

Starflam® X-Protect RX12414

polyamide 66



Starflam X-Protect RX12414 is an unfilled, 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	1.22	-	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 23°C, 2.00 mm	2.0	*	%	
Flow : 23°C, 2.00 mm	1.6	*	%	
Water Absorption				ISO 62
23°C, 24 hr	1.5	*	%	
Equilibrium, 23°C, 50% RH	1.7	*	%	

Mechanical

	dry	cond.	Unit	Test Standard
Tensile Modulus (23°C)	3700	1800	MPa	ISO 527-2
Tensile Stress (Yield, 23°C)	54	32	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	53	32	MPa	ISO 527-2
Tensile Strain (Yield, 23°C)	2.5	24	%	ISO 527-2
Tensile Strain (Break, 23°C)	3.9	24	%	ISO 527-2
Flexural Modulus (23°C)	4000	1400	MPa	ISO 178
Flexural Strength (23°C)	92	29	MPa	ISO 178

Impact

	dry	cond.	Unit	Test Standard
Charpy Notched Impact Strength				ISO 179/1eA
+23°C	2.6	4.8	kJ/m ²	
-30°C	2.1	3	kJ/m ²	
-40°C	2.1	3	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
+23°C	36	65	kJ/m ²	
-30°C	36	42	kJ/m ²	
-40°C	38	39	kJ/m ²	

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Notched Izod Impact Strength				ISO 180/1A
+23°C	2.1	3.2	kJ/m²	
-30°C	2.7	2.9	kJ/m²	
-40°C	2.7	2.9	kJ/m²	

Thermal	dry	cond.	Unit	Test Standard
Heat Deflection Temperature				ISO 75-2/A
1.80 MPa, Unannealed	74	-	°C	
0.45 MPa, Unannealed	179	-	°C	
Melting Temperature	260	*	°C	ISO 11357-3
RTI Elec				UL 746
0.800 mm	130		°C	
1.60 mm	130		°C	
3.00 mm	130		°C	
RTI Imp				UL 746
0.800 mm	65		°C	
1.60 mm	65		°C	
3.00 mm	65		°C	
RTI Str				UL 746
0.800 mm	65		°C	
1.60 mm	65		°C	
3.00 mm	65		°C	

Electrical	dry	cond.	Unit	Test Standard
Dielectric Strength (1.00 mm)	26	22	kV/mm	IEC 60243
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 1		-	
1.60 mm	PLC 1		-	
3.00 mm	PLC 0		-	

Flammability	Value	Unit	Test Standard
Flammability			UL 94
0.800 mm	V-1	-	
1.60 mm	V-1	-	
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

Injection	Value	Unit
Drying Temperature	80	°C
Drying Time	4	h
Suggested Max Moisture	0.2	%
Rear Temperature	265 - 275	°C
Middle Temperature	275 - 285	°C
Front Temperature	275 - 285	°C
Processing (Melt) Temperature	270 - 290	°C
Mold Temperature	70 - 90	°C

