

Celanex® 2300 GV3/20

Polybutylene Terephthalate

Celanese Corporation

Message:

Chemical abbreviation according to ISO 1043-1: PBT
Moulding compound ISO 7792- PBT, MGHR, 08-040N, GB20
Polybutylene terephthalate, low warpage, 20 % glass beads.
Flammability UL 94 HB minimum thickness 0.82 mm.
Recognition by Underwriters Laboratories, USA (UL)

General Information			
UL YellowCard	E42337-234653		
Filler / Reinforcement	Glass beads, 20% filler by weight		
Features	Low warpage		
RoHS Compliance	Contact manufacturer		
Multi-Point Data	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)	20.0	cm ³ /10min	ISO 1133
Water Absorption (Equilibrium, 23°C, 50% RH)	0.20	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3500	MPa	ISO 527-2/1A/1
Tensile Stress (Break)	50.0	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	4.0	%	ISO 527-2/1A/5
Tensile Creep Modulus			ISO 899-1
1 hr	3500	MPa	ISO 899-1
1000 hr	2400	MPa	ISO 899-1
Flexural Stress (23°C)	86.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	3.5	kJ/m ²	ISO 179/1eA
23°C	3.5	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	34	kJ/m ²	ISO 179/1eU
23°C	34	kJ/m ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method

Heat Deflection Temperature			
0.45 MPa, not annealed	180	°C	ISO 75-2/B
1.8 MPa, not annealed	70.0	°C	ISO 75-2/A
Vicat Softening Temperature	190	°C	ISO 306/B50
Melting Temperature ¹	225	°C	ISO 11357-3
CLTE - Flow	1.1E-4	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	26	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	4.40		IEC 60250
1 MHz	4.20		IEC 60250
Dissipation Factor			IEC 60250
100 Hz	8.5E-3		IEC 60250
1 MHz	0.018		IEC 60250
Comparative Tracking Index	225	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.820 mm	HB		UL 94
1.60 mm	HB		UL 94
Oxygen Index	21	%	ISO 4589-2
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	255 - 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	4.00 - 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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