FORTRON® 0203

Polyphenylene sulfide

A very easy flowing unfilled grade. This grade demonstrates excellent chemical resistance and thermal stability. Intended for extrusion applications that do not require high melt strength and for compounding with various fillers. Available as Fortron 0203B6 (granular powder), and 0203P6 (pellets)

Product information

Resin Identification	PPS		ISO 1043
Part Marking Code	>PPS<		ISO 11469

Typical mechanical properties

Tensile modulus	609000	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	4790	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	1	%	ISO 527-1/-2
Flexural modulus	566000	psi	ISO 178
Flexural strength	19600	psi	ISO 178
Compressive modulus	595000	psi	ISO 604
Izod notched impact strength, 23°C	0.951	ftlb/in^2	ISO 180/1A
Izod impact strength, 23°C	3.81	ftlb/in^2	ISO 180/1U
Hardness, Rockwell, M-scale	100		ISO 2039-2

Thermal properties

Melting temperature, 10°C/min	536	°F	ISO 11357-1/-3
Glass transition temperature, 10°C/min	194	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	248	°F	ISO 75-1/-2
Temperature of deflection under load, 8 MPa	203	°F	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	0.31	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	0.294	E-4/°F	ISO 11359-1/-2
Specific heat capacity of melt	1830	J/(kg K)	ISO 22007-4

Electrical properties

Relative permittivity, 1MHz	4		IEC 62631-2-1
Dissipation factor, 1MHz	84	E-4	IEC 62631-2-1
Volume resistivity	1E9	Ohm.m	IEC 62631-3-1
Electric strength	432	kV/in	IEC 60243-1
Comparative tracking index	100		IEC 60112
Arc Resistance	124	s	UL 746B

Physical/Other properties

Water absorption, 2mm	0.02	%	Sim. to ISO 62
Water absorption, Immersion 24h	0.01	%	Sim. to ISO 62
Density	0.0505	lb/in^3	ISO 1183

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Injection

Drying Recommended	yes	
Drying Temperature	230	°F
Drying Time, Dehumidified Dryer	2 - 4	h
Processing Moisture Content	≤0.02	%
Melt Temperature Optimum	599	°F
Min. melt temperature	527	°F
Max. melt temperature	608	°F
Max. screw tangential speed	0.2 - 0.3	m/s
Mold Temperature Optimum	302	°F
Min. mold temperature	275	°F
Max. mold temperature	320	°F
Hold pressure range	4350 - 10200	psi
Back pressure	435	psi
Ejection temperature	446	°F

Characteristics

Processing	Injection Molding, Other Extrusion
Special characteristics	High Flow, Chemical resistant

Additional information

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 (<= 60 h).

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