



FORTRON® 0320

Polyphenylene sulfide

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 μ m), pellet (0320P0) and crystallized pellet (0320C0) form.

marke (σουσού), ground powder (σουσού του μπή, pone	t (00201 0) and or	yotamzoa ponot (oc	22000) 101111.
Product information			
Resin Identification	PPS		ISO 1043
Part Marking Code	>PPS<		ISO 11469
Rheological properties			
Moulding shrinkage, parallel	1.2	%	ISO 294-4, 2577
Moulding shrinkage, normal	1.5	%	ISO 294-4, 2577
Typical mechanical properties			
Tensile modulus	3500	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	90	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	8	%	ISO 527-1/-2
Flexural modulus	4200	MPa	ISO 178
Flexural strength		MPa	ISO 178
Izod notched impact strength, 23°C		kJ/m²	ISO 180/1A
Izod notched impact strength, -30°C		kJ/m²	ISO 180/1A
Izod impact strength, 23°C		kJ/m²	ISO 180/1U
Izod impact strength, -30°C		kJ/m²	ISO 180/1U
Hardness, Rockwell, M-scale	90		ISO 2039-2
Poisson's ratio	0.37 ^[C]		
[C]: Calculated			
Thermal properties			
Melting temperature, 10°C/min	280	°C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	90		ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	115		ISO 75-1/-2
Temperature of deflection under load, 8 MPa	95		ISO 75-1/-2
Coefficient of linear thermal expansion	52	E-6/K	ISO 11359-1/-2
(CLTE), parallel		= - " (100
Coefficient of linear thermal expansion (CLTE), normal	53	E-6/K	ISO 11359-1/-2
Specific heat capacity of melt	1830	J/(kg K)	ISO 22007-4
Flammability			
Burning Behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested		mm	IEC 60695-11-10
Electrical properties			
Relative permittivity, 1000Hz	2.8		IEC 62631-2-1
Relative permittivity, 1MHz	4.6		IEC 62631-2-1
Dissipation factor, 1MHz	11	E-4	IEC 62631-2-1
Volume resistivity		Ohm.m	IEC 62631-3-1
Electric strength	18	kV/mm	IEC 60243-1

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Comparative tracking index	125	IEC 60112
Arc Resistance	124 s	UL 746B

Physical/Other properties

Water absorption, 2mm	0.02 %	Sim. to ISO 62
Density	1400 kg/m³	ISO 1183

Injection

Drying Temperature 110	°C
Drying Time, Dehumidified Dryer 2 - 4	h
Processing Moisture Content ≤0.02	%
Melt Temperature Optimum 315	°C
Min. melt temperature 284	°C
Max. melt temperature 320	°C
Screw tangential speed 0.2 - 0.3	m/s
Mold Temperature Optimum 150	°C
Min. mould temperature 140	°C
Max. mould temperature 160	°C
Hold pressure range 30 - 70	MPa
Back pressure 3	MPa

Characteristics

Processing Injection Moulding, Film Extrusion, Extrusion, Sheet Extrusion, Other Extrusion

Delivery form Pellets, Powder

Special characteristics Flame retardant, Heat stabilised or stable to heat, Chemical resistant

Additional information

Injection molding Preprocessing

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.

Processing

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 290-320 degC Mold temperature at least 75 degC

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

Processing Notes Pre-Drying

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FORTRON should in principle be predried. Because of the necessary low maximum residual moisture content the use of dry air dryers is recommended. The dew point should be =< - 30° C. The time between drying and processing should be as short as possible.

Storage

For subsequent storage the material should be stored dry in the dryer until processed (<= 60 h).

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