

IMPET® 830R

PET-(GF+MD)35

Celanese

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
^[C] Molding shrinkage, parallel	0.2	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	0.6	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	11000	MPa	ISO 527
^[C] Stress at break	120	MPa	ISO 527
^[C] Strain at break	2	%	ISO 527
^[C] Charpy impact strength, +23°C	26	kJ/m ²	ISO 179/1eU
^[C] Charpy impact strength, -30°C	22	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	7	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	5.3	kJ/m ²	ISO 179/1eA

[C]: CAMPUS

Thermal properties	Value	Unit	Test Standard
ISO Data			
^[C] Melting temperature, 10°C/min	244	°C	ISO 11357-1/-3
^[C] Glass transition temperature, 10°C/min	76	°C	ISO 11357-1/-2
^[C] Temp. of deflection under load, 1.80 MPa	206	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	235	°C	ISO 75-1/-2
^[C] Coeff. of linear therm. expansion, parallel	21	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	80	E-6/K	ISO 11359-1/-2

[C]: CAMPUS

Electrical properties	Value	Unit	Test Standard
ISO Data			
^[C] Volume resistivity	>1E13	Ohm*m	IEC 62631-3-1

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
^[C] Humidity absorption	0.13	%	Sim. to ISO 62
^[C] Density	1590	kg/m ³	ISO 1183

[C]: CAMPUS

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	121	°C	-
Pre-drying - Time	4	h	-
Processing humidity	≤0.01	%	-
Melt temperature	270 - 300	°C	-
Mold temperature	110 - 120	°C	-

Characteristics**Processing**

Injection Molding

Delivery form

Pellets

Regional Availability

North America, Europe, Asia Pacific, South and Central America, Near East/Africa

Other text information**Injection molding**

To avoid hydrolytic degradation during processing, IMPET resins have to be dried to a moisture level equal to or less than 0.01%.

Drying should be done in a dehumidifying hopper dryer capable of dewpoints <-30°F (-34°C) at 275°F (121°C) for 4 hours.

Rear Temperature 500-520(260-270) deg F (deg C)

Center Temperature 520-530(270-275) deg F (deg C)

Front Temperature 530-540(275-280) deg F (deg C)

Nozzle Temperature 530-550(275-290) deg F (deg C)

Melt Temperature 520-570(270-300) deg F (deg C)

Mold Temperature 230-250(110-120) deg F (deg C)

Back Pressure 0-25 psi

Screw Speed 50-75 rpm

Injection Speed Medium/Fast

Injection speed, injection pressure and holding pressure have to be optimized to the individual article geometry. To avoid material degradation during processing low back pressure and minimum screw speed have to be used. Overheating of the material has to be avoided, in particular for flame retardant grades. Up to 25% clean and dry regrind may be used.