

Starflam® PZ0042E

polyamide 6



Starflam PZ0042E is a glass filled, 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	1.31	-	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 23°C, 2.00 mm	0.9	*	%	
Flow : 23°C, 2.00 mm	0.7	*	%	
Water Absorption				ISO 62
23°C, 24 hr	1.7	*	%	
Equilibrium, 23°C, 50% RH	1.8	*	%	

Mechanical

	dry	cond.	Unit	Test Standard
Tensile Modulus (23°C)	5900	2800	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	87	45	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	3.2	11	%	ISO 527-2
Flexural Modulus (23°C)	5800	2500	MPa	ISO 178
Flexural Strength (23°C)	136	52	MPa	ISO 178

Impact

	dry	cond.	Unit	Test Standard
Charpy Notched Impact Strength				ISO 179/1eA
+23°C	3.8	9.8	kJ/m ²	
-30°C	3.9	4.2	kJ/m ²	
-40°C	3.6	3.9	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
+23°C	33	78	kJ/m ²	
-30°C	32	40	kJ/m ²	
-40°C	35	48	kJ/m ²	
Notched Izod Impact Strength				ISO 180/1A
+23°C	4	9.1	kJ/m ²	

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-30°C	3.9	4.7	kJ/m ²	
-40°C	4.5	3.7	kJ/m ²	
Unnotched Izod Impact Strength, +23°C	45	-	kJ/m ²	ISO 180/1U

Thermal	dry	cond.	Unit	Test Standard
Heat Deflection Temperature				ISO 75-2/A
1.80 MPa, Unannealed	192	169	°C	
0.45 MPa, Unannealed	215	205	°C	
Melting Temperature	222	*	°C	ISO 11357-3
RTI Elec				UL 746
0.750 mm	125		°C	
0.800 mm	125		°C	
1.00 mm	125		°C	
1.50 mm	125		°C	
3.00 mm	125		°C	
RTI Imp				UL 746
0.750 mm	125		°C	
0.800 mm	125		°C	
1.00 mm	125		°C	
1.50mm	125		°C	
3.00 mm	125		°C	
RTI Str				UL 746
0.750 mm	130		°C	
0.800 mm	130		°C	
1.00 mm	130		°C	
1.50 mm	130		°C	
3.00 mm	130		°C	

Electrical	dry	cond.	Unit	Test Standard
Dielectric Strength (1.00 mm)	27	26	kV/mm	IEC 60243
High Amp Arc Ignition (HAI)				UL 746
0.750 mm	PLC 3		-	
0.800 mm	PLC 0		-	
1.00 mm	PLC 0		-	
1.50 mm	PLC 0		-	
3.00 mm	PLC 0		-	
Hot-wire Ignition (HWI)				UL 746
0.750 mm	PLC 0		-	
0.800 mm	PLC 0		-	
1.00 mm	PLC 0		-	

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1.50 mm	PLC 0	-
3.00 mm	PLC 0	-

Flammability	Value	Unit	Test Standard
Flammability			UL 94
0.750 mm	V-2	-	
0.800 mm	V-2	-	
1.50 mm	V-2	-	
3.00 mm	V-2	-	
Glow Wire Flammability Index			IEC 60695-2-12
1.00 mm	960	°C	
Glow Wire Ignition Temperature			IEC 60695-2-13
1.00 mm	725	°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

