

FORTRON[®] 0309

Polyphenylene sulfide

0309 exhibits a good balance of flow and melt strength for extrusion processes. The material demonstrates excellent heat and chemical resistance. The intended use of this product is for extruding monofilament/fibers. Available in powder (0309B4) and high melv viscoity (0309B4 HMV) forms.

Product information

Resin Identification Part Marking Code	PPS >PPS<		ISO 1043 ISO 11469
Typical mechanical properties			
Tensile stress at break, 5mm/min Tensile strain at break, 5mm/min Flexural modulus	8	MPa % MPa	ISO 527-1/-2 ISO 527-1/-2 ISO 178
Flexural strength Hardness, Rockwell, M-scale	140 90	MPa	ISO 178 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	115 95	°C	ISO 11357-1/-3 ISO 11357-1/-3 ISO 75-1/-2 ISO 75-1/-2 ISO 11359-1/-2
(CLTE), parallel 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
Electrical properties			
Relative permittivity, 1000Hz Relative permittivity, 1MHz Dissipation factor, 1MHz Volume resistivity Electric strength Comparative tracking index Arc Resistance	1E9	E-4 Ohm.m kV/mm s	IEC 62631-2-1 IEC 62631-2-1 IEC 62631-2-1 IEC 62631-3-1 IEC 60243-1 IEC 60112 UL 746B
Physical/Other properties			
Water absorption, 2mm Density	0.02 1400	% kg/m³	Sim. to ISO 62 ISO 1183
Injection			
Drying Recommended Drying Temperature Drying Time, Dehumidified Dryer Processing Moisture Content Melt Temperature Optimum Min. melt temperature Max. melt temperature	yes 110 2 - 4 ≤0.02 315 284 320	h % °C °C	

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Screw tangential speed Mold Temperature Optimum Min. mould temperature Max. mould temperature Hold pressure range Back pressure

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.

0.2 - 0.3 m/s

150 °C

140 °C

160 °C

3 MPa

30-70 MPa

Storage

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

Chemical Media Resistance

Salt solutions

Sodium Hypochlorite solution (10% by mass), 23°C

Symbols used:

possibly resistant

Defined as: Supplier has sufficient indication that contact with chemical can be potentially accepted under the intended use conditions and expected service life. Criteria for assessment have to be indicated (e.g. surface aspect, volume change, property change).

not recommended - see explanation Defined as: Not recommended for general use. However, short-term exposure under certain restricted conditions could be acceptable (e.g. fast cleaning with thorough rinsing, spills, wiping, vapor exposure).

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