

FORTRON® 6162A7 - PPS

Description

Fortron 6162A7 is a mineral/glass reinforced grade for applications requiring the highest flow.

Physical properties	Value	Unit	Test Standard
Density	1920	kg/m ³	ISO 1183
Molding shrinkage, parallel	0.1 - 0.3	%	ISO 294-4, 2577
Molding shrinkage, normal	0.4 - 0.8	%	ISO 294-4, 2577
Water absorption, 23°C-sat	0.017	%	ISO 62

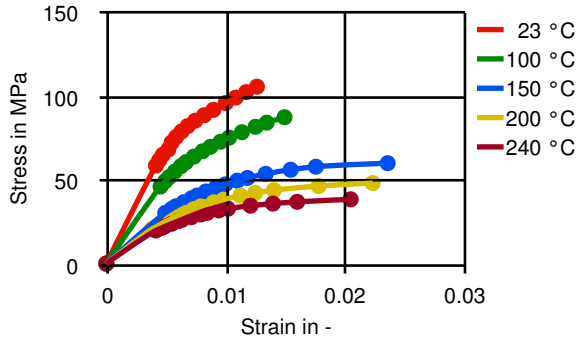
Mechanical properties	Value	Unit	Test Standard
Tensile modulus	15400	MPa	ISO 527-2/1A
Tensile stress at break, 5mm/min	115	MPa	ISO 527-2/1A
Tensile strain at break, 5mm/min	1.3	%	ISO 527-2/1A
Flexural modulus, 23°C	14500	MPa	ISO 178
Flexural strength, 23°C	185	MPa	ISO 178
Flexural strain at break	1.5	%	ISO 178
Charpy impact strength, 23°C	16	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	28.2	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	4.5	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	7.7	kJ/m ²	ISO 179/1eA
Izod impact notched, 23°C	6	kJ/m ²	ISO 180/1A
Izod impact notched, -30°C	8.9	kJ/m ²	ISO 180/1A
Izod impact unnotched, 23°C	18	kJ/m ²	ISO 180/1U
Rockwell hardness (M-Scale)	100	M-Scale	ISO 2039-2

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	0.19	E-4/°C	ISO 11359-2
Coeff. of linear therm expansion, normal	0.34	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 0.80	class mm	UL 94 UL 94

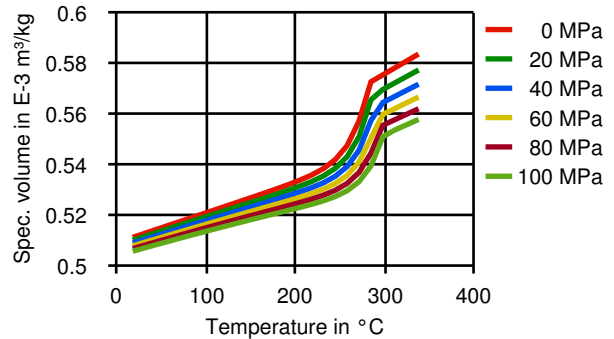
Electrical properties	Value	Unit	Test Standard
Relative permittivity, 1MHz	5.68	-	IEC 60250
Dissipation factor, 1MHz	10	E-4	IEC 60250

Diagrams

True Stress-strain



Moldflow Specific volume-temperature (pvT)



Typical injection moulding processing conditions

	Value	Unit	Test Standard
Pre Drying			
Necessary low maximum residual moisture content	0.02	%	-
Drying time	3 - 4	h	-
Drying temperature	130 - 140	°C	-
Temperature	Value	Unit	Test Standard
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 - 340	°C	-
Mold temperature	140 - 160	°C	-
Hot runner temperature	330 - 340	°C	-
Pressure	Value	Unit	Test Standard
Back pressure max.	30	bar	-
Speed	Value	Unit	Test Standard
Injection speed	fast	-	-
Screw Speed	Value	Unit	Test Standard
Screw speed diameter, 25mm	120	RPM	-
Screw speed diameter, 40mm	75	RPM	-
Screw speed diameter, 55mm	50	RPM	-

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 =< - 30° 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 (<= 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

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

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Characteristics

Special Characteristics

Flame retardant

Delivery Form

Pellets

Product Categories

Mineral/Glass reinforced

Additives

Release agent

Processing

Injection molding

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General Disclaimer

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