Starflam® R10002E

Ascend Performance Materials Operations LLC - *Polyamide 66/6 Copolymer*

General Information

Product Description

Starflam R10002E is a flame retardant PA66/6 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 • Flame Retardant	• Halogen Free • Heat Stabilized	
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		
Resin ID	• PA66/6 FR		

Properties [1]

Physical	Dry	Conditioned	Unit	Test Method
Density	1.18	--	g/cm³	ISO 1183
Water Absorption (24 hr, 73°F)	1.6	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	1.8	--	%	ISO 62
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus (73°F)	595000	334000	psi	ISO 527-1
Tensile Stress (Yield, 73°F)	11900	6960	psi	ISO 527-2
Tensile Strain (Break, 73°F)	4.9	6.2	%	ISO 527-2
Flexural Modulus (73°F)	522000	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	1.5	0.90	ft·lb/in²	
-22°F	1.2	1.2	ft·lb/in²	
73°F	1.7	2.2	ft·lb/in²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-40°F	23 ft·lb/in²	No Break		
-22°F	25	11	ft·lb/in²	
73°F	26	32	ft·lb/in²	
Notched Izod Impact Strength				ISO 180/1A
-40°F	1.7	1.2	ft·lb/in²	
-22°F	1.7	1.5	ft·lb/in²	
73°F	1.9	1.7	ft·lb/in²	
Unnotched Izod Impact Strength (73°F)	29	--	ft·lb/in²	ISO 180/1U
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Deflection Temperature Under Load (66 psi, Unannealed)	372	372	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	165	--	°F	ISO 75-2/A
Melting Temperature	504	--	°F	ISO 11357-3
RTI Elec				UL 746B
0.016 in	149	--	°F	
0.031 in	248	--	°F	
0.06 in	248	--	°F	

0.12 in	248	--	°F	
RTI Imp				UL 746B
0.016 in	149	--	°F	
0.031 in	149	--	°F	
0.06 in	167	--	°F	
0.12 in	167	--	°F	
RTI Str				UL 746B
0.016 in	149	--	°F	
0.031 in	185	--	°F	
0.06 in	185	--	°F	
0.12 in	185	--	°F	
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Electric Strength (0.0394 in)	660	510	V/mil	IEC 60243-1
High Amp Arc Ignition (HAI) (0.03 in)	PLC 0	--		UL 746A
Hot-wire Ignition (HWI) (0.03 in)	PLC 3	--		UL 746A
Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**
Flame Rating				UL 94
0.016 in	V-0	--		
0.031 in	V-0	--		
0.06 in	V-0	--		
0.12 in	V-0	--		

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

Notes

[1] Typical properties: these are not to be construed as specifications.