

Starflam® X-Protect RF0067K

polyamide 66



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

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	1.48	-	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 23°C, 2.00 mm	1.0	*	%	
Flow : 23°C, 2.00 mm	0.3	*	%	
Water Absorption				ISO 62
23°C, 24 hr	0.9	*	%	
Equilibrium, 23°C, 50% RH	1.1	*	%	

Mechanical

	dry	cond.	Unit	Test Standard
Tensile Modulus (23°C)	10500	7900	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	135	94	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	2.1	3	%	ISO 527-2
Flexural Modulus (23°C)	10300	7500	MPa	ISO 178
Flexural Strength (23°C)	191	138	MPa	ISO 178

Impact

	dry	cond.	Unit	Test Standard
Charpy Notched Impact Strength				ISO 179/1eA
+23°C	11	12	kJ/m ²	
-30°C	10	12	kJ/m ²	
-40°C	10	12	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
+23°C	55	61	kJ/m ²	
-30°C	53	51	kJ/m ²	
-40°C	53	51	kJ/m ²	
Notched Izod Impact Strength				ISO 180/1A
+23°C	9.6	11	kJ/m ²	

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-30°C	8.7	10	kJ/m ²
-40°C	8.5	10	kJ/m ²

Thermal	dry	cond.	Unit	Test Standard
Heat Deflection Temperature				ISO 75-2/A
1.80 MPa, Unannealed	218	191	°C	
0.45 MPa, Unannealed	247	243	°C	
Melting Temperature	258	*	°C	ISO 11357-3
RTI Elec				UL 746
0.800 mm	140		°C	
1.60 mm	140		°C	
3.00 mm	140		°C	
RTI Imp				UL 746
0.800 mm	110		°C	
1.60 mm	110		°C	
3.00 mm	110		°C	
RTI Str				UL 746
0.800 mm	140		°C	
1.60 mm	140		°C	
3.00 mm	140		°C	

Electrical	dry	cond.	Unit	Test Standard
Dielectric Strength (1.00 mm)	34	32	kV/mm	IEC 60243
Comparative Tracking Index (3.00 mm)	575		V	IEC 60112
High Amp Arc Ignition (HAI)				UL 746
0.800 mm	PLC 0		-	
1.60 mm	PLC 0		-	
3.00 mm	PLC 0		-	
Hot-wire Ignition (HWI)				UL 746
0.800 mm	PLC 0		-	
1.60 mm	PLC 0		-	
3.00 mm	PLC 0		-	

Flammability	Value	Unit	Test Standard
Flammability			UL 94
0.800 mm	V-0	-	
1.60 mm	V-0	-	
3.00 mm	V-0	-	
Glow Wire Flammability Index			IEC 60695-2-12

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0.800 mm	960	°C	
1.60 mm	960	°C	
3.00 mm	960	°C	
Glow Wire Ignition Temperature			IEC 60695-2-13
0.800 mm	800	°C	
1.60 mm	800	°C	
3.00 mm	825	°C	

Railway Application	dry	cond.	Unit	Test Standard
Oxygen index	44	-	%	EN ISO 4589-2
Smoke Density	147		Ds Max	EN ISO 5659-2
Smoke Toxicity	0.58		CIT _{NLP}	NF X 70-100-1/2
Railway Classification				EN 45545-2
R22	HL3		-	
R23	HL3		-	

Injection	Value	Unit
Drying Temperature	80	°C
Drying Time	4	h
Rear Temperature	260 - 280	°C
Middle Temperature	280 - 290	°C
Front Temperature	260 - 280	°C
Processing (Melt) Temperature	270 - 290	°C
Mold Temperature	40 - 90	°C

