

Vydyne® B 50 GF BK EST KW2

 Ascend Performance Materials Operations LLC - *Polyamide 6*
General Information
Product Description

Vydyne B 50 GF BK EST KW2 is standard flow, organic heat stabilized, 50% glass-fiber reinforced PA6 resin. Available in black, this product is also lubricated for improved machine feed and flow.

General

Material Status	• Commercial: Active
Availability	• Asia Pacific • Europe • North America
Filler / Reinforcement	• Glass Fiber, 50% Filler by Weight
Additive	• Heat Stabilizer • Lubricant
Features	• Chemical Resistant • Good Flow • Heat Stabilized - Organic • Gasoline Resistant • Good Heat Resistance • Lubricated • General Purpose • Heat Stabilized
Appearance	• Black
Forms	• Pellets
Processing Method	• Injection Molding
Resin ID	• PA6-GF50

Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.57	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 73°F, 0.0787 in	0.50	--	%	
Flow : 73°F, 0.0787 in	0.30	--	%	
Water Absorption (24 hr, 73°F)	1.3	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	1.3	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	2.29E+6	1.57E+6	psi	ISO 527-1
Tensile Stress (Break, 73°F)	31900	21800	psi	ISO 527-2
Tensile Strain (Break, 73°F)	2.5	5.5	%	ISO 527-2
Flexural Modulus (73°F)	2.44E+6	1.75E+6	psi	ISO 178
Flexural Stress (73°F)	48300	32500	psi	ISO 178
Poisson's Ratio (73°F)	0.34	--		ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-40°F	6.7	6.2	ft·lb/in ²	
-22°F	6.7	6.7	ft·lb/in ²	
73°F	8.1	9.5	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-40°F	45	46	ft·lb/in ²	
-22°F	44	44	ft·lb/in ²	
73°F	44	44	ft·lb/in ²	
Notched Izod Impact Strength				ISO 180/1A
-40°F	6.7	7.1	ft·lb/in ²	
-22°F	7.6	7.1	ft·lb/in ²	
73°F	8.1	10	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	428	421	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	415	401	°F	ISO 75-2/A
Melting Temperature	428	--	°F	ISO 11357-3



CLTE - Flow (73 to 131°F, 0.0787 in)	8.9E-6	--	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F, 0.0787 in)	4.2E-5	--	in/in/°F	ISO 11359-2
Electrical	Dry	Conditioned	Unit	Test Method
Electric Strength (0.0394 in)	690	610	V/mil	IEC 60243-1
Comparative Tracking Index (0.118 in)	575	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.06 in	HB	--		
0.12 in	HB	--		

Processing Information

Injection	Dry Unit
Drying Temperature	176 to 194 °F
Drying Time	> 3.0 hr
Rear Temperature	446 to 536 °F
Middle Temperature	446 to 536 °F
Front Temperature	446 to 536 °F
Nozzle Temperature	446 to 536 °F
Processing (Melt) Temp	446 to 536 °F
Mold Temperature	176 to 194 °F

Notes

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

