Impet® 330R

Celanese Corporation - Polyethylene Terephthalate

Tuesday, November 5, 2019

General Information

Product Description

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			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight		
Recycled Content	• Yes		
Features	• Good Stiffness	• Good Strength	• High Heat Resistance
RoHS Compliance	• Contact Manufacturer		
Processing Method	• Injection Molding		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.58	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (280°C/2.16 kg)	3.0	g/10 min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	0.60	%	
Flow	0.20	%	
Water Absorption (Equilibrium, 73°F, 50% RH)	0.16	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	1.61E+6	psi	ISO 527-2/1A
Tensile Stress (Break)	23100	psi	ISO 527-2/1A/5
Tensile Strain (Break)	2.3	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	1.60E+6	psi	ISO 178
Flexural Stress (73°F)	33200	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	4.2	ft·lb/in²	
73°F	4.0	ft·lb/in²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	13	ft·lb/in²	
73°F	13	ft·lb/in²	
Notched Izod Impact Strength (73°F)	4.2	ft·lb/in²	ISO 180/1A
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	122		ISO 2039-2
Shore Hardness (Shore D, 15 sec)	86		ISO 868
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (66 psi, Unannealed)	464	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	430	°F	ISO 75-2/A
Glass Transition Temperature [2]	163	°F	ISO 11357-2
Melting Temperature [2]	471	°F	ISO 11357-3

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Thermal	Nominal Value	Unit	Test Method
CLTE - Flow	1.0E-5	in/in/°F	ISO 11359-2
CLTE - Transverse	3.9E-5	in/in/°F	ISO 11359-2
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	3.0E+15	ohms	IEC 60093
Volume Resistivity	7.0E+16	ohms·cm	IEC 60093
Electric Strength	810	V/mil	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	2.83		
1 MHz	3.46		
Dissipation Factor			IEC 60250
100 Hz	0.012		
1 MHz	0.014		
Arc Resistance	25.0	sec	Internal Method
Comparative Tracking Index	175	V	IEC 60112
Flammability	**Nominal Value**	**Unit**	**Test Method**
Oxygen Index	25	%	ISO 4589-2

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	266 to 284	°F
Drying Time	4.0	hr
Suggested Max Moisture	0.010	%
Hopper Temperature	68 to 122	°F
Rear Temperature	491 to 509	°F
Middle Temperature	500 to 527	°F
Front Temperature	500 to 527	°F
Nozzle Temperature	518 to 554	°F
Processing (Melt) Temp	500 to 554	°F
Mold Temperature	230 to 250	°F
Injection Rate	Moderate-Fast	

Injection Notes

Feeding zone temperature: 255 to 265°C
Zone4 temperature: 265 to 280°C
Hot runner temperature: 260 to 290°C

Notes

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

[2] 10°C/min