

Vydyne® AG10K

Ascend Performance Materials Operations LLC - *Polyamide 66*

General Information

Product Description

Vydyne AG10K is a 50% glass fiber reinforced, heat and hydrolytically stabilized PA66 for injection molded applications.

General

Material Status	• Commercial: Active
Availability	• Europe • North America
Filler / Reinforcement	• Glass Fiber, 50% Filler by Weight
Additive	• Heat Stabilizer • Mold Release
Features	• Good Strength • Heat Stabilized • Outstanding Surface Finish
Appearance	• Black • Natural Color
Forms	• Pellets
Processing Method	• Injection Molding
Resin ID	• PA66-GF50

Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.55	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 73°F, 0.0787 in	0.70	--	%	
Flow : 73°F, 0.0787 in	0.30	--	%	
Water Absorption (24 hr, 73°F)	0.80	--	%	ISO 62
Water Absorption (Saturation, 73°F)	2.5	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	1.2	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	2.28E+6	1.81E+6	psi	ISO 527-1
Tensile Stress (Break, 73°F)	31800	23900	psi	ISO 527-2
Tensile Strain (Break, 73°F)	2.6	3.5	%	ISO 527-2
Flexural Modulus (73°F)	2.34E+6	1.71E+6	psi	ISO 178
Flexural Stress (73°F)	48600	34800	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-40°F	7.1	5.7	ft·lb/in ²	
-22°F	6.7	6.2	ft·lb/in ²	
73°F	6.7	8.6	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-40°F	39	38	ft·lb/in ²	
-22°F	39	39	ft·lb/in ²	
73°F	42	46	ft·lb/in ²	
Notched Izod Impact Strength				ISO 180/1A
-40°F	5.2	5.7	ft·lb/in ²	
-22°F	6.2	6.2	ft·lb/in ²	
73°F	6.7	8.1	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	502	--	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	487	--	°F	ISO 75-2/A
Melting Temperature	500	--	°F	ISO 11357-3
RTI Elec				UL 746B
0.030 in	149	--	°F	



0.12 in	149	--	°F	
RTI Imp				UL 746B
0.030 in	149	--	°F	
0.12 in	149	--	°F	
RTI Str				UL 746B
0.030 in	149	--	°F	
0.12 in	149	--	°F	
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity (0.0394 in)	1.0E+16	--	ohms·cm	IEC 60093
Electric Strength (0.0394 in)	660	610	V/mil	IEC 60243-1
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.030 in	HB	--		
0.12 in	HB	--		

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 536 °F
Middle Temperature	518 to 536 °F
Front Temperature	518 to 554 °F
Processing (Melt) Temp	518 to 554 °F
Mold Temperature	140 to 194 °F

Notes

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

