



Celanex® 2300 GV1/30

Celanese Corporation - Polybutylene Terephthalate

Monday, November 4, 2019

General Information

Product Description

Chemical abbreviation according to ISO 1043-1: PBT Moulding compound ISO 7792- PBT, MGHR, 08-100N, GF30 Polybutylene terephthalate, 30 % glass fibre reinforced. Flammability UL 94 HB minimum thickness 1.2 mm. Recognition by Underwriters Laboratories, USA (UL)

General

Material Status	• Commercial: Active
Availability	• Europe • North America
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight
RoHS Compliance	• Contact Manufacturer
Automotive Specifications	• FORD WSK-M4D737-A2 Color: Black
Resin ID (ISO 1043)	• PBT

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.55	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	9.00	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.0 to 1.2	%	
Flow	0.30 to 0.40	%	
Water Absorption (Saturation, 73°F)	0.40	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.15	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1.49E+6	psi	ISO 527-2/1A
Tensile Stress (Break)	21800	psi	ISO 527-2/1A/5
Tensile Strain (Break)	2.5	%	ISO 527-2/1A/5
Tensile Creep Modulus (1 hr)	1.33E+6	psi	ISO 899-1
Tensile Creep Modulus (1000 hr)	943000	psi	ISO 899-1
Flexural Stress (73°F)	30500	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	4.3	ft·lb/in ²	
73°F	4.5	ft·lb/in ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	29	ft·lb/in ²	
73°F	29	ft·lb/in ²	
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness ²	31200	psi	ISO 2039-1
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (66 psi, Unannealed)	437	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	410	°F	ISO 75-2/A
Heat Deflection Temperature (1160 psi, Unannealed)	302	°F	ISO 75-2/C
Vicat Softening Temperature	428	°F	ISO 306/B50
Melting Temperature ³	437	°F	ISO 11357-3
CLTE - Flow	1.4E-5	in/in/°F	ISO 11359-2

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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	840	V/mil	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	4.40		
1 MHz	4.30		
Dissipation Factor			IEC 60250
100 Hz	2.0E-3		
1 MHz	0.019		
Comparative Tracking Index	425	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.05 in	HB		
0.06 in	HB		
Oxygen Index	20	%	ISO 4589-2
Fill Analysis	Nominal Value	Unit	Test Method
Melt Density	1.32	g/cm ³	Internal Method
Melt Thermal Conductivity	1.2	Btu·in/hr/ft ² /°F	Internal Method
Ejection Temperature	428	°F	
Specific Heat Capacity of Melt	0.411	Btu/lb/°F	

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	248 to 284	°F
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.020	%
Hopper Temperature	68 to 122	°F
Rear Temperature	482 to 500	°F
Middle Temperature	482 to 500	°F
Front Temperature	491 to 509	°F
Nozzle Temperature	500 to 518	°F
Processing (Melt) Temp	500 to 518	°F
Mold Temperature	167 to 212	°F
Injection Rate	Fast	
Back Pressure	145 to 435	psi

Injection Notes

Die Temperature: 260 to 270°C
Feed Temperature: 190 to 200°C
Zone 4 Temperature: 255 to 265°C

Notes

- ¹ Typical properties: these are not to be construed as specifications.
- ² 30s
- ³ 10°C/min