

Starflam® PZ0042E

Ascend Performance Materials Operations LLC - *Polyamide 6*

General Information

Product Description

Starflam PZ0042E is a 20% glass filled, 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, 20% 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-GF20 FR

Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.31	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 73°F, 0.0787 in	0.90	--	%	
Flow : 73°F, 0.0787 in	0.70	--	%	
Water Absorption (24 hr, 73°F)	1.7	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	1.8	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	856000	406000	psi	ISO 527-1
Tensile Stress (Break, 73°F)	12600	6530	psi	ISO 527-2
Tensile Strain (Break, 73°F)	3.2	11	%	ISO 527-2
Flexural Modulus (73°F)	841000	363000	psi	ISO 178
Flexural Stress (73°F)	19700	7540	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-40°F	1.7	1.9	ft·lb/in ²	
-22°F	1.9	2.0	ft·lb/in ²	
73°F	1.8	4.7	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-40°F	17	23	ft·lb/in ²	
-22°F	15	19	ft·lb/in ²	
73°F	16	37	ft·lb/in ²	
Notched Izod Impact Strength				ISO 180/1A
-40°F	2.1	1.8	ft·lb/in ²	
-22°F	1.9	2.2	ft·lb/in ²	
73°F	1.9	4.3	ft·lb/in ²	
Unnotched Izod Impact Strength (73°F)	21	--	ft·lb/in ²	ISO 180/1U
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	419	401	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	378	336	°F	ISO 75-2/A
Melting Temperature	432	--	°F	ISO 11357-3
RTI Elec				UL 746B



0.030 in	257	--		°F
0.031 in	257	--		°F
0.04 in	257	--		°F
0.06 in	257	--		°F
0.12 in	257	--		°F
RTI Imp				UL 746B
0.030 in	257	--		°F
0.031 in	257	--		°F
0.04 in	257	--		°F
0.06 in	257	--		°F
0.12 in	257	--		°F
RTI Str				UL 746B
0.030 in	266	--		°F
0.031 in	266	--		°F
0.04 in	266	--		°F
0.06 in	266	--		°F
0.12 in	266	--		°F
Electrical				
Dry Conditioned Unit Test Method				
Electric Strength (0.0394 in)	690	660	V/mil	IEC 60243-1
High Amp Arc Ignition (HAI)				
UL 746A				
0.030 in	PLC 3	--		
0.03 in	PLC 0	--		
0.04 in	PLC 0	--		
0.06 in	PLC 0	--		
0.12 in	PLC 0	--		
Hot-wire Ignition (HWI)				
UL 746A				
0.030 in	PLC 0	--		
0.03 in	PLC 0	--		
0.04 in	PLC 0	--		
0.06 in	PLC 0	--		
0.12 in	PLC 0	--		
Flammability				
Dry Conditioned Unit Test Method				
Flame Rating				
UL 94				
0.030 in	V-2	--		
0.031 in	V-2	--		
0.06 in	V-2	--		
0.12 in	V-2	--		
Glow Wire Flammability Index (0.04 in)	1760	--	°F	IEC 60695-2-12
Glow Wire Ignition Temperature (0.04 in)	1340	--	°F	IEC 60695-2-13

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
Mold Temperature		122 to 194 °F

Notes

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

