

FORTRON® 0205

Polyphenylene sulfide

0205 is an easy flowing unfilled grade. It demonstrates excellent chemical resistance and thermal stability. Intended for compounding with various fillers. Available standard in pellet (0205P4) and powder 'flake' (0205B4) form.

F	roc	luct	in	forma	tion	

Resin Identification Part Marking Code	PPS >PPS<		ISO 1043 ISO 11469
Rheological properties			
Moulding shrinkage, parallel Moulding shrinkage, normal	1.2 1.5		ISO 294-4, 2577 ISO 294-4, 2577
Typical mechanical properties			
Tensile modulus Tensile stress at break, 5mm/min Tensile strain at break, 5mm/min Flexural modulus Flexural strength Izod notched impact strength, 23°C Izod impact strength, 23°C Hardness, Rockwell, M-scale Poisson's ratio [C]: Calculated	2 3900 130 2	MPa %	ISO 527-1/-2 ISO 527-1/-2 ISO 527-1/-2 ISO 178 ISO 178 ISO 180/1A ISO 180/1U ISO 2039-2
Thermal properties			
Melting temperature, 10°C/min Glass transition temperature, 10°C/min Temperature of deflection under load, 1.8 MPa Temperature of deflection under load, 8 MPa Coefficient of linear thermal expansion (CLTE), parallel Coefficient of linear thermal expansion (CLTE), normal	115 95 53	°C	ISO 11357-1/-3 ISO 11357-1/-3 ISO 75-1/-2 ISO 75-1/-2 ISO 11359-1/-2
Specific heat capacity of melt	1830	J/(kg K)	ISO 22007-4
Electrical properties			
Volume resistivity Electric strength Comparative tracking index Arc Resistance		Ohm.m kV/mm	IEC 62631-3-1 IEC 60243-1 IEC 60112 UL 746B
Physical/Other properties			
Water absorption, 2mm Water absorption, Immersion 24h Density	0.02 0.03 1400		Sim. to ISO 62 Sim. to ISO 62 ISO 1183

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Injection

Drying Recommended	yes	
Drying Temperature	110	°C
Drying Time, Dehumidified Dryer	2 - 4	h
Processing Moisture Content	≤0.02	%
Melt Temperature Optimum	315	°C
Min. melt temperature	275	°C
Max. melt temperature	320	°C
Screw tangential speed	0.2 - 0.3	m/s
Mold Temperature Optimum	150	°C
Min. mould temperature	135	°C
Max. mould temperature	160	°C
Hold pressure range	30 - 70	MPa
Back pressure	3	MPa
Ejection temperature	230	°C

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 310-320 degC Mold wall temperature at least 140 degC

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

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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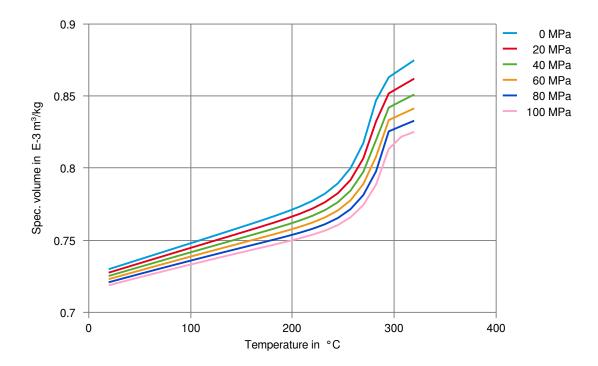
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Specific volume-temperature (pvT)



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