

Starflam® RF0057E

polyamide 66

Starflam RF0057E is a glass fiber reinforced, flame retardant PA66 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	1.37	-	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 23°C, 2.00 mm	0.7	*	%	
Flow : 23°C, 2.00 mm	0.4	*	%	
Water Absorption				ISO 62
23°C, 24 hr	1.1	*	%	
Equilibrium, 23°C, 50% RH	1.7	*	%	

Mechanical

	dry	cond.	Unit	Test Standard
Tensile Modulus (23°C)	9600	6300	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	126	84	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	2.3	3.6	%	ISO 527-2
Flexural Modulus (23°C)	9600	6200	MPa	ISO 178
Flexural Strength (23°C)	194	127	MPa	ISO 178

Impact

	dry	cond.	Unit	Test Standard
Charpy Notched Impact Strength				ISO 179/1eA
+23°C	8	11	kJ/m ²	
-30°C	8	7.6	kJ/m ²	
-40°C	8.1	7.2	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
+23°C	55	59	kJ/m ²	
-30°C	58	53	kJ/m ²	
-40°C	53	52	kJ/m ²	
Notched Izod Impact Strength				ISO 180/1A
+23°C	8.1	10	kJ/m ²	

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polyamide 66



-30°C	7.7	7.6	kJ/m²	
-40°C	8	7.4	kJ/m²	
Unnotched Izod Impact Strength, +23°C	45	-	kJ/m²	ISO 180/1U

Thermal	dry	cond.	Unit	Test Standard
Heat Deflection Temperature				ISO 75-2/A
1.80 MPa, Unannealed	244	234	°C	
0.45 MPa, Unannealed	260	258	°C	
Melting Temperature	262	*	°C	ISO 11357-3
RTI Elec				UL 746
0.400 mm	65		°C	
0.800 mm	140		°C	
0.900 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
0.400 mm	65		°C	
0.800 mm	110		°C	
0.900 mm	110		°C	
1.50mm	110		°C	
1.60 mm	110		°C	
2.00 mm	110		°C	
3.00 mm	110		°C	
RTI Str				UL 746
0.400 mm	65		°C	
0.800 mm	140		°C	
0.900 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)	30	30	kV/mm	IEC 60243
Comparative Tracking Index (3.00 mm)	600		V	IEC 60112
High Amp Arc Ignition (HAI)				UL 746
0.400 mm	PLC 0		-	
0.800 mm	PLC 0		-	

Starflam® RF0057E

polyamide 66



0.900 mm	PLC 0	-	
1.50 mm	PLC 0	-	
1.60 mm	PLC 0	-	
2.00 mm	PLC 0	-	
3.00 mm	PLC 0	-	
Hot-wire Ignition (HWI)			UL 746
0.400 mm	PLC 0	-	
0.800 mm	PLC 0	-	
0.900 mm	PLC 0	-	
1.50 mm	PLC 0	-	
1.60 mm	PLC 0	-	
2.00 mm	PLC 0	-	
3.00 mm	PLC 0	-	
Flammability			
Flammability	Value	Unit	Test Standard
Flammability			UL 94
0.400 mm	V-0	-	
0.800 mm	V-0	-	
1.50 mm	V-0	-	
1.60 mm	V-0	-	
3.00 mm	V-0	-	
Flammability, 5V			UL 94
2.00 mm	5VA	-	
3.00 mm	5VB	-	
Glow Wire Flammability Index			IEC 60695-2-12
0.400 mm	960	°C	
0.800 mm	960	°C	
0.900 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
0.400 mm	775	°C	
0.800 mm	775	°C	
0.900 mm	775	°C	
1.50 mm	775	°C	
1.60 mm	775	°C	
2.00 mm	775	°C	
3.00 mm	825	°C	

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Injection	Value	Unit
Drying Temperature	80	°C
Drying Time	4	h
Suggested Max Moisture	0.15 - 0.25	%
Rear Temperature	265 - 275	°C
Middle Temperature	270 - 280	°C
Front Temperature	270 - 280	°C
Processing (Melt) Temperature	270 - 280	°C
Mold Temperature	60 - 100	°C

