

FORTRON® ICE 716L - PPS

Description

FORTRON ICE 716L is a 65% glass fiber-mineral reinforced polyphenylene sulfide with improved mechanical properties, that belongs to our new generation of Fortron® PPS.

This new technology allows optimization of molding conditions with faster cycle times. Due to the faster crystallization of the material at a higher temperature, the option of mold wall temperature reduction can be subject of advanced process optimization. The potential for optimization of Fortron® ICE by cycle time reduction is possible by standard cavity surface temperatures of 140 °C. The potential for lowering the mold temperature must be checked individually and it depends on process and part design.

Physical properties	Value	Unit	Test Standard
Density	1950	kg/m ³	ISO 1183
Molding shrinkage, parallel	0,2 - 0,5	%	ISO 294-4, 2577
Molding shrinkage, normal	0,3 - 0,6	%	ISO 294-4, 2577
Water absorption, 23 °C-sat	0,02	%	ISO 62

Mechanical properties	Value	Unit	Test Standard
Tensile modulus	21500	MPa	ISO 527-2/1A
Tensile stress at break, 5mm/min	160	MPa	ISO 527-2/1A
Tensile strain at break, 5mm/min	1,2	%	ISO 527-2/1A
Flexural modulus, 23 °C	21000	MPa	ISO 178
Flexural strength, 23 °C	260	MPa	ISO 178
Charpy impact strength, 23 °C	30	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23 °C	10	kJ/m ²	ISO 179/1eA

Thermal properties	Value	Unit	Test Standard
DTUL at 1.8 MPa	270	°C	ISO 75-1, -2
DTUL at 8.0 MPa	220	°C	ISO 75-1, -2
Coeff. of linear therm expansion, parallel	0,14	E-4/°C	ISO 11359-2
Coeff. of linear therm expansion, normal	0,31	E-4/°C	ISO 11359-2

Typical injection moulding processing conditions

Pre Drying	Value	Unit	Test Standard
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	-

Characteristics

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Product Categories

Specialty

Delivery Form

Pellets

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General Disclaimer

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