Starflam® AFR470X2I BK0939

Ascend Performance Materials Operations LLC - *Polyamide 66*

General Information

Product Description

Starflam AFR470X2I BK0939 is a 35% glass filled, halogen free, red phosphorus based flame retardant PA66 for injection molding applications.

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Glass Fiber, 35% Filler by Weight		
Additive	• Flame Retardant	• Heat Stabilizer	• Lubricant
Features	• Flame Retardant • Heat Stabilized	• Heat Stabilized - Organic • Laser Markable	• Lubricated
Agency Ratings	• ASTM D4066 PA0120G35 A43370	• ASTM D6779 PA0120G35 A43370	• SAE J1639 PA661116
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		
Resin ID	• PA66-GF35 FR		

Properties [1]

Physical	Dry	Conditioned	Unit	Test Method
Density	1.47	--	g/cm³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 73°F, 0.0787 in	0.50	--	%	
Flow : 73°F, 0.0787 in	0.10	--	%	
Water Absorption (24 hr, 73°F)	0.90	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	1.2	--	%	ISO 62
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus (73°F)	1.61E+6	1.39E+6	psi	ISO 527-1
Tensile Stress (Break, 73°F)	23200	16000	psi	ISO 527-2
Tensile Strain (Break, 73°F)	2.6	3.3	%	ISO 527-2
Flexural Modulus (73°F)	1.45E+6	1.23E+6	psi	ISO 178
Flexural Stress (73°F)	32600	25100	psi	ISO 178
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179/1eA
-40°F	4.3	4.3	ft·lb/in²	
-22°F	4.3	4.3	ft·lb/in²	
73°F	5.7	6.2	ft·lb/in²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-40°F	31	30	ft·lb/in²	
-22°F	31	30	ft·lb/in²	
73°F	33	33	ft·lb/in²	
Notched Izod Impact Strength				ISO 180/1A
-40°F	4.0	4.8	ft·lb/in²	
-22°F	4.3	4.8	ft·lb/in²	
73°F	5.7	6.7	ft·lb/in²	
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Deflection Temperature Under Load (66 psi, Unannealed)	500	493	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	464	455	°F	ISO 75-2/A

Melting Temperature	500	--	°F	ISO 11357-3
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Electric Strength (0.0394 in)	610	530	V/mil	IEC 60243-1
Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**
Flame Rating				UL 94
0.030 in	V-0	--		
0.06 in	V-0	--		
0.12 in	V-0	--		
Glow Wire Ignition Temperature (0.030 in)	1520	--	°F	IEC 60695-2-13

Processing Information

Injection	**Dry**	**Unit**
Drying Temperature	158 to 176	°F
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.050	%
Suggested Max Regrind	25	%
Rear Temperature	< 545	°F
Middle Temperature	< 554	°F
Front Temperature	< 554	°F
Nozzle Temperature	< 554	°F
Processing (Melt) Temp	< 572	°F