FORTRON® ICE 716A

Polyphenylene sulfide

FORTRON ICE 716A is a 65% glass fiber-mineral reinforced polyphenylene sulfide, 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)65		ISO 1043
Part Marking Code	>PPS-(GF+MD)65<		ISO 11469

Rheological properties

Molding shrinkage, parallel	0.2	%	ISO 294-4, 2577
Molding shrinkage, normal	0.5	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	2.76E6	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	18900	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	1.2	%	ISO 527-1/-2
Flexural modulus	2.73E6	psi	ISO 178
Flexural strength	30500	psi	ISO 178
Compressive modulus	2.68E6	psi	ISO 604
Compressive strength	33400	psi	ISO 604
Charpy impact strength, 23°C	9.51	ftlb/in²	ISO 179/1eU
Charpy impact strength, -30°C	9.51	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23°C	3.33	ftlb/in²	ISO 179/1eA
Charpy notched impact strength, -30°C	3.33	ftlb/in²	ISO 179/1eA
Izod notched impact strength, 23°C	2.85	ftlb/in²	ISO 180/1A
Izod notched impact strength, -30°C	2.85	ftlb/in²	ISO 180/1A
Izod impact strength, 23°C	9.51	ftlb/in²	ISO 180/1U
Izod impact strength, -30°C	9.51	ftlb/in²	ISO 180/1U
Hardness, Rockwell, M-scale	100		ISO 2039-2

Thermal properties

Melting temperature, 10°C/min	536	°F	ISO 11357-1/-3
Glass transition temperature, 10°C/min	194	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	518	°F	ISO 75-1/-2
Temperature of deflection under load, 8 MPa	419	°F	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	0.11	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	0.133	E-4/°F	ISO 11359-1/-2
Specific heat capacity of melt	1600	J/(kg K)	ISO 22007-4

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Electrical properties

Relative permittivity, 1MHz	5.6		IEC 62631-2-1
Dissipation factor, 1MHz	20	E-4	IEC 62631-2-1
Volume resistivity	>1E13	Ohm.m	IEC 62631-3-1
Surface resistivity	>1E15	Ohm	IEC 62631-3-2
Electric strength	635	kV/in	IEC 60243-1
Comparative tracking index	175		IEC 60112
Arc Resistance	182	s	UL 746B

Physical/Other properties

Water absorption, 2mm	0.02	%	Sim. to ISO 62
Water absorption, Immersion 24h	0.03	%	Sim. to ISO 62
Density	0.0722	lb/in^3	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	266	°F
Drying Time, Dehumidified Dryer	2 - 4	h
Processing Moisture Content	≤0.02	%
Melt Temperature Optimum	626	°F
Min. melt temperature	590	°F
Max. melt temperature	644	°F
Max. screw tangential speed	0.2 - 0.3	m/s
Mold Temperature Optimum	284	°F
Min. mold temperature	257	°F
Max. mold temperature	320	°F
Hold pressure range	4350 - 10200	psi
Back pressure	435	psi
Ejection temperature	466	°F

Characteristics

Processing	Injection Molding
Additives	Release agent, Nucleated
Special characteristics	Flame retardant, Light stabilized or stable to light, Heat stabilized or stable to heat, High Flow

Additional information

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

Revised: 2026-09-08 Source: Celanese Materials Database

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