

ISO 1043

ISO 11469

ISO 11357-1/-3

ISO 11357-1/-3

ISO 11359-1/-2

ISO 11359-1/-2

ISO 22007-4

ISO 75-1/-2

ISO 75-1/-2

FORTRON® 0214

Polyphenylene sulfide

Product information
Resin Identification

Part Marking Code

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.

PPS

280 °C

90 °C

110 °C

95 °C

52 E-6/K

53 E-6/K

1830 J/(kg K)

>PPS<

Moulding shrinkage, parallel	1.2	%	ISO 294-4, 2577
Moulding shrinkage, normal	1.5	%	ISO 294-4, 2577
Typical mechanical properties			
Tensile modulus	3800	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	90	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	3	%	ISO 527-1/-2
Flexural modulus	3750	MPa	ISO 178
Flexural strength	120	MPa	ISO 178
Izod notched impact strength, 23°C	3.5	kJ/m²	ISO 180/1A
Izod impact strength, 23°C	45	kJ/m²	ISO 180/1U
Hardness, Rockwell, M-scale	95		ISO 2039-2
Poisson's ratio	0.36 ^[C]		
[C]: Calculated			

Electrical properties

Specific heat capacity of melt

(CLTE), parallel

Melting temperature, 10°C/min

Glass transition temperature, 10°C/min

Coefficient of linear thermal expansion

Temperature of deflection under load, 1.8 MPa

Coefficient of linear thermal expansion (CLTE),

Temperature of deflection under load, 8 MPa

Relative permittivity, 1000Hz	3.2	IEC 62631-2-1
Volume resistivity	1E9 Ohm.m	IEC 62631-3-1
Electric strength	18 kV/mm	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	1350 kg/m ³	ISO 1183
Density of melt	1150 kg/m ³	

Injection

yes	
110	°C
2 - 4	h
≤0.02	%
315	°C
275	°C
320	°C
0.2 - 0.3	m/s
150	°C
135	°C
160	°C
30 - 70	MPa
3	MPa
192	°C
	110 2 - 4 ≤0.02 315 275 320 0.2 - 0.3 150 135 160 30 - 70

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

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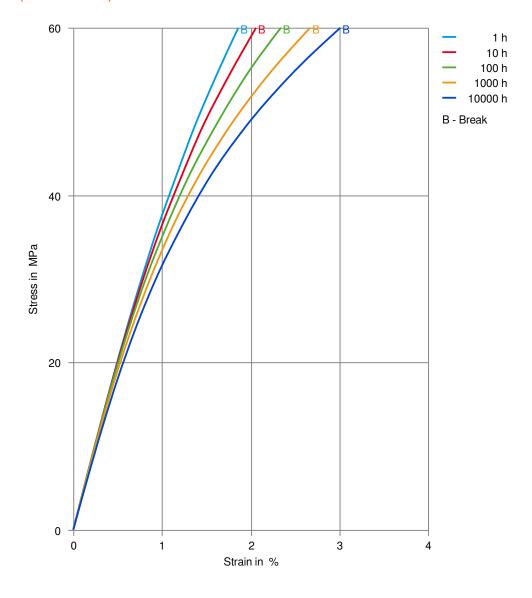
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For subsequent storage the material should be stored dry in the dryer until processed (<= 60 h).

Stress-strain (isochronous) 23°C



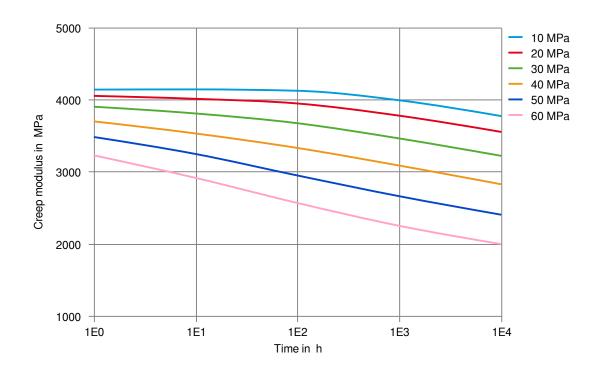
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Polyphenylene sulfide

Creep modulus-time 23°C

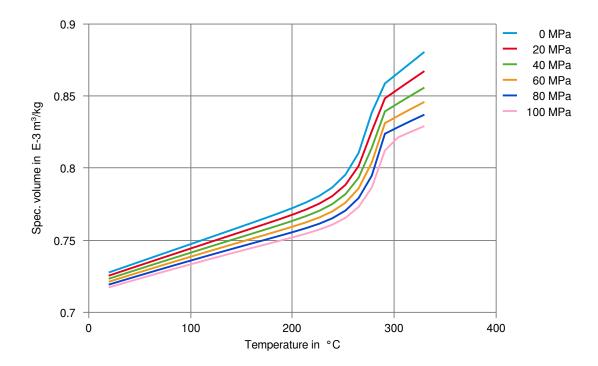


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Specific volume-temperature (pvT)



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