

Impet® 340R

Polyethylene Terephthalate

Celanese Corporation

Message:

Impet 340R is a 45% glass-reinforced injection moldable polyester made with post consumer recycled PET. It provides an excellent combination of strength, stiffness, and high temperature resistance.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 45% filler by weight		
Recycled Content	Yes		
Features	Rigid, good		
	Good strength		
	Heat resistance, high		
RoHS Compliance	Contact manufacturer		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.70	g/cm ³	ASTM D792
--	1.73	g/cm ³	ISO 1183
Molding Shrinkage			
Flow	0.60	%	ASTM D955
Vertical flow direction	0.60	%	ISO 294-4
Flow direction	0.20	%	ISO 294-4
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	121		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	16800	MPa	ISO 527-2/1A/1
Tensile Strength			
Fracture, 23°C	197	MPa	ASTM D638
Fracture	174	MPa	ISO 527-2/1A/5
Tensile Elongation			
Fracture, 23°C	2.0	%	ASTM D638
Fracture	1.7	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	15400	MPa	ISO 178
Flexural Stress (23°C)	259	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	9.0	kJ/m ²	ISO 179/1eA
23°C	11	kJ/m ²	ISO 179/1eA

Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	21	kJ/m ²	ISO 179/1eU
23°C	24	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)	9.5	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	240	°C	ISO 75-2/B
1.8 MPa, not annealed	229	°C	ASTM D648, ISO 75-2/A
Glass Transition Temperature ¹	73.0	°C	ISO 11357-2
Melting Temperature ²	244	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow	1.4E-5	cm/cm/°C	ISO 11359-2
Lateral	8.3E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+14	ohms	ASTM D257
Volume Resistivity			
--	1.0E+15	ohms · cm	ASTM D257
--	1.0E+16	ohms · cm	IEC 60093
Dielectric Strength ³	21	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
1 kHz	3.50		ASTM D150
10 kHz	3.80		ASTM D150
1 MHz	3.40		ASTM D150
Dissipation Factor			ASTM D150
1 kHz	6.0E-3		ASTM D150
10 kHz	9.0E-3		ASTM D150
1 MHz	0.012		ASTM D150
Arc Resistance	129	sec	ASTM D495
Comparative Tracking Index			
--	225	V	IEC 60112
--	250	V	ASTM D3638
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.810 mm)	HB		UL 94
Oxygen Index	22	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	130 - 140	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.010	%	
Suggested Max Regrind	25	%	
Hopper Temperature	20.0 - 50.0	°C	
Rear Temperature	255 - 265	°C	
Middle Temperature	260 - 275	°C	

Front Temperature	260 - 275	°C
Nozzle Temperature	270 - 290	°C
Processing (Melt) Temp	260 - 290	°C
Mold Temperature	110 - 121	°C
Back Pressure	0.00 - 0.172	MPa

Injection instructions

Manifold Temperature: 260 to 290°C Zone 4 Temperature: 265 to 280°C Feed Temperature: 255 to 265°C

NOTE

1.	10°C/min
2.	10°C/min
3.	Method A (short time)

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