

Impet® 2700 GV1/45 (Europe)

Polyethylene Terephthalate

Celanese Corporation

Message:

Polyethylene terephthalate, 45% glass filled, high flowability, excellent gloss, high modulus, very high heat deflection temperature.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 45% filler by weight		
Features	Rigidity, high		
	Highlight		
	High liquidity		
	Heat resistance, high		
RoHS Compliance	Contact manufacturer		
Processing Method	Injection molding		
Multi-Point Data	Isochronous Stress vs. Strain (ISO 11403-1)		
	Isothermal Stress vs. Strain (ISO 11403-1)		
Resin ID (ISO 1043)	PET		
Physical	Nominal Value	Unit	Test Method
Density	1.74	g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Vertical flow direction	0.60	%	ISO 294-4
Flow direction	0.20	%	ISO 294-4
Water Absorption (Equilibrium, 23°C, 50% RH)	0.15	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	121		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	17000	MPa	ISO 527-2/1A/1
Tensile Stress (Break)	185	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	1.5	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	17000	MPa	ISO 178
Flexural Stress (23°C)	240	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	13	kJ/m ²	ISO 179/1eA
23°C	12	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	31	kJ/m ²	ISO 179/1eU

23°C	35	kJ/m ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	252	°C	ISO 75-2/B
1.8 MPa, not annealed	228	°C	ISO 75-2/A
8.0 MPa, not annealed	170	°C	ISO 75-2/C
Vicat Softening Temperature	260	°C	ISO 306/B50
Melting Temperature ¹	248	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow	1.5E-5	cm/cm/°C	ISO 11359-2
Lateral	1.0E-4	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+14	ohms	IEC 60093
Volume Resistivity	> 1.0E+16	ohms·cm	IEC 60093
Dielectric Strength	35	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	5.20		IEC 60250
1 MHz	4.50		IEC 60250
Dissipation Factor			IEC 60250
100 Hz	3.0E-3		IEC 60250
1 MHz	0.017		IEC 60250
Comparative Tracking Index	175	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	26	%	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 Rate	Fast		
Back Pressure	1.00 - 2.00	MPa	
Injection instructions			
Manifold Temperature: 270 to 290°CZone 4 Temperature: 280 to 290°CFeed Temperature: 40 to 60°C			

NOTE

1. 10°C/min

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