Vydyne® 66B

Ascend Performance Materials Operations LLC - *Polyamide 66*

General Information

Product Description

Vydyne 66B is a high-viscosity PA66 resin suitable for injection-molding and extrusion applications. It is available in natural color only. 66B 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 Melt Strength • High Molecular Weight • High Rigidity • High Strength	• High Viscosity • Kosher Approved • Oil Resistant • Solvent Resistant
Agency Ratings	• ASTM D4066 PA0114 • ASTM D6779 PA0114 • 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
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Extrusion		
Resin ID	• PA66		

Properties [1]

Physical	Dry	Conditioned	Unit	Test Method
Density	1.14	--	g/cm³	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
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
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
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179/1eA
-22°F	2.9	2.9	ft·lb/in²	
73°F	2.9	11	ft·lb/in²	
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/in²	
73°F	2.9	12	ft·lb/in²	
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
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
0.030 in	266	--	°F	
0.06 in	266	--	°F	
0.12 in	266	--	°F	
RTI Imp				UL 746B
0.030 in	167	--	°F	
0.06 in	167	--	°F	
0.12 in	167	--	°F	
RTI Str				UL 746B
0.030 in	185	--	°F	
0.06 in	185	--	°F	
0.12 in	185	--	°F	
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
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
0.030 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
0.030 in	PLC 4	--		
0.06 in	PLC 3	--		
0.12 in	PLC 2	--		
Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**
Flame Rating				UL 94
0.030 in	HB	--		
0.06 in	HB	--		
0.12 in	V-2	--		
Glow Wire Flammability Index				IEC 60695-2-12
0.030 in	1560	--	°F	
0.06 in	1560	--	°F	
0.12 in	1760	--	°F	
Glow Wire Ignition Temperature				IEC 60695-2-13
0.030 in	1290	--	°F	
0.06 in	1290	--	°F	
0.12 in	1290	--	°F	
Oxygen Index	28	--	%	ISO 4589-2

Processing Information

Extrusion	**Dry**	**Unit**
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