

Impet® 2700 GV1/20

Polyethylene Terephthalate

Celanese Corporation

Message:

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

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 20% filler by weight		
Features	Rigidity, high		
	Highlight		
	High liquidity		
RoHS Compliance	Contact manufacturer		
Forms	Particle		
Processing Method	Injection molding		
Multi-Point Data	Isothermal Stress vs. Strain (ISO 11403-1)		
Physical	Nominal Value	Unit	Test Method
Density	1.52	g/cm³	ISO 1183
Molding Shrinkage			ISO 294-4
Vertical flow direction	0.90	%	ISO 294-4
Flow direction	0.30	%	ISO 294-4
Water Absorption (Equilibrium, 23°C, 50% RH)	0.20	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	123		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	8200	MPa	ISO 527-2/1A/1
Tensile Stress (Break)	133	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	2.0	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	8100	MPa	ISO 178
Flexural Stress (23°C)	173	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	6.6	kJ/m²	ISO 179/1eA
23°C	6.8	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	20	kJ/m²	ISO 179/1eU
23°C	20	kJ/m²	ISO 179/1eU
Notched Izod Impact (23°C)	7.2	kJ/m²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method

Heat Deflection Temperature			
0.45 MPa, not annealed	248	°C	ISO 75-2/B
1.8 MPa, not annealed	233	°C	ISO 75-2/A
8.0 MPa, not annealed	80.0	°C	ISO 75-2/C
Glass Transition Temperature ¹	80.0	°C	ISO 11357-2
Vicat Softening Temperature	255	°C	ISO 306/B50
Melting Temperature ²	250	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow	2.3E-5	cm/cm/°C	ISO 11359-2
Lateral	9.5E-5	cm/cm/°C	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
Dielectric Strength	31	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	4.60		IEC 60250
1 MHz	4.10		IEC 60250
Dissipation Factor			IEC 60250
100 Hz	3.0E-3		IEC 60250
1 MHz	0.019		IEC 60250
Comparative Tracking Index	200	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.800 mm	HB		UL 94
1.60 mm	HB		UL 94
Oxygen Index	24	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	120 - 140	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.010	%	
Hopper Temperature	20.0 - 50.0	°C	
Rear Temperature	260 - 270	°C	
Middle Temperature	270 - 280	°C	
Front Temperature	280 - 290	°C	
Nozzle Temperature	270 - 290	°C	
Processing (Melt) Temp	270 - 290	°C	
Mold Temperature	135 - 145	°C	
Injection Pressure	60.0 - 90.0	MPa	
Injection Rate	Fast		
Holding Pressure	30.0 - 50.0	MPa	
Back Pressure	1.00 - 2.00	MPa	
Screw Speed	50 - 80	rpm	

Injection instructions

Feed Temperature: 40 to 60°C Zone 4 Temperature: 280 to 290°C Manifold Temperature: 270 to 290°C

NOTE

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| 1. | 10°C/min |
| 2. | 10°C/min |

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Recommended distributors for this material

Susheng Import & Export Trading Co., Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

