Fortron® ICE 716A

Celanese Corporation - Polyphenylene Sulfide

Tuesday, November 5, 2019

General Information

Product Description

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			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Fast Molding Cycle	• Good Processability	

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.95	g/cm³	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow	0.50	%	
Flow	0.20	%	
Water Absorption (Saturation, 73°F)	0.020	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	2.76E+6	psi	ISO 527-2/1A
Tensile Stress (Break)	18900	psi	ISO 527-2/1A/5
Tensile Strain (Break)	1.2	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	2.73E+6	psi	ISO 178
Flexural Stress	30500	psi	ISO 178
Compressive Modulus	2.68E+6	psi	ISO 604
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	3.3	ft·lb/in²	
73°F	3.3	ft·lb/in²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	9.5	ft·lb/in²	
73°F	9.5	ft·lb/in²	
Notched Izod Impact Strength			ISO 180/1A
-22°F	2.9	ft·lb/in²	
73°F	2.9	ft·lb/in²	
Unnotched Izod Impact Strength			ISO 180/1U
-22°F	9.5	ft·lb/in²	
73°F	9.5	ft·lb/in²	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	100		ISO 2039-2
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (264 psi, Unannealed)	518	°F	ISO 75-2/A
Heat Deflection Temperature (1160 psi, Unannealed)	419	°F	ISO 75-2/C
Glass Transition Temperature [2]	194	°F	ISO 11357-2
Melting Temperature [2]	536	°F	ISO 11357-3

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Thermal	Nominal Value	Unit	Test Method
CLTE - Flow	1.1E-5	in/in/°F	ISO 11359-2
CLTE - Transverse	1.3E-5	in/in/°F	ISO 11359-2

Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Electric Strength	640	V/mil	IEC 60243-1
Relative Permittivity (1 MHz)	5.60		IEC 60250
Dissipation Factor (1 MHz)	2.0E-3		IEC 60250
Comparative Tracking Index	175	V	IEC 60112

Fill Analysis	Nominal Value	Unit
Specific Heat Capacity of Melt	0.382	Btu/lb/°F

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	266 to 284	°F
Drying Time	3.0 to 4.0	hr
Suggested Max Moisture	0.020	%
Hopper Temperature	68 to 86	°F
Rear Temperature	554 to 572	°F
Middle Temperature	590 to 608	°F
Front Temperature	626 to 644	°F
Nozzle Temperature	590 to 626	°F
Processing (Melt) Temp	626 to 644	°F
Mold Temperature	284 to 320	°F
Injection Rate	Fast	
Back Pressure	< 435	psi

Injection Notes

Feeding zone temperature: 60 to 80°C
Zone4 temperature: 330 to 340°C
Hot runner temperature: 330 to 340°C

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] 10°C/min