

**Starflam® RF0057E**

 Ascend Performance Materials Operations LLC - *Polyamide 66*
**General Information**
**Product Description**

Starflam RF0057E is a 25% glass fiber reinforced, flame retardant PA66 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	• PA66-GF25 FR

**Properties <sup>1</sup>**

<b>Physical</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Density	1.37	--	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 73°F, 0.0787 in	0.70	--	%	
Flow : 73°F, 0.0787 in	0.40	--	%	
Water Absorption (24 hr, 73°F)	1.1	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	1.7	--	%	ISO 62
<b>Mechanical</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Tensile Modulus (73°F)	1.39E+6	914000	psi	ISO 527-1
Tensile Stress (Break, 73°F)	18300	12200	psi	ISO 527-2
Tensile Strain (Break, 73°F)	2.3	3.6	%	ISO 527-2
Flexural Modulus (73°F)	1.39E+6	899000	psi	ISO 178
Flexural Stress (73°F)	28100	18400	psi	ISO 178
<b>Impact</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Charpy Notched Impact Strength				ISO 179/1eA
-40°F	3.9	3.4	ft·lb/in <sup>2</sup>	
-22°F	3.8	3.6	ft·lb/in <sup>2</sup>	
73°F	3.8	5.2	ft·lb/in <sup>2</sup>	
Charpy Unnotched Impact Strength				ISO 179/1eU
-40°F	25	25	ft·lb/in <sup>2</sup>	
-22°F	28	25	ft·lb/in <sup>2</sup>	
73°F	26	28	ft·lb/in <sup>2</sup>	
Notched Izod Impact Strength				ISO 180/1A
-40°F	3.8	3.5	ft·lb/in <sup>2</sup>	
-22°F	3.7	3.6	ft·lb/in <sup>2</sup>	
73°F	3.9	4.8	ft·lb/in <sup>2</sup>	
Unnotched Izod Impact Strength (73°F)	21	--	ft·lb/in <sup>2</sup>	ISO 180/1U
<b>Thermal</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Deflection Temperature Under Load (66 psi, Unannealed)	500	496	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	471	453	°F	ISO 75-2/A
Melting Temperature	504	--	°F	ISO 11357-3
RTI Elec				UL 746B



0.016 in	149	--	°F		
0.031 in	284	--	°F		
0.04 in	284	--	°F		
0.06 in	<ul style="list-style-type: none"><li>• 284</li><li>• 284</li></ul>	--	°F		
0.08 in	284	--	°F		
0.12 in	284	--	°F		
<b>RTI Imp</b>				UL 746B	
0.016 in	149	--	°F		
0.031 in	230	--	°F		
0.04 in	230	--	°F		
0.06 in	<ul style="list-style-type: none"><li>• 230</li><li>• 230</li></ul>	--	°F		
0.08 in	230	--	°F		
0.12 in	230	--	°F		
<b>RTI Str</b>				UL 746B	
0.016 in	149	--	°F		
0.031 in	284	--	°F		
0.04 in	284	--	°F		
0.06 in	<ul style="list-style-type: none"><li>• 284</li><li>• 284</li></ul>	--	°F		
0.08 in	284	--	°F		
0.12 in	284	--	°F		
<b>Electrical</b>		<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Electric Strength (0.0394 in)		760	760	V/mil	IEC 60243-1
Comparative Tracking Index (0.118 in)		600	--	V	IEC 60112
High Amp Arc Ignition (HAI)					UL 746A
0.016 in	PLC 0	--			
0.03 in	PLC 0	--			
0.04 in	PLC 0	--			
0.06 in	<ul style="list-style-type: none"><li>• PLC 0</li><li>• PLC 0</li></ul>	--			
0.08 in	PLC 0	--			
0.12 in	PLC 0	--			
<b>Hot-wire Ignition (HWI)</b>				UL 746A	
0.016 in	PLC 0	--			
0.03 in	PLC 0	--			
0.04 in	PLC 0	--			
0.06 in	<ul style="list-style-type: none"><li>• PLC 0</li><li>• PLC 0</li></ul>	--			
0.08 in	PLC 0	--			
0.12 in	PLC 0	--			
<b>Flammability</b>		<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Flame Rating					UL 94
0.016 in	V-0	--			
0.031 in	V-0	--			
0.06 in	<ul style="list-style-type: none"><li>• V-0</li><li>• V-0</li></ul>	--			
0.12 in	<ul style="list-style-type: none"><li>• V-0</li><li>• 5VB</li></ul>	--			
0.08 in	5VA	--			
Glow Wire Flammability Index					IEC 60695-2-12
0.016 in	1760	--	°F		
0.031 in	1760	--	°F		
0.04 in	1760	--	°F		
0.06 in	<ul style="list-style-type: none"><li>• 1760</li><li>• 1760</li></ul>	--	°F		
0.08 in	1760	--	°F		
	1760	--	°F		
Ignition Temperature					IEC
	1430	--	°F		
	1430	--	°F		
	1430	--	°F		

0.06 in	<ul style="list-style-type: none"> <li>• 1430</li> <li>• 1430</li> </ul>	--	°F
0.08 in	1430	--	°F
0.12 in	1520	--	°F

### Processing Information

Injection	Dry Unit
Drying Temperature	176 °F
Drying Time	4.0 hr
Suggested Max Moisture	0.15 to 0.25 %
Rear Temperature	509 to 527 °F
Middle Temperature	518 to 536 °F
Front Temperature	518 to 536 °F
Processing (Melt) Temp	518 to 536 °F
Mold Temperature	140 to 212 °F

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

