

Fortron® ICE 717F

Polyphenylene Sulfide

Celanese Corporation

Message:

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.

General Information			
Filler / Reinforcement	Micro glass bead \ mineral		
Features	Fuel resistance		
	Heat resistance, high		

Physical	Nominal Value	Unit	Test Method
Density	1.98	g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Vertical flow direction	0.18 - 0.23	%	ISO 294-4
Flow direction	0.11 - 0.16	%	ISO 294-4
Water Absorption (Saturation, 23°C)	0.19	%	ISO 62

Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	102		ISO 2039-2

Mechanical	Nominal Value	Unit	Test Method
Tensile Stress (Break)	135	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	1.1	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	18500	MPa	ISO 178
Flexural Stress (23°C)	210	MPa	ISO 178

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	4.9	kJ/m ²	ISO 179/1eA
23°C	5.0	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	24	kJ/m ²	ISO 179/1eU
23°C	22	kJ/m ²	ISO 179/1eU
Notched Izod Impact			ISO 180/1A
-30°C	5.6	kJ/m ²	ISO 180/1A
23°C	6.6	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	22	kJ/m ²	ISO 180/1U

Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
1.8 MPa, not annealed	277	°C	ISO 75-2/A
8.0 MPa, not annealed	235	°C	ISO 75-2/C

Glass Transition Temperature ¹	90.0	°C	ISO 11357-2
Melting Temperature ²	280	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow	1.6E-5	cm/cm/°C	ISO 11359-2
Lateral	3.0E-5	cm/cm/°C	ISO 11359-2

Injection	Nominal Value	Unit
Drying Temperature	130 - 140	°C
Drying Time	3.0 - 4.0	hr
Suggested Max Moisture	0.020	%
Hopper Temperature	20.0 - 30.0	°C
Rear Temperature	290 - 300	°C
Middle Temperature	310 - 320	°C
Front Temperature	330 - 340	°C
Nozzle Temperature	310 - 330	°C
Processing (Melt) Temp	330 - 340	°C
Mold Temperature	90.0 - 160	°C
Injection Pressure	50.0 - 100	MPa
Injection Rate	Fast	
Holding Pressure	30.0 - 70.0	MPa
Back Pressure	0.00 - 3.00	MPa

Injection instructions

Manifold Temperature: 330 to 340°C Zone 4 Temperature: 330 to 340°C Feed Temperature: 60 to 80°C

NOTE

1. 10°C/min
2. 10°C/min

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