

Starflam® PF0057E

polyamide 6

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

Regional Availability	• North America	• Europe	
Additive	• Flame Retarding Agent	• Heat Stabilizer	• Release agent
Features	• Flame Retardant	• Halogen Content, None	
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		

Physical

	dry	cond.	Unit	Test Standard
Density	1.39	-	g/cm ³	ISO 1183
Water Absorption				ISO 62
23°C, 24 hr	1.3	*	%	
Equilibrium, 23°C, 50% RH	1.9	*	%	

Mechanical

	dry	cond.	Unit	Test Standard
Tensile Modulus (23°C)	10100	6000	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	134	79	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	2.4	4.5	%	ISO 527-2
Flexural Modulus (23°C)	9900	6000	MPa	ISO 178
Flexural Strength (23°C)	215	122	MPa	ISO 178

Impact

	dry	cond.	Unit	Test Standard
Charpy Notched Impact Strength				ISO 179/1eA
+23°C	11	15	kJ/m ²	
-30°C	9.8	9	kJ/m ²	
-40°C	9.7	8.7	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
+23°C	61	66	kJ/m ²	
-30°C	60	57	kJ/m ²	
-40°C	61	55	kJ/m ²	
Notched Izod Impact Strength				ISO 180/1A
+23°C	9.8	14	kJ/m ²	
-30°C	9.3	9	kJ/m ²	
-40°C	9.1	9	kJ/m ²	
Unnotched Izod Impact Strength, +23°C	54	-	kJ/m ²	ISO 180/1U

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Thermal	dry	cond.	Unit	Test Standard
Heat Deflection Temperature				ISO 75-2/A
1.80 MPa, Unannealed	205	193	°C	
0.45 MPa, Unannealed	219	217	°C	
Melting Temperature	221	*	°C	ISO 11357-3
RTI Elec				UL 746
0.800 mm	140		°C	
1.50 mm	140		°C	
1.60 mm	140		°C	
2.00 mm	140		°C	
3.00 mm	140		°C	
RTI Imp				UL 746
0.800 mm	105		°C	
1.50mm	105		°C	
1.60 mm	105		°C	
2.00 mm	105		°C	
3.00 mm	105		°C	
RTI Str				UL 746
0.800 mm	140		°C	
1.50 mm	140		°C	
1.60 mm	140		°C	
2.00 mm	140		°C	
3.00 mm	140		°C	
Electrical	dry	cond.	Unit	Test Standard
Dielectric Strength (1.00 mm)	31	27	kV/mm	IEC 60243
Comparative Tracking Index (3.00 mm)	600		V	IEC 60112
High Amp Arc Ignition (HAI)				UL 746
0.800 mm	PLC 0		-	
1.50 mm	PLC 0		-	
1.60 mm	PLC 0		-	
3.00 mm	PLC 0		-	
Hot-wire Ignition (HWI)				UL 746
0.800 mm	PLC 0		-	
1.50 mm	PLC 0		-	
1.60 mm	PLC 0		-	
3.00 mm	PLC 0		-	

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Flammability	Value	Unit	Test Standard
Flammability			UL 94
0.800 mm	V-0	-	
1.50 mm	V-0	-	
1.60 mm	V-0	-	
2.00 mm	V-0	-	
3.00 mm	V-0	-	
Flammability, 5V			UL 94
1.50 mm	5VB	-	
1.60 mm	5VA	-	
2.00 mm	5VA	-	
3.00 mm	5VA	-	
Glow Wire Flammability Index			IEC 60695-2-12
0.800 mm	960	°C	
1.50 mm	960	°C	
1.60 mm	960	°C	
2.00 mm	960	°C	
3.00 mm	960	°C	
Glow Wire Ignition Temperature			IEC 60695-2-13
0.800 mm	775	°C	
1.50 mm	775	°C	
1.60 mm	775	°C	
2.00 mm	775	°C	
3.00 mm	800	°C	
Injection	Value	Unit	
Drying Temperature	80	°C	
Drying Time	4	h	
Suggested Max Moisture	0.2	%	
Rear Temperature	240 - 250	°C	
Middle Temperature	250 - 260	°C	
Front Temperature	250 - 270	°C	
Processing (Melt) Temperature	250 - 270	°C	
Mold Temperature	50 - 90	°C	