

## FORTRON® 1342L4 - PPS

### Description

Fortron 1342L4 is a low wear glass filled grade, ideally suited for bearings, gears and other sliding friction/wear applications.

Physical properties	Value	Unit	Test Standard
Density	1690	kg/m <sup>3</sup>	ISO 1183
Molding shrinkage, parallel	0.2	%	ISO 294-4, 2577
Molding shrinkage, normal	0.5	%	ISO 294-4, 2577
Water absorption, 23°C-sat	0.02	%	ISO 62

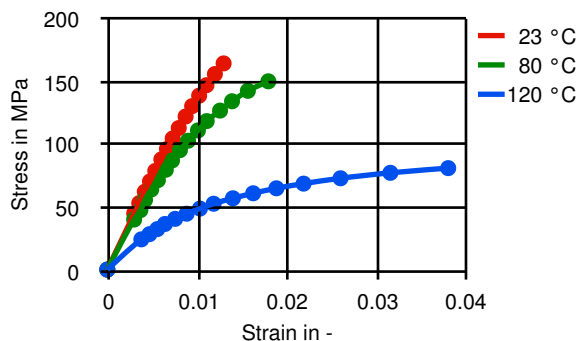
Mechanical properties	Value	Unit	Test Standard
Tensile modulus	14400	MPa	ISO 527-2/1A
Tensile stress at break, 5mm/min	165	MPa	ISO 527-2/1A
Tensile strain at break, 5mm/min	1.6	%	ISO 527-2/1A
Flexural modulus, 23°C	13700	MPa	ISO 178
Flexural stress at break	245	MPa	ISO 178
Charpy impact strength, 23°C	44	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, 23°C	8.5	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, -30°C	8.5	kJ/m <sup>2</sup>	ISO 179/1eA
Izod impact notched, 23°C	8.5	kJ/m <sup>2</sup>	ISO 180/1A
Izod impact notched, -30°C	8.5	kJ/m <sup>2</sup>	ISO 180/1A

Thermal properties	Value	Unit	Test Standard
Melting temperature, 10°C/min	280	°C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	90	°C	ISO 11357-1,-2,-3
DTUL at 1.8 MPa	270	°C	ISO 75-1, -2
DTUL at 8.0 MPa	215	°C	ISO 75-1, -2
Coeff. of linear therm expansion, parallel	0.22	E-4/°C	ISO 11359-2
Coeff. of linear therm expansion, normal	0.4	E-4/°C	ISO 11359-2
Flammability @1.6mm nom. thickn. thickness tested (1.6)	V-0 1.5	class mm	UL 94 UL 94
Flammability at thickness h thickness tested (h)	V-0 0.75	class mm	UL 94 UL 94

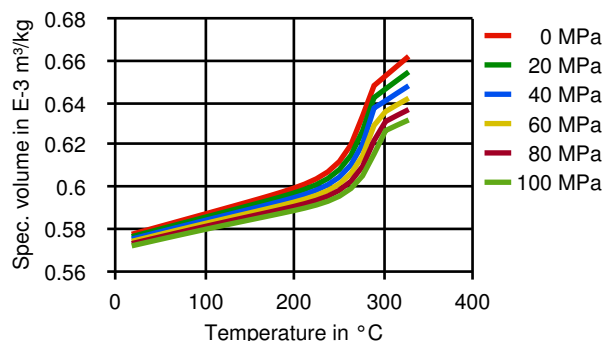
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## Diagrams

**True Stress-strain**



**Moldflow Specific volume-temperature (pvT)**



## Typical injection moulding processing conditions

	Value	Unit	Test Standard
<b>Pre Drying</b>			
Necessary low maximum residual moisture content	0.02	%	-
Drying time	3 - 4	h	-
Drying temperature	130 - 140	°C	-
<b>Temperature</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
Hopper temperature	20 - 30	°C	-
Feeding zone temperature	60 - 80	°C	-
Zone1 temperature	290 - 300	°C	-
Zone2 temperature	310 - 320	°C	-
Zone3 temperature	330 - 340	°C	-
Zone4 temperature	330 - 340	°C	-
Nozzle temperature	310 - 330	°C	-
Melt temperature	330	°C	-
Mold temperature	140 - 160	°C	-
Hot runner temperature	330 - 340	°C	-
<b>Pressure</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
Back pressure max.	30	bar	-
<b>Speed</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
Injection speed	fast	-	-
<b>Screw Speed</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
Screw speed diameter, 25mm	120	RPM	-
Screw speed diameter, 40mm	75	RPM	-
Screw speed diameter, 55mm	50	RPM	-
<b>Other</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
Specimen thickness (shrinkage)	3.18	mm	Internal

## Other text information

### 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  $\leq -30^{\circ}\text{C}$ . The time between drying and processing should be as short as possible.

### Longer pre-drying times/storage

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

### Injection molding

On injection molding machines with 15-25 D long three-section screws, as are usual in the trade, the FORTRON is processable. A shut-off nozzle is preferred to a free-flow nozzle.

Melt temperature 320-340 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.

### Characteristics

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#### Product Categories

Specialty

#### Delivery Form

Pellets

#### Processing

Injection molding

#### Additives

Release agent

### Contact Information

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### General Disclaimer

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