(+) **18816996168** Ponciplastics.com



# FORTRON<sup>®</sup> 6160B4

## Polyphenylene sulfide

Fortron 6160B4 has excellent heat and chemical resistance as well as good electrical properties. This product is inherently flame-retardant and offers high hardness and rigidity. 6160B4 has demonstrated excellent performance in hot runner systems and superior contact corrosion resistance. Applications include electronic components (i.e. molded in lead frames, contacts or pins).

### Product information

i roduct information			
Resin Identification	PPS-(GF+MD)6 0		ISO 1043
Part Marking Code	>PPS-(GF+MD)6	0<	ISO 11469
Rheological properties			
Moulding shrinkage, parallel	0.2	%	ISO 294-4, 2577
Moulding shrinkage, normal	0.6	%	ISO 294-4, 2577
Typical mechanical properties			
Tensile modulus	17300	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	145	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	1	%	ISO 527-1/-2
Flexural modulus	16700	MPa	ISO 178
Flexural strength	220	MPa	ISO 178
Compressive strength		MPa	ISO 604
Charpy impact strength, 23°C		kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength, -30 °C		kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, 23°C		kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, -30 °C		kJ/m <sup>2</sup>	ISO 179/1eA
Izod notched impact strength, 23°C		kJ/m <sup>2</sup>	ISO 180/1A
Izod notched impact strength, -30 °C	7.0 100	kJ/m²	ISO 180/1A ISO 2039-2
Hardness, Rockwell, M-scale Poisson's ratio	0.33 <sup>[C]</sup>		130 2039-2
	0.33		
[C]: Calculated			
Thermal properties			
Melting temperature, 10°C/min	280		ISO 11357-1/-3
Glass transition temperature, 10°C/min		°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	270		ISO 75-1/-2
Temperature of deflection under load, 8 MPa	220	°C	ISO 75-1/-2
Flammability			
Burning Behav. at 1.5mm nom. thickn.	V-0	class	IEC 60695-11-10
Thickness tested		mm	IEC 60695-11-10
Burning Behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	0.81	mm	IEC 60695-11-10



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Electrical properties			
Relative permittivity, 1MHz	4.9		IEC 62631-2-1
Dissipation factor, 1MHz	10	E-4	IEC 62631-2-1
Volume resistivity	>1E13	Ohm.m	IEC 62631-3-1
Surface resistivity	>1E15	Ohm	IEC 62631-3-2
Electric strength	26	kV/mm	IEC 60243-1
Comparative tracking index	175		IEC 60112
Physical/Other properties			
Water absorption, 2mm	0.02	%	Sim. to ISO 62
Density	1900	kg/m³	ISO 1183
Injection			
Drying Recommended	yes		
Drying Temperature	130	°C	
Drying Time, Dehumidified Dryer	2 - 4	h	
Processing Moisture Content	≤0.02	%	
Melt Temperature Optimum	330	°C	
Min. melt temperature	310	°C	
Max. melt temperature	340	°C	
Screw tangential speed	0.2 - 0.3	m/s	
Mold Temperature Optimum	150	°C	
Min. mould temperature	140	°C	
Max. mould temperature	160	-	
Hold pressure range	30 - 70		
Back pressure		MPa	
Ejection temperature	219	°C	

### Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Special characteristics	Flame retardant, Heat stabilised or stable to heat, Chemical resistant

### Additional information

Injection molding

### Preprocessing

Predrying in a dehumidified air dryer at 130 - 140 degC/3-4 hours is recommended.

#### Processing

On injection molding machines with 15-25 D long three-section screws, as are usual in the trade, the FORTRON is processable. A shut-off nozzle is preferred to a free-flow nozzle.

Melt temperature 320-340 degC

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Mold wall temperature at least 140 degC

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

#### Postprocessing

Tool temperature of at least 135 degC is recommended for parts to achieve maximum crystallizable potential.

#### **Processing Notes**

#### Pre-Drying

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 ( $\leq 60$  h).

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