Vydyne® STAT B 40 FC BK

Ascend Performance Materials Operations LLC - *Polyamide 6*

General Information

Product Description

Vydyne STAT B 40 FC BK is standard flow 40% carbon-fiber reinforced PA6 resin. Available in black, it is specifically designed for high stiffness and strength. This product is also electrically conductive.

General			
Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Filler / Reinforcement	• Carbon Fiber, 40% Filler by Weight		
Additive	• Lubricant		
Features	• Chemical Resistant • Gasoline Resistant • General Purpose	• Good Dimensional Stability • Good Flow • Good Stiffness	• High Tensile Strength • Lubricated
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		
Resin ID	• PA6-CF40		

Properties [1]

Physical	Dry	Conditioned	Unit	Test Method
Density	1.31	--	g/cm³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 73°F, 0.0787 in	0.50	--	%	
Flow : 73°F, 0.0787 in	0.20	--	%	
Water Absorption (Equilibrium, 73°F, 50% RH)	1.9	--	%	ISO 62
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus (73°F)	3.41E+6	2.39E+6	psi	ISO 527-1
Tensile Stress (Break, 73°F)	34800	29000	psi	ISO 527-2
Tensile Strain (Break, 73°F)	1.5	3.5	%	ISO 527-2
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength (73°F)	5.2	7.6	ft·lb/in²	ISO 179/1eA
Charpy Unnotched Impact Strength (73°F)	48	--	ft·lb/in²	ISO 179/1eU
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Deflection Temperature Under Load (66 psi, Unannealed)	428	--	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	410	--	°F	ISO 75-2/A
Melting Temperature	432	--	°F	ISO 11357-3
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Volume Resistivity (0.0394 in)	1.0E+3	--	ohms·cm	IEC 60093
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 212	°F
Drying Time	> 3.0	hr
Rear Temperature	446 to 518	°F
Middle Temperature	446 to 527	°F
Front Temperature	446 to 527	°F
Nozzle Temperature	446 to 527	°F
Processing (Melt) Temp	446 to 527	°F
Mold Temperature	176 to 194	°F