

Starflam AFR450X2

Polyamide 66

Eurostar Engineering Plastics

Message:

Starflam AFR450X2 is a Red Phosphorous Flame Retardant, 25 % Glass Fiber Reinforced Polyamide 66 Injection Molding Resin

General Information			
UL YellowCard	E340012-100747897		
Filler / Reinforcement	Glass Fiber,25% Filler by Weight		
Additive	Flame Retardant 3		
Features	Flame Retardant		
RoHS Compliance	RoHS Compliant		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.33	g/cm ³	ISO 1183
Molding Shrinkage - Flow ¹	0.30 to 0.50	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	6.0	%	
Equilibrium, 23°C, 50% RH	1.2	%	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (L-Scale)	108		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	8700	MPa	ISO 527-2/1
Tensile Stress (Break)	160	MPa	ISO 527-2/5
Tensile Strain (Break)	2.0	%	ISO 527-2/5
Flexural Modulus ²	8000	MPa	ISO 178
Flexural Stress	210	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength ³			ISO 180/1A
-40°C	8.0	kJ/m ²	
-20°C	9.0	kJ/m ²	
23°C	12	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature ⁴			
0.45 MPa, Unannealed, 100 mm Span	250	°C	ISO 75-2/Be
1.8 MPa, Unannealed, 100 mm Span	248	°C	ISO 75-2/Ae
Vicat Softening Temperature	245	°C	ISO 306/B50, ISO 306/B120
Ball Pressure Test ⁵ (125°C)	Pass		IEC 60695-10-2
CLTE			ISO 11359-2
Flow : 23 to 60°C	2.8E-5	cm/cm/°C	

Transverse : 23 to 60°C	9.0E-5	cm/cm/°C	
RTI Elec	110	°C	UL 746
RTI Imp	110	°C	UL 746
RTI Str	115	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity ⁶	> 1.0E+16	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Electric Strength (3.20 mm, in Oil)	17	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
50 Hz	3.00		
60 Hz	3.00		
1 MHz	2.80		
Dissipation Factor			IEC 60250
50 Hz	5.4E-3		
60 Hz	5.4E-3		
1 MHz	0.012		
Comparative Tracking Index	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.800 mm, Tested by E2P	V-2		
1.70 mm	V-0		
Glow Wire Flammability Index (2.00 mm)	960	°C	IEC 60695-2-12
Injection	Nominal Value	Unit	
Drying Temperature	75.0 to 85.0	°C	
Drying Time	4.0 to 6.0	hr	
Suggested Max Moisture	0.10	%	
Rear Temperature	275 to 285	°C	
Middle Temperature	275 to 285	°C	
Front Temperature	270 to 285	°C	
Processing (Melt) Temp	275 to 285	°C	
Mold Temperature	60.0 to 90.0	°C	
NOTE			
1.	Tensile Bar		
2.	2.0 mm/min		
3.	80*10*4		
4.	120*10*4		
5.	125°C ±2°C		
6.	ROA		

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