Impet® 2700 GV1/20

Celanese Corporation - Polyethylene Terephthalate

Tuesday, November 5, 2019

General Information

Product Description

Polyethylene terephthalate, 20 % glass fibre reinforced, high flowability, excellent gloss, high modulus

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Glass Fiber, 20% Filler by Weight		
Features	• High Flow	• High Gloss	• High Stiffness
RoHS Compliance	• Contact Manufacturer		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.52	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (280°C/2.16 kg)	34	g/10 min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	0.90	%	
Flow	0.30	%	
Water Absorption (Saturation, 73°F)	0.45	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.20	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	1.19E+6	psi	ISO 527-2/1A
Tensile Stress (Break)	19300	psi	ISO 527-2/1A/5
Tensile Strain (Break)	2.0	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	1.17E+6	psi	ISO 178
Flexural Stress (73°F)	25100	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	3.1	ft·lb/in²	
73°F	3.2	ft·lb/in²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	9.5	ft·lb/in²	
73°F	9.5	ft·lb/in²	
Notched Izod Impact Strength (73°F)	3.4	ft·lb/in²	ISO 180/1A
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	123		ISO 2039-2
Ball Indentation Hardness [2]	34100	psi	ISO 2039-1
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (66 psi, Unannealed)	478	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	451	°F	ISO 75-2/A
Heat Deflection Temperature (1160 psi, Unannealed)	176	°F	ISO 75-2/C
Glass Transition Temperature [3]	176	°F	ISO 11357-2
Vicat Softening Temperature	482	°F	ISO 306/B50
Melting Temperature [3]	491	°F	ISO 11357-3

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Thermal	Nominal Value	Unit	Test Method
CLTE - Flow	1.3E-5	in/in/°F	ISO 11359-2
CLTE - Transverse	5.3E-5	in/in/°F	ISO 11359-2
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	> 1.0E+14	ohms	IEC 60093
Volume Resistivity	3.0E+16	ohms·cm	IEC 60093
Electric Strength	790	V/mil	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	4.60		
1 MHz	4.10		
Dissipation Factor			IEC 60250
100 Hz	3.0E-3		
1 MHz	0.019		
Arc Resistance	84.0	sec	Internal Method
Comparative Tracking Index	200	V	IEC 60112
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating			UL 94
0.031 in	HB		
0.06 in	HB		
Oxygen Index	24	%	ISO 4589-2

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	248 to 284	°F
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.010	%
Hopper Temperature	68 to 122	°F
Rear Temperature	500 to 518	°F
Middle Temperature	518 to 536	°F
Front Temperature	536 to 554	°F
Nozzle Temperature	518 to 554	°F
Processing (Melt) Temp	518 to 554	°F
Mold Temperature	275 to 293	°F
Injection Rate	Fast	

Injection Notes

Feeding zone temperature: 40 to 60°C
Zone4 temperature: 280 to 290°C
Hot runner temperature: 270 to 290°C

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] 30s

[3] 10°C/min