FORTRON® 0320

PPS — Celanese

Product Texts

0320 exhibits a high melt strength for extrusion processes. The material demonstrates excellent heat and chemical resistance. The intended use of this product is for extruding monofilament/fibers, rod and slab. Available standard in powder 'flake' (0320B0), ground powder (0320B0/100 µm), pellet (0320P0) and crystallized pellet (0320C0) form.

Flammability at thickness h (3 mm)	V-0	-

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	**3500**	MPa	ISO 527
[C] Stress at break	**90**	MPa	ISO 527
[C] Strain at break	**8**	%	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	**52**	E-6/K	ISO 11359-1/-2
[C] Coeff. of linear therm. expansion, normal	**53**	E-6/K	ISO 11359-1/-2
[C] Burning Behav. at thickness h	**V-0**	class	IEC 60695-11-10
Thickness tested	**3.0**	mm	-

[C]: CAMPUS

Electrical properties	Value	Unit	Test Standard
ISO Data			
[C] Relative permittivity, 1MHz	**4.6**	-	IEC 62631-2-1
[C] Dissipation factor, 1MHz	**11**	E-4	IEC 62631-2-1
[C] Volume resistivity	**1E9**	Ohm*m	IEC 62631-3-1
[C] Electric strength	**18**	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, Fiber Extrusion, Film Extrusion, Profile Extrusion, Sheet Extrusion, Other Extrusion

Delivery form
Pellets, Powder

Special Characteristics
Heat stabilized or stable to heat

Features
Melt Strength

Chemical Resistance
General Chemical Resistance

Applications
Monofilament

Regional Availability
North America, Europe, Asia Pacific, South and Central America

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.