

**Starflam® RF0077E**

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

Starflam RF0077E is a 35% glass fiber reinforced, flame retardant PA66 for injection molded applications. The material is halogen free and red phosphorus free.

**General**

Material Status	<ul style="list-style-type: none"> <li>Commercial: Active</li> </ul>
Availability	<ul style="list-style-type: none"> <li>Europe</li> <li>North America</li> </ul>
Filler / Reinforcement	<ul style="list-style-type: none"> <li>Glass Fiber, 35% Filler by Weight</li> </ul>
Additive	<ul style="list-style-type: none"> <li>Flame Retardant</li> <li>Heat Stabilizer</li> <li>Mold Release</li> </ul>
Features	<ul style="list-style-type: none"> <li>Flame Retardant</li> <li>Halogen Free</li> <li>Heat Stabilized</li> </ul>
Appearance	<ul style="list-style-type: none"> <li>Natural Color</li> </ul>
Forms	<ul style="list-style-type: none"> <li>Pellets</li> </ul>
Processing Method	<ul style="list-style-type: none"> <li>Injection Molding</li> </ul>
Resin ID	<ul style="list-style-type: none"> <li>PA66-GF35 FR</li> </ul>

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

<b>Physical</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Density	1.49	--	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 73°F, 0.0787 in	0.80	--	%	
Flow : 73°F, 0.0787 in	0.20	--	%	
Water Absorption (24 hr, 73°F)	0.70	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	1.0	--	%	ISO 62
<b>Mechanical</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Tensile Modulus (73°F)	1.89E+6	1.46E+6	psi	ISO 527-1
Tensile Stress (Break, 73°F)	23200	17500	psi	ISO 527-2
Tensile Strain (Break, 73°F)	2.3	2.7	%	ISO 527-2
Flexural Modulus (73°F)	1.96E+6	1.38E+6	psi	ISO 178
Flexural Stress (73°F)	36000	26300	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	4.8	4.5	ft·lb/in <sup>2</sup>	
-22°F	4.8	4.8	ft·lb/in <sup>2</sup>	
73°F	4.8	5.2	ft·lb/in <sup>2</sup>	
Charpy Unnotched Impact Strength				ISO 179/1eU
-40°F	29	26	ft·lb/in <sup>2</sup>	
-22°F	29	29	ft·lb/in <sup>2</sup>	
73°F	29	30	ft·lb/in <sup>2</sup>	
Notched Izod Impact Strength				ISO 180/1A
-40°F	4.6	3.9	ft·lb/in <sup>2</sup>	
-22°F	4.5	4.3	ft·lb/in <sup>2</sup>	
73°F	4.5	4.8	ft·lb/in <sup>2</sup>	
<b>Thermal</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Deflection Temperature Under Load (66 psi, Unannealed)	500	500	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	482	471	°F	ISO 75-2/A
Melting Temperature	500	--	°F	ISO 11357-3
RTI Elec				UL 746B
0.031 in	284	--	°F	



0.06 in	284	--	°F	
0.12 in	284	--	°F	
RTI Imp				UL 746B
0.031 in	230	--	°F	
0.06 in	230	--	°F	
0.12 in	230	--	°F	
RTI Str				UL 746B
0.031 in	284	--	°F	
0.06 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)	--	810	V/mil	IEC 60243-1
Comparative Tracking Index (0.118 in)	600	--	V	IEC 60112
High Amp Arc Ignition (HAI)				UL 746A
0.03 in	PLC 0	--		
0.06 in	PLC 0	--		
0.12 in	PLC 0	--		
Hot-wire Ignition (HWI)				UL 746A
0.03 in	PLC 0	--		
0.06 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
0.031 in	V-0	--		
0.06 in	<ul style="list-style-type: none"> <li>• V-0</li> <li>• 5VA</li> </ul>	--		
0.12 in	<ul style="list-style-type: none"> <li>• V-0</li> <li>• 5VA</li> </ul>	--		
Glow Wire Flammability Index				IEC 60695-2-12
0.031 in	1760	--	°F	
0.06 in	1760	--	°F	
0.12 in	1760	--	°F	
Glow Wire Ignition Temperature				IEC 60695-2-13
0.031 in	1430	--	°F	
0.06 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	509 to 527 °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.

