FORTRON® 0205

PPS — Celanese

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
[C] Molding shrinkage, parallel	**1.2**	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**1.5**	%	ISO 294-4, 2577
[C] Spec. heat capacity of melt	**1830**	J/(kg K)	-

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**4000**	MPa	ISO 527
[C] Stress at break	**66**	MPa	ISO 527
[C] Strain at break	**2**	%	ISO 527

[C]: CAMPUS

Thermal properties	Value	Unit	Test Standard
ISO Data			
[C] Melting temperature, 10°C/min	**280**	°C	ISO 11357-1/-3
[C] Glass transition temperature, 10°C/min	**90**	°C	ISO 11357-1/-2
[C] Temp. of deflection under load, 1.80 MPa	**115**	°C	ISO 75-1/-2
[C] Temp. of deflection under load, 8.00 MPa	**95**	°C	ISO 75-1/-2
[C] Coeff. of linear therm. expansion, parallel	**53**	E-6/K	ISO 11359-1/-2
[C] Coeff. of linear therm. expansion, normal	**52**	E-6/K	ISO 11359-1/-2

[C]: CAMPUS

Electrical properties	Value	Unit	Test Standard
ISO Data			
[C] Volume resistivity	**1E9**	Ohm*m	IEC 62631-3-1
[C] Electric strength	**17**	kV/mm	IEC 60243-1

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
[C] Water absorption	**0.02**	%	Sim. to ISO 62
[C] Density	**1350**	kg/m³	ISO 1183

[C]: CAMPUS

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	**120**	°C	-
Pre-drying - Time	**3 - 4**	h	-
Melt temperature	**310 - 320**	°C	-
Mold temperature	**≥140**	°C	-

Characteristics

Processing

Injection Molding, Other Extrusion

Delivery form

Pellets, Powder

Regional Availability

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

Other text information

Injection molding

In spite of the minimum moisture absorption a drying of FORTRON is necessary. Predrying in a dehumidified air dryer at 120 degC/3-4 hours is recommended.
On injection molding machines with 15-25 D long three-section screws, are usual in the trade, the unreinforced FORTRON is processable. A shut-off nozzle is recommended.

Melt temperature 310-320 degC
Mold wall temperature at least 140 degC

A medium injection rate is normally preferred. All mold cavities must be effectively vented.