

**Vydyne® 23HST BK0891**

Ascend Performance Materials Operations LLC - Polyamide 66

**General Information**
**Product Description**

Vydyne 23HST BK0891 is an unfilled, heat-stabilized, lubricated injection-molding PA66 grade exhibiting high-toughness, excellent flow, and fast cycle time. 23HST BK0891 is designed principally for thin part molding such as cable ties and fasteners. This product offers the main benefits of PA66 such as high strength, rigidity, and maintains flame resistance with excellent toughness in cold and dry environments.

**General**

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• Heat Stabilizer	• Lubricant	• Mold Release
Features	• Abrasion Resistant • Chemical Resistant • Fast Molding Cycle • Gasoline Resistant • General Purpose	• Good Mold Release • Good Weather Resistance • Heat Aging Resistant • Heat Stabilized • High Rigidity	• High Strength • Low Temperature Toughness • Lubricated • Solvent Resistant
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		
Resin ID	• PA66		

**Properties <sup>1</sup>**

<b>Physical</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Density	1.14	--	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 73°F, 0.0787 in	1.8	--	%	
Flow : 73°F, 0.0787 in	1.8	--	%	
Water Absorption (24 hr, 73°F)	2.1	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	2.0	--	%	ISO 62
<b>Mechanical</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Tensile Modulus (73°F)	377000	174000	psi	ISO 527-1
Tensile Stress (Yield, 73°F)	10300	6820	psi	ISO 527-2
Tensile Stress (Break, 73°F)	6960	5950	psi	ISO 527-2
Tensile Strain (Yield, 73°F)	4.7	21	%	ISO 527-2
Tensile Strain (Break, 73°F)	31	> 50	%	ISO 527-2
Flexural Modulus (73°F)	421000	160000	psi	ISO 178
Flexural Stress (73°F)	12200	4210	psi	ISO 178
Poisson's Ratio (73°F)	0.38	--		ISO 527-2
<b>Impact</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Charpy Notched Impact Strength				ISO 179/1eA
-40°F	2.5	2.8	ft-lb/in <sup>2</sup>	
-22°F	2.9	3.5	ft-lb/in <sup>2</sup>	
73°F	5.2	11	ft-lb/in <sup>2</sup>	
Charpy Unnotched Impact Strength				ISO 179/1eU
-40°F	No Break	No Break		
-22°F	No Break	No Break		
73°F	No Break	No Break		
Notched Izod Impact Strength				ISO 180/1A
-40°F	3.0	4.0	ft-lb/in <sup>2</sup>	
-22°F	4.0	4.3	ft-lb/in <sup>2</sup>	



73°F	4.4	9.0	ft·lb/in <sup>2</sup>	
<b>Thermal</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Deflection Temperature Under Load (66 psi, Unannealed)	385	--	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	151	--	°F	ISO 75-2/A
Melting Temperature	500	--	°F	ISO 11357-3
CLTE - Flow (73 to 131°F, 0.0787 in)	4.3E-5	--	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F, 0.0787 in)	4.7E-5	--	in/in/°F	ISO 11359-2
<b>Electrical</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Electric Strength (0.0394 in)	740	690	V/mil	IEC 60243-1

### Processing Information

<b>Injection</b>	<b>Dry Unit</b>
Drying Temperature	167 to 185 °F
Drying Time	4.0 to 8.0 hr
Suggested Max Moisture	0.15 %
Suggested Max Re grind	20 %
Rear Temperature	500 to 536 °F
Middle Temperature	518 to 545 °F
Front Temperature	536 to 554 °F
Nozzle Temperature	536 to 572 °F
Processing (Melt) Temp	545 to 572 °F
Mold Temperature	149 to 203 °F

