

Starflam® 366

 Ascend Performance Materials Operations LLC - *Polyamide 66*

General Information

Product Description

Starflam 366 (formerly Vdyne® ECO366) is a non-halogenated, unreinforced, flame-retardant PA66 compound designed with high comparative tracking index (CTI) and low corrosion for improved electrical contact performance. It has superior flow properties to assist in filling thin-walled, intricate parts with reduced warpage and reduced cycle time. It is lubricated for machine feed and easy mold release.

General

Material Status	• Commercial: Active
Availability	• Asia Pacific • Europe • North America
Additive	• Flame Retardant • Heat Stabilizer • Lubricant
Features	• Crack Resistant • Good Toughness • Heat Stabilized - Organic • Flame Retardant • Halogen Free • Low Density • Good Mold Release • Heat Stabilized • Lubricated
RoHS Compliance	• RoHS Compliant
UL File Number	• E70062
Appearance	• Natural Color
Forms	• Pellets
Processing Method	• Injection Molding
Resin ID	• PA66 FR

 Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.17	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 73°F, 0.0787 in	1.2	--	%	
Flow : 73°F, 0.0787 in	0.90	--	%	
Water Absorption (24 hr, 73°F)	0.80	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	2.3	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Stress (Yield, 73°F)	12000	8410	psi	ISO 527-2
Tensile Strain (Break, 73°F)	5.0	6.0	%	ISO 527-2
Flexural Modulus (73°F)	566000	196000	psi	ISO 178
Flexural Stress (73°F)	15500	5660	psi	ISO 178
Poisson's Ratio (73°F)	0.40	--		ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°F	1.8	--	ft·lb/in ²	
73°F	1.6	--	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F	37	--	ft·lb/in ²	
73°F	36	--	ft·lb/in ²	
Notched Izod Impact Strength (73°F)	2.9	--	ft·lb/in ²	ISO 180/1A
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	464	--	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	167	--	°F	ISO 75-2/A
Melting Temperature	509	--	°F	ISO 11357-3
RTI Elec				UL 746B
0.016 in	248	--	°F	
0.030 in	248	--	°F	



0.06 in	248	--		°F	
0.12 in	248	--		°F	
RTI Imp					UL 746B
0.016 in	167	--		°F	
0.030 in	176	--		°F	
0.06 in	176	--		°F	
0.12 in	176	--		°F	
RTI Str					UL 746B
0.016 in	221	--		°F	
0.030 in	230	--		°F	
0.06 in	230	--		°F	
0.12 in	230	--		°F	
Electrical	Dry	Conditioned	Unit	Test Method	
Volume Resistivity (0.0394 in)	1.0E+10	--	ohms·cm	IEC 60093	
Electric Strength (0.0394 in)	430	--	V/mil	IEC 60243-1	
Arc Resistance (0.118 in)	PLC 5	--		ASTM D495	
Comparative Tracking Index (0.118 in)	600	--	V	IEC 60112	
High Amp Arc Ignition (HAI)					UL 746A
0.016 in	PLC 2	--			
0.030 in	PLC 1	--			
0.06 in	PLC 1	--			
0.12 in	PLC 1	--			
High Voltage Arc Tracking Rate (HVTR) (0.118 in)	PLC 0	--			UL 746A
Hot-wire Ignition (HWI)					UL 746A
0.016 in	PLC 4	--			
0.030 in	PLC 4	--			
0.06 in	PLC 3	--			
0.12 in	PLC 2	--			
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	--			
Glow Wire Flammability Index					IEC 60695-2-12
0.016 in	1760	--		°F	
0.030 in	1760	--		°F	
0.06 in	1760	--		°F	
0.12 in	1760	--		°F	
Glow Wire Ignition Temperature					IEC 60695-2-13
0.016 in	1760	--		°F	
0.030 in	1760	--		°F	
0.06 in	1290	--		°F	
0.12 in	1290	--		°F	
Oxygen Index	35	--		%	ISO 4589-2

Processing Information

Injection	Dry Unit
Drying Temperature	176 °F
Drying Time	4.0 hr
Rear Temperature	500 to 554 °F
Middle Temperature	500 to 554 °F
Front Temperature	500 to 554 °F
Nozzle Temperature	500 to 554 °F
Processing (Melt) Temp	518 to 545 °F
Mold Temperature	149 to 203 °F

