Fortron® ICE 716A

Polyphenylene Sulfide

Celanese Corporation

Message:

Fortron ICE 716A is a faster crystallizing version of Fortron 6165A6. It offers similar characteristics to the 6165A6 with improved processing that improves crystallization efficiency and reduces cycle time.

General Information	
Filler / Reinforcement	Glass \mineral, 65% filler by weight
Features	Workability, good Fast molding cycle

Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	2.00	g/cm³	ASTM D792
--	1.95	g/cm³	ISO 1183
Molding Shrinkage			
Flow	0.10 - 0.20	%	ASTM D955
Transverse flow	0.30 - 0.50	%	ASTM D955
Vertical flow direction	0.30 - 0.60	%	ISO 294-4
Flow direction	0.20 - 0.50	%	ISO 294-4
Water Absorption (Saturation, 23°C)	0.020	%	ISO 62
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness			
Class m	100		ASTM D785
M scale	100		ISO 2039-2
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	19000	MPa	ISO 527-2/1A/1
Tensile Strength			
Fracture, 23°C	114	MPa	ASTM D638
Fracture	130	MPa	ISO 527-2/1A/5
Tensile Elongation			
Fracture, 23°C	1.3	%	ASTM D638
Fracture	1.2	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	18800	MPa	ISO 178
Flexural Stress	210	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	7.0	kJ/m²	ISO 179/1eA
23°C	7.0	kJ/m²	ISO 179/1eA

Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	20	kJ/m²	ISO 179/1eU
23°C	20	kJ/m²	ISO 179/1eU
Notched Izod Impact			ISO 180/1A
-30°C	6.0	kJ/m²	ISO 180/1A
23°C	6.0	kJ/m²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	20	kJ/m²	ISO 180/1U
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			
0.45 MPa, not annealed	280	°C	ASTM D648
1.8 MPa, not annealed	266	°C	ASTM D648
1.8 MPa, not annealed	270	°C	ISO 75-2/A
8.0 MPa, not annealed	215	°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	1.9E-5	cm/cm/°C	ISO 11359-2
Lateral	2.4E-5	cm/cm/°C	ISO 11359-2
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity			
--	1.0E+16	ohms·cm	ASTM D257
--	> 1.0E+15	ohms·cm	IEC 60093
Dielectric Strength	25	kV/mm	IEC 60243-1
Dielectric Constant			
1 kHz	4.50		ASTM D150
1 MHz	4.50		ASTM D150
1 MHz	5.60		IEC 60250
Dissipation Factor			
1 kHz	1.0E-3		ASTM D150
1 MHz	9.0E-4		ASTM D150
1 MHz	2.0E-3		IEC 60250
Arc Resistance	182	sec	ASTM D495
Comparative Tracking Index	175	V	IEC 60112
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating			UL 94
0.750 mm	V-0		UL 94
1.50 mm	V-0		UL 94
Fill Analysis	**Nominal Value**	**Unit**	**Test Method**
Specific Heat Capacity of Melt	1600	J/kg/°C	Internal method
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	140 - 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
Screw Speed	50 - 120	rpm

Injection instructions
Manifold Temperature: 330 to 340°CZone 4 Temperature: 330 to 340°CFeed Temperature: 60 to 80°C

NOTE	
1.	10°C/min
2.	10°C/min

Recommended distributors for this material

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