

**Vydyne® 66A NT0766**

Ascend Performance Materials Operations LLC - Polyamide 66

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

Vydyne 66A NT0766 is a high-viscosity PA66 resin suitable for injection-molding and extrusion applications. It is available in natural color only. 66A NT0766 resin offers high strength, rigidity and toughness over a broad range of demanding applications and good fluid resistance to a wide variety of chemicals, solvents and oils.

**General**

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Features	• Chemical Resistant • Gasoline Resistant • General Purpose • Good Toughness	• High Molecular Weight • High Rigidity • High Strength • High Viscosity	• Kosher Approved • Oil Resistant • Solvent Resistant
Agency Ratings	• ASTM D4066 • ASTM D6779 • EC 1935/2004 • EU 10/2011	• EU 2023/2006 • FDA 21 CFR 177.1500 • FED L-P-410A • MIL M-20693B	• NSF STD-51 • NSF STD-61 • USDA 3A
UL File Number	• E70062		
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Film Extrusion • Injection Molding	• Profile Extrusion • Sheet Extrusion	
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	2.0	--	%	
Flow : 73°F, 0.0787 in	2.1	--	%	
Water Absorption (Saturation, 73°F)	8.5	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	2.5	--	%	ISO 62
<b>Mechanical</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Tensile Modulus (73°F)	406000	261000	psi	ISO 527-1
Tensile Stress (Yield, 73°F)	12300	7980	psi	ISO 527-2
Tensile Stress (Break, 73°F)	7980	10200	psi	ISO 527-2
Tensile Strain (Yield, 73°F)	5.0	20	%	ISO 527-2
Tensile Strain (Break, 73°F)	25	150	%	ISO 527-2
Flexural Modulus (73°F)	450000	131000	psi	ISO 178
Flexural Stress (73°F)	13100	4350	psi	ISO 178
Poisson's Ratio (73°F)	0.42	--		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
-22°F	2.9	2.9	ft·lb/in <sup>2</sup>	
73°F	2.9	11	ft·lb/in <sup>2</sup>	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F	No Break	No Break		
73°F	No Break	No Break		
Notched Izod Impact Strength				ISO 180/1A
-22°F	2.9	2.9	ft·lb/in <sup>2</sup>	
73°F	2.9	12	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)	383	--	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	158	--	°F	ISO 75-2/A
Melting Temperature	500	--	°F	ISO 11357-3
CLTE - Flow (73 to 131°F, 0.0787 in)	5.6E-5	--	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F, 0.0787 in)	5.6E-5	--	in/in/°F	ISO 11359-2
RTI Elec				UL 746B
0.028 in	266	--	°F	
0.06 in	266	--	°F	
0.12 in	266	--	°F	
RTI Imp				UL 746B
0.028 in	167	--	°F	
0.06 in	167	--	°F	
0.12 in	167	--	°F	
RTI Str				UL 746B
0.028 in	185	--	°F	
0.06 in	185	--	°F	
0.12 in	185	--	°F	
<b>Electrical</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Electric Strength (0.0394 in)	660	--	V/mil	IEC 60243-1
Arc Resistance (0.118 in)	PLC 5	--		ASTM D495
Comparative Tracking Index (0.118 in)	600	--	V	IEC 60112
High Amp Arc Ignition (HAI)				UL 746A
0.028 in	PLC 0	--		
0.06 in	PLC 0	--		
0.12 in	PLC 0	--		
High Voltage Arc Tracking Rate (HVTR) (0.118 in)	PLC 0	--		UL 746A
Hot-wire Ignition (HWI)				UL 746A
0.028 in	PLC 4	--		
0.06 in	PLC 3	--		
0.12 in	PLC 2	--		
<b>Flammability</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Flame Rating				UL 94
0.028 in	HB	--		
0.06 in	HB	--		
0.12 in	HB	--		
Glow Wire Flammability Index				IEC 60695-2-12
0.028 in	1560	--	°F	
0.06 in	1560	--	°F	
0.12 in	1760	--	°F	
Glow Wire Ignition Temperature				IEC 60695-2-13
0.028 in	1290	--	°F	
0.06 in	1290	--	°F	
0.12 in	1290	--	°F	
Oxygen Index	28	--	%	ISO 4589-2

### Processing Information

<b>Extrusion</b>	<b>Dry Unit</b>
Cylinder Zone 1 Temp.	482 to 563 °F
Cylinder Zone 2 Temp.	482 to 563 °F
Cylinder Zone 3 Temp.	482 to 563 °F
Cylinder Zone 4 Temp.	482 to 563 °F
Cylinder Zone 5 Temp.	482 to 563 °F
Melt Temperature	518 to 563 °F
Die Temperature	518 to 563 °F

