ISO 11403-1)		
	Shear Stress vs. Shear Rate (ISO 11403-1)		
Resin ID (ISO 1043)	PBT		
Physical	Nominal Value	Unit	Test Method
Density	1.45	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	14.0	cm ³ /10min	ISO 1133
Water Absorption (Equilibrium, 23°C, 50% RH)	0.15	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	7400	MPa	ISO 527-2/1A/1
Tensile Stress (Break)	125	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	3.0	%	ISO 527-2/1A/5
Tensile Creep Modulus			ISO 899-1
1 hr	6200	MPa	ISO 899-1
1000 hr	4800	MPa	ISO 899-1
Flexural Stress (23°C)	170	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	7.0	kJ/m ²	ISO 179/1eA
23°C	7.5	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	43	kJ/m ²	ISO 179/1eU

23°C	46	kJ/m ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	220	°C	ISO 75-2/B
1.8 MPa, not annealed	195	°C	ISO 75-2/A
8.0 MPa, not annealed	100	°C	ISO 75-2/C
Vicat Softening Temperature	215	°C	ISO 306/B50
Melting Temperature ¹	225	°C	ISO 11357-3
CLTE - Flow	3.5E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Dielectric Strength	31	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	4.20		IEC 60250
1 MHz	4.10		IEC 60250
Dissipation Factor			IEC 60250
100 Hz	1.6E-3		IEC 60250
1 MHz	0.019		IEC 60250
Comparative Tracking Index	350	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.22 mm	HB		UL 94
1.49 mm	HB		UL 94
Oxygen Index	20	%	ISO 4589-2
Fill Analysis	Nominal Value	Unit	Test Method
Density of Melt	1.230	g/cm ³	Internal method
Ejection Temperature	220	°C	Internal method
Specific Heat Capacity of Melt	1840	J/kg/°C	Internal method
Thermal Conductivity of Melt	0.16	W/m/K	Internal method
Injection	Nominal Value	Unit	
Drying Temperature	120 - 140	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	20.0 - 50.0	°C	
Rear Temperature	250 - 260	°C	
Middle Temperature	250 - 260	°C	
Front Temperature	255 - 265	°C	
Nozzle Temperature	260 - 270	°C	
Processing (Melt) Temp	260 - 270	°C	
Mold Temperature	75.0 - 100	°C	
Injection Pressure	60.0 - 100	MPa	

Injection Rate	Fast	
Holding Pressure	40.0 - 80.0	MPa
Back Pressure	1.00 - 3.00	MPa
Injection instructions		
Manifold Temperature: 260 to 270°CZone 4 Temperature: 255 to 265°CFeed Temperature: 190 to 200°C		
NOTE		
1.	10°C/min	

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