Celanese
The chemistry inside innovation™

FORTRON® 0214

Polyphenylene sulfide

0214 is an unfilled grade exhibiting good melt strength. This grade demonstrates excellent heat and chemical resistance. It can be extruded to produce multi-filaments. Due to the excellent balance of flow and melt strength, this product is occasionally used for injection molding parts. Available standard in powder (0214B1), pellet (0214P1) and crystallized pellet (0214C1) form.

Product information

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

Rheological properties

Molding shrinkage, parallel	1.2	%	ISO 294-4, 2577
Molding shrinkage, normal	1.5	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	551000	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	13100	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	3	%	ISO 527-1/-2
Flexural modulus	544000	psi	ISO 178
Flexural strength	18100	psi	ISO 178
Izod notched impact strength, 23°C	1.66	ftlb/in²	ISO 180/1A
Izod impact strength, 23°C	21.4	ftlb/in²	ISO 180/1U
Hardness, Rockwell, M-scale	95		ISO 2039-2

Tribological properties

Coefficient of dynamic friction, against steel	0.14		ISO 8295

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	230	°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	0.29	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, 1000Hz	3.2		IEC 62631-2-1
Volume resistivity	1E9	Ohm.m	IEC 62631-3-1
Electric strength	457	kV/in	IEC 60243-1
Comparative tracking index	125		IEC 60112
Arc Resistance	124	s	UL 746B

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Physical/Other properties

Water absorption, 2mm	0.02	%	Sim. to ISO 62
Water absorption, Immersion 24h	0.03	%	Sim. to ISO 62
Density	0.0487	lb/in³	ISO 1183
Density of melt	71.8	lb/ft³	

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	378	°F

Extrusion

Drying Temperature	212 - 248	°F
Drying Time, Dehumidified Dryer	2 - 4	h
Processing Moisture Content	≤0.02	%
Melt Temperature Optimum	581	°F
Melt Temperature Range	527 - 590	°F

Characteristics

Processing	Injection Molding, Film Extrusion, Extrusion, Other Extrusion
Special characteristics	Heat stabilized 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 310-320 degC
Mold wall temperature at least 140 degC

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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.

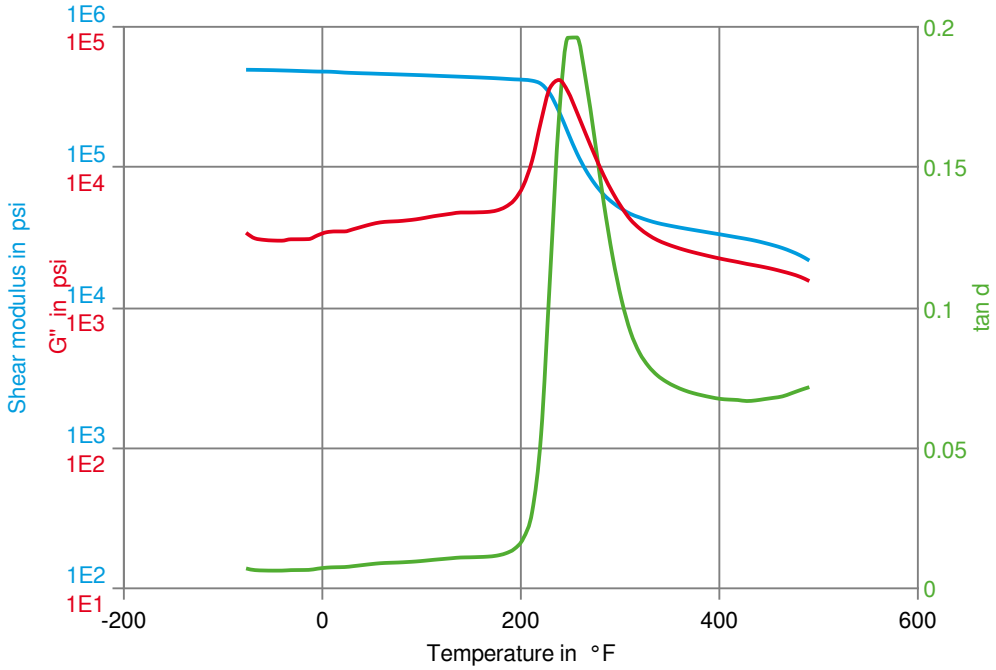
Storage

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

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Dynamic Shear modulus-temperature

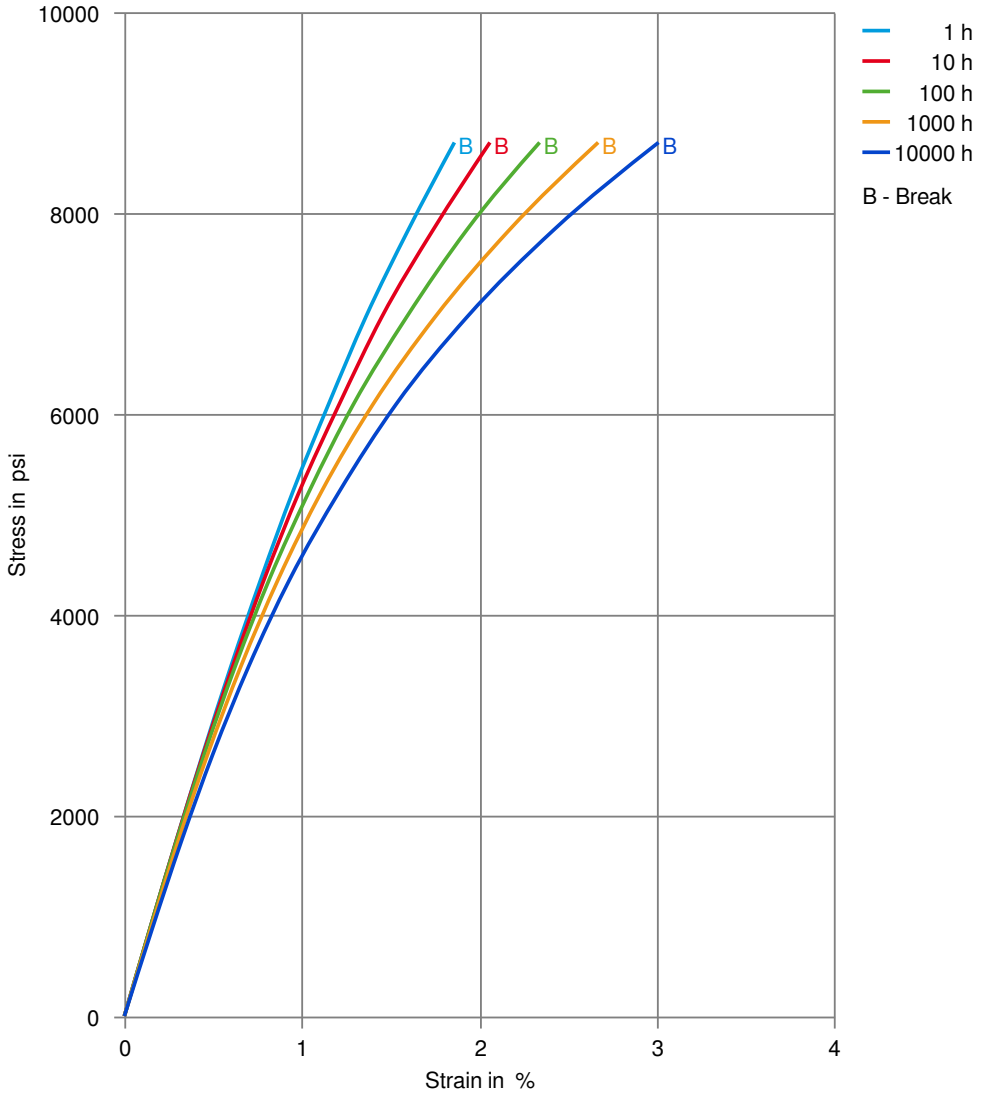


Revised: 2026-09-08 Source: Celanese Materials Database

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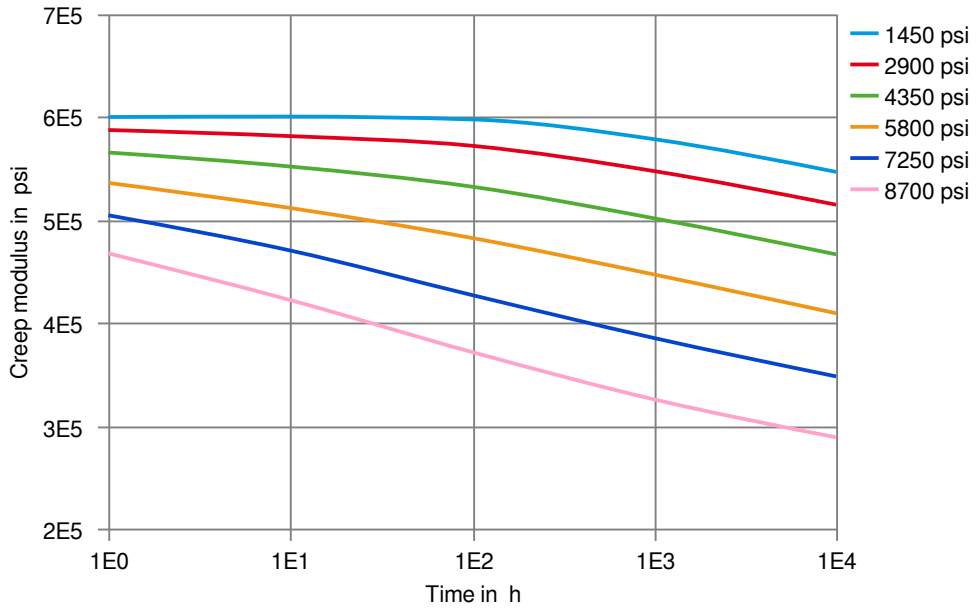
Stress-strain (isochronous) 73.4 °F



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Creep modulus-time 73.4 °F



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