

Starflam® AFR200Y

Ascend Performance Materials Operations LLC - Polyamide 66

General Information

Product Description

Starflam AFR200Y is an unfilled, flame retardant, heat stabilized PA66 for injection molded applications. The material is halogen free and red phosphorus free.

General

Material Status	• Commercial: Active
Availability	• Europe • North America
Additive	• Flame Retardant • Heat Stabilizer • Mold Release
Features	• Bromine Free • Halogen Free • Flame Retardant • Heat Stabilized
Appearance	• Natural Color
Forms	• Pellets
Processing Method	• Injection Molding
Resin ID	• PA66 FR

Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.18	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 73°F, 0.0787 in	1.7	--	%	
Flow : 73°F, 0.0787 in	1.8	--	%	
Water Absorption (24 hr, 73°F)	1.9	--	%	ISO 62
Water Absorption (Saturation, 73°F)	7.5	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	1.1	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	508000	276000	psi	ISO 527-1
Tensile Stress (Yield, 73°F)	11600	7110	psi	ISO 527-2
Tensile Stress (Break, 73°F)	11200	7110	psi	ISO 527-2
Tensile Strain (Yield, 73°F)	4.0	16	%	ISO 527-2
Tensile Strain (Break, 73°F)	7.8	16	%	ISO 527-2
Flexural Modulus (73°F)	537000	218000	psi	ISO 178
Flexural Stress (73°F)	14800	5370	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-40°F	2.1	1.9	ft·lb/in ²	
-22°F	2.1	2.0	ft·lb/in ²	
73°F	2.1	3.1	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-40°F	50	56	ft·lb/in ²	
-22°F	57	71	ft·lb/in ²	
73°F	57	88	ft·lb/in ²	
Notched Izod Impact Strength				ISO 180/1A
-40°F	2.4	2.6	ft·lb/in ²	
-22°F	2.3	2.6	ft·lb/in ²	
73°F	2.3	2.9	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	442	--	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	178	--	°F	ISO 75-2/A



Melting Temperature	500	--	°F	ISO 11357-3
RTI Elec				UL 746B
0.030 in	266	--	°F	
0.06 in	266	--	°F	
0.12 in	266	--	°F	
RTI Imp				UL 746B
0.030 in	194	--	°F	
0.06 in	194	--	°F	
0.12 in	194	--	°F	
RTI Str				UL 746B
0.030 in	239	--	°F	
0.06 in	239	--	°F	
0.12 in	239	--	°F	
Electrical	Dry	Conditioned	Unit	Test Method
Electric Strength (0.0394 in)	790	710	V/mil	IEC 60243-1
Comparative Tracking Index (0.118 in)	600	--	V	IEC 60112
High Amp Arc Ignition (HAI) (0.06 in)	PLC 3	--		UL 746A
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.016 in	V-0	--		
0.030 in	V-0	--		
0.06 in	V-0	--		
0.12 in	V-0	--		
Oxygen Index	31	--	%	ISO 4589-2

Processing Information

Injection	Dry Unit
Drying Temperature	167 to 185 °F
Drying Time	4.0 hr
Suggested Max Moisture	0.20 %
Rear Temperature	500 to 518 °F
Middle Temperature	509 to 536 °F
Front Temperature	518 to 536 °F
Processing (Melt) Temp	509 to 536 °F
Mold Temperature	140 to 194 °F

