

# Vydyne® 88X-D

## polyamide 66/6 copolymer



Vydyne 88X-D is medium-viscosity PA66/6 random copolymer used for injection-molding applications. It provides benefits of high flow, fast cycles and good surface finish of the final parts. This copolymer is specifically designed to be used in application that requires high strength, good toughness, good surface lubricity and abrasion resistance.

Vydyne 88X-D is available in natural color, and it is the product of choice for low-yellowness-required applications. Vydyne 88X-D

maintains the chemical resistance typical of PA66/6 to many chemicals, machine and motor oils, solvents and gasoline.

### Typical Applications/End Uses:

Vydyne 88X-D has been used in many injection-molding applications such as cable ties/tie straps, terminal blocks, bearings, bushings, cams, electrical connectors and housings and many other hardware and general consumer-industrial parts.

General				
Material Status	• Commercial: Active			
Availability	• Asia Pacific	• Europe	• North America	
Additive	• Lubricant	• Nucleating Agent		
Features	• Fast Molding Cycle • General Purpose • Good Mold Release	• Good Stiffness • High Rigidity • Lubricated	• Nucleated	
Uses	• Bearings • Cams • Connectors	• Fasteners • General Purpose • Housings	• Industrial Applications	
Agency Ratings	• ASTM D 4066 PA0131	• ASTM D 6779 PA0131	• FED L-P-410A	
RoHS Compliance	• RoHS Compliant			
Automotive Specifications	• ASTM D4000 PA131	• ASTM D4066 PA0131	• FEDERAL LP410A	
UL File Number	• E70062			
Appearance	• Natural Color			
Forms	• Pellets			
Processing Method	• Injection Molding			

Physical	Dry	Conditioned	Unit	Test Method
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 (73°F, 24 hr)	1.4	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	2.8	--	%	ISO 62

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Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	493000	261000	psi	ISO 527-2
Tensile Stress (Yield, 73°F)	12500	8700	psi	ISO 527-2
Tensile Stress (Break, 73°F)	7250	5800	psi	ISO 527-2
Tensile Strain (Yield, 73°F)	5.0	10	%	ISO 527-2
Nominal Tensile Strain at Break (73°F)	27	> 50	%	ISO 527-2
Flexural Modulus (73°F)	421000	142000	psi	ISO 178
Flexural Strength (73°F)	13100	4350	psi	ISO 178
Poisson's Ratio	0.40	--		ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°F	2.4	2.4	ft·lb/in <sup>2</sup>	
73°F	2.9	14	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	2.4	2.4	ft·lb/in <sup>2</sup>	
73°F	2.9	14	ft·lb/in <sup>2</sup>	

Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature 66 psi, Unannealed	361	--	°F	ISO 75-2/B
Heat Deflection Temperature 264 psi, Unannealed	144	--	°F	ISO 75-2/A
Melting Temperature	487	--	°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
0.0157 in	266	--	°F	
0.0280 in	266	--	°F	
0.0591 in	266	--	°F	
0.118 in	266	--	°F	
RTI Imp				UL 746
0.0157 in	167	--	°F	
0.0280 in	167	--	°F	
0.0591 in	167	--	°F	
0.118 in	167	--	°F	
RTI Str				UL 746
0.0157 in	167	--	°F	
0.0280 in	185	--	°F	
0.0591 in	185	--	°F	
0.118 in	185	--	°F	
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity (0.0295 in)	1.0E+10	--	ohm·cm	IEC 60093
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 3	--		

Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.0157 in	V-2	--		
0.0280 in	V-2	--		
0.0591 in	V-2	--		
0.118 in	V-2	--		
Glow Wire Flammability Index				IEC 60695-2-12
0.0280 in	1470	--	°F	
0.0591 in	1470	--	°F	
0.118 in	1710	--	°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	--	%	ISO 4589-2
<b>Injection</b>		<b>Dry Unit</b>		
Drying Temperature		< 158 °F		
Drying Time		1.0 to 3.0 hr		
Suggested Max Regrind		25 %		
Rear Temperature		482 to 518 °F		
Middle Temperature		500 to 527 °F		
Front Temperature		518 to 536 °F		
Nozzle Temperature		518 to 554 °F		
Processing (Melt) Temp		527 to 554 °F		
Mold Temperature		149 to 203 °F		

## Notes

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

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