Starflam® AFR682A1

Ascend Performance Materials Operations LLC - *Polyamide 66*

General Information

Product Description

Starflam AFR682A1 is a flame retardant, mineral filled PA66 for injection molded applications.

General			
Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Filler / Reinforcement	• Mineral		
Additive	• Flame Retardant	• Heat Stabilizer	• Mold Release
Features	• Bromine Free • Flame Retardant	• Halogen Free • Heat Stabilized	
UL File Number	• E70062		
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		
Resin ID	• PA66-MF FR		

Properties [1]

Physical	**Nominal Value**	**Unit**	**Test Method**
Density	1.60	g/cm³	ISO 1183
Water Absorption (Saturation, 73°F)	5.0	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.60	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus (73°F)	1.09E+6	psi	ISO 527-1
Tensile Stress (Break, 73°F)	10200	psi	ISO 527-2
Tensile Strain (Break, 73°F)	2.8	%	ISO 527-2
Flexural Modulus (73°F)	986000	psi	ISO 178
Flexural Stress (73°F)	17400	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	0.95	ft·lb/in²	
73°F	1.4	ft·lb/in²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	14	ft·lb/in²	
73°F	14	ft·lb/in²	
Notched Izod Impact Strength			ISO 180/1A
-40°F	1.4	ft·lb/in²	
-22°F	1.9	ft·lb/in²	
73°F	1.9	ft·lb/in²	
Unnotched Izod Impact Strength			ISO 180/1U
-22°F	13	ft·lb/in²	
73°F	13	ft·lb/in²	
Thermal	**Nominal Value**	**Unit**	**Test Method**
CLTE - Flow (73 to 131°F, 0.0787 in)	1.9E-5	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F, 0.0787 in)	2.5E-5	in/in/°F	ISO 11359-2
RTI Elec			UL 746B
0.030 in	149	°F	
0.06 in	149	°F	
RTI Imp			UL 746B

0.030 in	149	°F	
0.06 in	149	°F	
RTI Str			UL 746B
0.030 in	149	°F	
0.06 in	149	°F	

Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity (0.0394 in)	1.0E+15	ohms·cm	IEC 60093
Comparative Tracking Index (0.118 in)	600	V	IEC 60112

Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating			UL 94
0.030 in	V-2		
0.06 in	V-2		
Glow Wire Flammability Index (0.04 in)	1760	°F	IEC 60695-2-12
Oxygen Index	32	%	ISO 4589-2

Processing Information

Injection	**Nominal Value**	**Unit**
Drying Temperature	167 to 185	°F
Drying Time	4.0 to 6.0	hr
Suggested Max Moisture	0.20	%
Rear Temperature	500 to 518	°F
Middle Temperature	518 to 536	°F
Front Temperature	518 to 545	°F
Processing (Melt) Temp	518 to 545	°F
Mold Temperature	140 to 194	°F

Notes

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