

# FORTRON® ICE 716L

## Polyphenylene sulfide

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.

### Product information

Resin Identification	PPS-(GF+MD)6 5	ISO 1043
Part Marking Code	>PPS-(GF+MD)65<	ISO 11469

### Rheological properties

Moulding shrinkage range, parallel	0.2 - 0.5 %	ISO 294-4, 2577
Moulding shrinkage range, normal	0.3 - 0.6 %	ISO 294-4, 2577

### Typical mechanical properties

Tensile modulus	21500 MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	160 MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	1.2 %	ISO 527-1/-2
Flexural modulus	21000 MPa	ISO 178
Flexural strength	260 MPa	ISO 178
Charpy impact strength, 23°C	30 kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, 23°C	10 kJ/m <sup>2</sup>	ISO 179/1eA
Poisson's ratio	0.33 <sup>[C]</sup>	

[C]: Calculated

### Thermal properties

Temperature of deflection under load, 1.8 MPa	270 °C	ISO 75-1/-2
Temperature of deflection under load, 8 MPa	220 °C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	14 E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	31 E-6/K	ISO 11359-1/-2

### Physical/Other properties

Water absorption, 2mm	0.02 %	Sim. to ISO 62
Density	1950 kg/m <sup>3</sup>	ISO 1183

### Injection

Drying Recommended	yes
Drying Temperature	130 °C
Drying Time, Dehumidified Dryer	2 - 4 h
Processing Moisture Content	≤0.02 %
Melt Temperature Optimum	330 °C
Min. melt temperature	310 °C
Max. melt temperature	340 °C

# FORTRON® ICE 716L

## Polyphenylene sulfide

Screw tangential speed	0.2 - 0.3 m/s
Mold Temperature Optimum	140 °C
Min. mould temperature	125 °C
Max. mould temperature	160 °C
Hold pressure range	30 - 70 MPa
Back pressure	3 MPa
Ejection temperature	239 °C

### Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Additives	Nucleated
Special characteristics	Flame retardant, High Flow

### Automotive

OEM	STANDARD
Hyundai	MS244-02 Type A-2