

# 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.

Typical Applications/End Uses:  
Typical uses include packaging films, monofilaments, bristles, rods, tubing, sheet and extruded profiles.

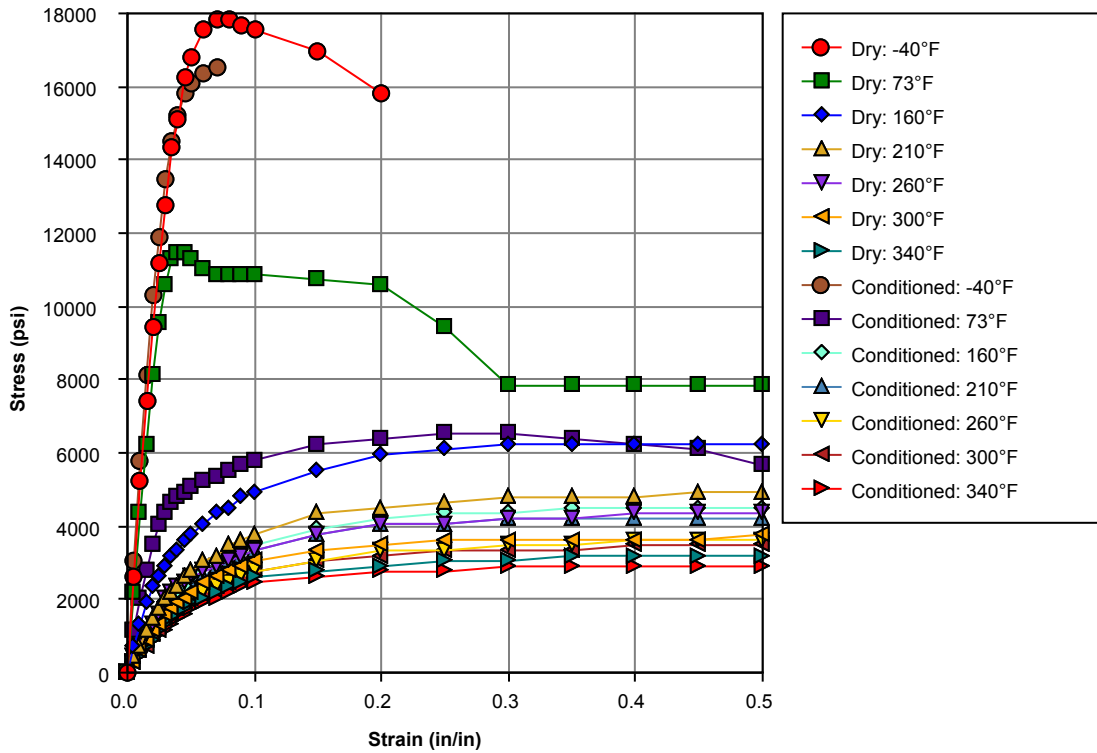
General				
Material Status	• Commercial: Active			
Availability	• Asia Pacific	• Europe	• North America	
Features	• Gasoline Resistance • General Purpose • Good Chemical Resistance • Good Melt Strength	• Good Toughness • High Molecular Weight • High Rigidity • High Strength	• High Viscosity • Kosher Approved • Oil Resistant • Solvent Resistant	
Uses	• Film • Industrial Applications • Monofilaments	• Profiles • Rods • Sheet	• Tubing	
Agency Ratings	• ASTM D 4066 PA0114 • ASTM D 6779 PA0114 • FDA 21 CFR 177.1500	• FED L-P-410A • MIL M-20693B • NSF 51	• NSF 61 • USDA 3A	
RoHS Compliance	• RoHS Compliant			
UL File Number	• E70062			
Appearance	• Natural Color			
Forms	• Pellets			
Processing Method	• Extrusion			
Multi-Point Data	• Isothermal Stress vs. Strain (ISO 11403-1)			
Physical	Dry	Conditioned	Unit	Test Method
Density	1.14	--	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 0.0787 in	2.0	--	%	
Flow : 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 527-2/1A
Tensile Stress (Yield, 73°F)	12300	7980	psi	ISO 527-2/1A
Tensile Stress (Break, 73°F)	7980	10200	psi	ISO 527-2/1A
Tensile Strain (Yield, 73°F)	5.0	20	%	ISO 527-2
Nominal Tensile Strain at Break (73°F)	> 25	> 150	%	ISO 527-2/1A
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/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
-22°F	2.9	2.9	ft·lb/in <sup>2</sup>	
73°F	2.9	12	ft·lb/in <sup>2</sup>	

Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature 66 psi, Unannealed	383	--	°F	ISO 75-2/B
Heat Deflection Temperature 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 746
0.0280 in	266	--	°F	
0.0591 in	266	--	°F	
0.118 in	266	--	°F	
RTI Imp				UL 746
0.0280 in	167	--	°F	
0.0591 in	167	--	°F	
0.118 in	167	--	°F	
RTI Str				UL 746
0.0280 in	185	--	°F	
0.0591 in	185	--	°F	
0.118 in	185	--	°F	
Electrical	Dry	Conditioned	Unit	Test Method
Dielectric Strength (0.0394 in)	660	--	V/mil	IEC 60243
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 746
0.0280 in	PLC 0	--		
0.0591 in	PLC 0	--		
0.118 in	PLC 0	--		
High Voltage Arc Tracking Rate (HVTR)	PLC 0	--		UL 746
Hot-wire Ignition (HWI)				UL 746
0.0280 in	PLC 4	--		
0.0591 in	PLC 3	--		
0.118 in	PLC 2	--		

Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.0280 in	HB	--		
0.0591 in	HB	--		
0.118 in	V-2	--		
Glow Wire Flammability Index				IEC 60695-2-12
0.0280 in	1560	--	°F	
0.0591 in	1560	--	°F	
0.118 in	1760	--	°F	
Glow Wire Ignition Temperature				IEC 60695-2-13
0.0280 in	1290	--	°F	
0.0591 in	1290	--	°F	
0.118 in	1290	--	°F	
Oxygen Index	28	--	%	ASTM D2863

Isothermal Stress vs. Strain (ISO 11403-1)



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

### 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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