

Impet® 330R

Polyethylene Terephthalate

Celanese Corporation

Message:

Impet 330R is a 30% glass reinforced injection moldable polyester containing post consumer recycled PET. It provides an excellent combination of strength, stiffness, and high temperature resistance.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 30% 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	1.58	g/cm ³	ASTM D792, ISO 1183
Molding Shrinkage			
Flow	0.70	%	ASTM D955
Vertical flow direction	0.60	%	ISO 294-4
Flow direction	0.20	%	ISO 294-4
Water Absorption (Equilibrium, 23°C, 50% RH)	0.16	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	122		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	11100	MPa	ISO 527-2/1A/1
Tensile Strength			
Fracture, 23°C	165	MPa	ASTM D638
Fracture	159	MPa	ISO 527-2/1A/5
Tensile Elongation			
Fracture, 23°C	2.0	%	ASTM D638
Fracture	2.3	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	11000	MPa	ISO 178
Flexural Stress (23°C)	229	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	8.8	kJ/m ²	ISO 179/1eA
23°C	8.5	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU

-30°C	28	kJ/m ²	ISO 179/1eU
23°C	27	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)	8.8	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	224	°C	ASTM D648
1.8 MPa, not annealed	221	°C	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	1.8E-5	cm/cm/°C	ISO 11359-2
Lateral	7.0E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity			
--	3.1E+14	ohms	ASTM D257
--	3.0E+15	ohms	IEC 60093
Volume Resistivity			
--	3.0E+15	ohms·cm	ASTM D257
--	7.0E+16	ohms·cm	IEC 60093
Dielectric Strength			
-- ³	22	kV/mm	ASTM D149
--	32	kV/mm	IEC 60243-1
Dielectric Constant			
1 kHz	3.20		ASTM D150
10 kHz	3.10		ASTM D150
100 Hz	2.83		IEC 60250
1 MHz	3.46		IEC 60250
Dissipation Factor			
1 kHz	0.010		ASTM D150
10 kHz	0.016		ASTM D150
100 Hz	0.012		IEC 60250
1 MHz	0.014		IEC 60250
Arc Resistance	125	sec	ASTM D495
Comparative Tracking Index	175	V	IEC 60112, ASTM D3638
Flammability	Nominal Value	Unit	Test Method
Flame Rating	HB		UL 94
Oxygen Index	25	%	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
Injection Rate	Moderate-Fast	

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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