

# Vydyne® 66B

## polyamide 66



Vydyne 66B is a high-viscosity PA66 resin suitable for injection-molding and extrusion applications. It is available in natural color only. Vydyne 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 Melt Strength	• Good Toughness • High Molecular Weight • High Rigidity • High Strength	• High Viscosity • Kosher Approved • Oil Resistant • Solvent Resistant	
Uses	• Film • Industrial Applications • Monofilaments	• Profiles • Rods • Sheet	• Tubing	
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	
RoHS Compliance	• RoHS Compliant			
UL File Number	• E70062			
Appearance	• Natural Color			
Forms	• Pellets			
Processing Method	• Extrusion			

Physical	Dry	Conditioned	Unit	Test Method
Density	1.14	--	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 2.00 mm	2.0	--	%	
Flow : 2.00 mm	2.1	--	%	
Water Absorption				ISO 62
Saturation, 23°C	8.5	--	%	
Equilibrium, 23°C, 50% RH	2.5	--	%	

Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	2800	1800	MPa	ISO 527-2/1A
Tensile Stress				ISO 527-2/1A
Yield, 23°C	85.0	55.0	MPa	
Break, 23°C	55.0	70.0	MPa	
Tensile Strain (Yield, 23°C)	5.0	20	%	ISO 527-2
Nominal Tensile Strain at Break (23°C)	> 25	> 150	%	ISO 527-2/1A
Flexural Modulus (23°C)	3100	900	MPa	ISO 178
Flexural Stress (23°C)	90.0	30.0	MPa	ISO 178
Poisson's Ratio (23°C)	0.42	--		ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	6.0	6.0	kJ/m <sup>2</sup>	
23°C	6.0	23	kJ/m <sup>2</sup>	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	No Break	No Break		
23°C	No Break	No Break		
Notched Izod Impact Strength				ISO 180
-30°C	6.0	6.0	kJ/m <sup>2</sup>	
23°C	6.0	25	kJ/m <sup>2</sup>	

Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	195	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	70.0	--	°C	ISO 75-2/A
Melting Temperature	260	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C, 2.00 mm	1.0E-4	--	cm/cm/°C	
Transverse : 23 to 55°C, 2.00 mm	1.0E-4	--	cm/cm/°C	
RTI Elec				UL 746
0.71 mm	130	--	°C	
1.5 mm	130	--	°C	
3.0 mm	130	--	°C	
RTI Imp				UL 746
0.71 mm	75.0	--	°C	
1.5 mm	75.0	--	°C	
3.0 mm	75.0	--	°C	
RTI Str				UL 746
0.71 mm	85.0	--	°C	
1.5 mm	85.0	--	°C	
3.0 mm	85.0	--	°C	
Electrical	Dry	Conditioned	Unit	Test Method
Dielectric Strength (1.00 mm)	26	--	kV/mm	IEC 60243
Arc Resistance (3.00 mm)	PLC 5	--		ASTM D495
Comparative Tracking Index (3.00 mm)	600	--	V	IEC 60112
High Amp Arc Ignition (HAI)				UL 746
0.71 mm	PLC 0	--		
1.5 mm	PLC 0	--		
3.0 mm	PLC 0	--		
High Voltage Arc Tracking Rate (HVTR)	PLC 0	--		UL 746
Hot-wire Ignition (HWI)				UL 746
0.71 mm	PLC 4	--		
1.5 mm	PLC 3	--		
3.0 mm	PLC 2	--		

Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.71 mm	HB	--		
1.5 mm	HB	--		
3.0 mm	V-2	--		
Glow Wire Flammability Index				IEC 60695-2-12
0.71 mm	850	--	°C	
1.5 mm	850	--	°C	
3.0 mm	960	--	°C	
Glow Wire Ignition Temperature				IEC 60695-2-13
0.71 mm	700	--	°C	
1.5 mm	700	--	°C	
3.0 mm	700	--	°C	
Oxygen Index	28	--	%	ASTM D2863
<b>Extrusion</b>		<b>Dry Unit</b>		
Cylinder Zone 1 Temp.		250 to 295 °C		
Cylinder Zone 2 Temp.		250 to 295 °C		
Cylinder Zone 3 Temp.		250 to 295 °C		
Cylinder Zone 4 Temp.		250 to 295 °C		
Cylinder Zone 5 Temp.		250 to 295 °C		
Melt Temperature		270 to 295 °C		
Die Temperature		270 to 295 °C		

#### Extrusion Notes

Recommended Extrusion Conditions:

Melt Point: 260°C

Melt Pressure: 3 to 17 MPa

Blow Film Bath Temperature: 20°C to 80°C

Chill Roll Temperature (Cast Film): 20°C to 80°C

Screw Design: General Purpose or Barrier

**Notes**

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

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