

FORTRON® ICE 717F | PPS | Mineral / Glass Reinforced

Description

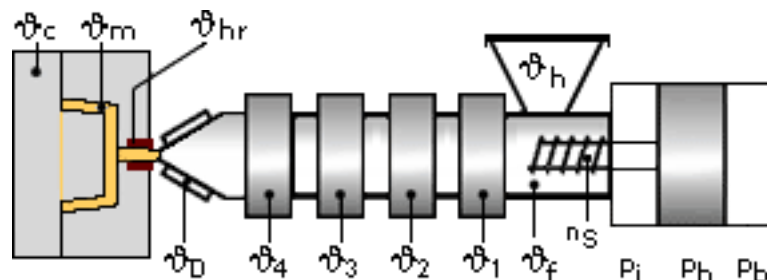
Fortron ICE 717F is a glass/mineral reinforced material with superior fuel resistance. It is specially designed to work in the environment of high temperature and high ethanol content. It offers excellent physical properties similar to those of the Fortron standard glass/mineral reinforced products.

Physical properties	Value	Unit	Test Standard
Density	1980	kg/m ³	ISO 1183
Mold shrinkage - parallel	0.11 - 0.16	%	ISO 294-4
Mold shrinkage - normal	0.18 - 0.23	%	ISO 294-4
Water absorption (23°C-sat)	0.19	%	ISO 62

Mechanical properties	Value	Unit	Test Standard
Tensile stress at break (5mm/min)	135	MPa	ISO 527-2/1A
Tensile strain at break (5mm/min)	1.1	%	ISO 527-2/1A
Flexural modulus (23°C)	18500	MPa	ISO 178
Flexural strength (23°C)	210	MPa	ISO 178
Charpy impact strength @ 23°C	22.0	kJ/m ²	ISO 179/1eU
Charpy impact strength @ -30°C	24.0	kJ/m ²	ISO 179/1eU
Charpy notched impact strength @ 23°C	5.0	kJ/m ²	ISO 179/1eA
Charpy notched impact strength @ -30°C	4.9	kJ/m ²	ISO 179/1eA
Unnotched impact str (Izod) @ 23°C	22	kJ/m ²	ISO 180/1U
Notched impact strength (Izod) @ 23°C	6.6	kJ/m ²	ISO 180/1A
Notched impact strength (Izod) @ -30°C	5.6	kJ/m ²	ISO 180/1A
Rockwell hardness	102	M-Scale	ISO 2039-2

Thermal properties	Value	Unit	Test Standard
Melting temperature (10°C/min)	280	°C	ISO 11357-1,-2,-3
Glass transition temperature (10°C/min)	90	°C	ISO 11357-1,-2,-3
DTUL @ 1.8 MPa	277	°C	ISO 75-1/-2
DTUL @ 8.0 MPa	235	°C	ISO 75-1/-2
Coeff.of linear therm. expansion (parallel)	0.16	E-4/°C	ISO 11359-2
Coeff.of linear therm. expansion (normal)	0.3	E-4/°C	ISO 11359-2

Typical injection moulding processing conditions



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Pre Drying:

Necessary low maximum residual moisture content: 0.02%

Drying time: 3 - 4 h

Drying temperature: 130 - 140 °C

Temperature:

	[°] Manifold	[°] Mold	[°] Melt	[°] Nozzle	[°] Zone4	[°] Zone3	[°] Zone2	[°] Zone1	[°] Feed	[°] Hopper
min (°C)	330	90	330	310	330	330	310	290	60	20
max (°C)	340	160	340	330	340	340	320	300	80	30

Pressure:

	Inj press	Hold press	Back pressure
min (bar)	500	300	0
max (bar)	1000	700	30

Speed:

Injection speed: fast

Screw speed

Screw diameter (mm)	16	25	40	55	75
Screw speed (RPM)	-	120	75	50	-

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Properties of molded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use.

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