Starflam® PF0057E

Ascend Performance Materials Operations LLC - *Polyamide 6*

General Information

Product Description

Starflam PF0057E is a 25% glass fiber reinforced, flame retardant PA6 for injection molded applications. The material is halogen free and red phosphorus free.

General			
Material Status	• Commercial: Active		
Availability	• Europe	• North America	
Filler / Reinforcement	• Glass Fiber, 25% Filler by Weight		
Additive	• Flame Retardant	• Heat Stabilizer	• Mold Release
Features	• Flame Retardant	• Halogen Free	• Heat Stabilized
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		
Resin ID	• PA6-GF25 FR		

Properties [1]

Physical	Dry	Conditioned	Unit	Test Method
Density	1.39	--	g/cm³	ISO 1183
Water Absorption (24 hr, 73°F)	1.3	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	1.9	--	%	ISO 62
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus (73°F)	1.46E+6	870000	psi	ISO 527-1
Tensile Stress (Break, 73°F)	19400	11500	psi	ISO 527-2
Tensile Strain (Break, 73°F)	2.4	4.5	%	ISO 527-2
Flexural Modulus (73°F)	1.44E+6	870000	psi	ISO 178
Flexural Stress (73°F)	31200	17700	psi	ISO 178
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179/1eA
-40°F	4.6	4.1	ft·lb/in²	
-22°F	4.7	4.3	ft·lb/in²	
73°F	5.2	7.1	ft·lb/in²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-40°F	29	26	ft·lb/in²	
-22°F	29	27	ft·lb/in²	
73°F	29	31	ft·lb/in²	
Notched Izod Impact Strength				ISO 180/1A
-40°F	4.3	4.3	ft·lb/in²	
-22°F	4.4	4.3	ft·lb/in²	
73°F	4.7	6.7	ft·lb/in²	
Unnotched Izod Impact Strength (73°F)	26	--	ft·lb/in²	ISO 180/1U
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Deflection Temperature Under Load (66 psi, Unannealed)	426	423	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	401	379	°F	ISO 75-2/A
Melting Temperature	430	--	°F	ISO 11357-3
RTI Elec				UL 746B
0.031 in	284	--	°F	
0.06 in	• 284 • 284	--	°F	

0.08 in	284	--	°F	
0.12 in	284	--	°F	
RTI Imp				UL 746B
0.031 in	221	--	°F	
0.06 in	• 221 • 221	--	°F	
0.08 in	221	--	°F	
0.12 in	221	--	°F	
RTI Str				UL 746B
0.031 in	284	--	°F	
0.06 in	• 284 • 284	--	°F	
0.08 in	284	--	°F	
0.12 in	284	--	°F	

Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Electric Strength (0.0394 in)	790	690	V/mil	IEC 60243-1
Comparative Tracking Index (0.118 in)	600	--	V	IEC 60112
High Amp Arc Ignition (HAI)				UL 746A
0.03 in	PLC 0	--		
0.06 in	• PLC 0 • PLC 0	--		
0.12 in	PLC 0	--		
Hot-wire Ignition (HWI)				UL 746A
0.03 in	PLC 0	--		
0.06 in	• PLC 0 • PLC 0	--		
0.12 in	PLC 0	--		

Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**
Flame Rating				UL 94
0.031 in	V-0	--		
0.06 in	• V-0 • V-0 • 5VB • 5VA	--		
0.08 in	• V-0 • 5VA	--		
0.12 in	• V-0 • 5VA	--		
Glow Wire Flammability Index				IEC 60695-2-12
0.031 in	1760	--	°F	
0.06 in	• 1760 • 1760	--	°F	
0.08 in	1760	--	°F	
0.12 in	1760	--	°F	
Glow Wire Ignition Temperature				IEC 60695-2-13
0.031 in	1430	--	°F	
0.06 in	• 1430 • 1430	--	°F	
0.08 in	1430	--	°F	
0.12 in	1470	--	°F	

Processing Information

Injection	**Dry**	**Unit**
Drying Temperature	176	°F
Drying Time	4.0	hr
Suggested Max Moisture	0.20	%
Rear Temperature	464 to 482	°F
Middle Temperature	482 to 500	°F
Front Temperature	482 to 518	°F
Processing (Melt) Temp	482 to 518	°F
ature	122 to 194	°F