

## Starflam® X-Protect RF0067K

Ascend Performance Materials Operations LLC - Polyamide 66

### General Information

#### Product Description

Starflam X-Protect RF0067K is a 30% 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, 30% 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-(X+GF)30 FR

### Properties <sup>1</sup>

Physical	Dry	Conditioned	Unit	Test Method
Density	1.48	--	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 73°F, 0.0787 in	1.0	--	%	
Flow : 73°F, 0.0787 in	0.30	--	%	
Water Absorption (24 hr, 73°F)	0.90	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	1.1	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	1.52E+6	1.15E+6	psi	ISO 527-1
Tensile Stress (Break, 73°F)	19600	13600	psi	ISO 527-2
Tensile Strain (Break, 73°F)	2.1	3.0	%	ISO 527-2
Flexural Modulus (73°F)	1.49E+6	1.09E+6	psi	ISO 178
Flexural Stress (73°F)	27700	20000	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-40°F	4.8	5.7	ft·lb/in <sup>2</sup>	
-22°F	4.8	5.7	ft·lb/in <sup>2</sup>	
73°F	5.2	5.7	ft·lb/in <sup>2</sup>	
Charpy Unnotched Impact Strength				ISO 179/1eU
-40°F	25	24	ft·lb/in <sup>2</sup>	
-22°F	25	24	ft·lb/in <sup>2</sup>	
73°F	26	29	ft·lb/in <sup>2</sup>	
Notched Izod Impact Strength				ISO 180/1A
-40°F	4.0	4.8	ft·lb/in <sup>2</sup>	
-22°F	4.1	4.8	ft·lb/in <sup>2</sup>	
73°F	4.6	5.2	ft·lb/in <sup>2</sup>	
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	477	469	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	424	376	°F	ISO 75-2/A
Melting Temperature	496	--	°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)	860	810	V/mil	IEC 60243-1
Comparative Tracking Index (0.118 in)	575	--	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	V-0	--		
0.12 in	V-0	--		
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	1470	--		°F
0.06 in	1470	--		°F
0.12 in	1520	--		°F
Oxygen Index <sup>2</sup>	44	--		% ISO 4589-2
Smoke Density <sup>2</sup>	150	--		Ds ISO 5659-2
Smoke Toxicity <sup>2</sup>	0.58	--		CIT NLP NF X 70-100-1/2
<b>Additional Information</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Railway Classification <sup>2</sup>				EN 45545-2
R22	HL3	--		
R23	HL3	--		

### Processing Information

<b>Injection</b>	<b>Dry</b>	<b>Unit</b>
Drying Temperature		< 140 °F
Drying Time		< 4.0 hr
Suggested Max Moisture		< 0.20 %
Rear Temperature		500 to 536 °F
Middle Temperature		518 to 536 °F
Front Temperature		482 to 518 °F
Nozzle Temperature		518 to 536 °F
Processing (Melt) Temp		500 to 536 °F
Mold Temperature		104 to 194 °F

