



Vydyne® 66B

Ascend Performance Materials Operations LLC - Polyamide 66

Monday, November 4, 2019

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. 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		

ASTM & ISO Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.14	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 0.0787 in	2.0	--	%	
Flow : 0.0787 in	2.1	--	%	
Water Absorption				ISO 62
Saturation, 73°F	8.5	--	%	
Water Absorption				ISO 62
Equilibrium, 73°F, 50% RH	2.5	--	%	
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				ISO 527-2/1A
73°F	> 25	> 150	%	
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

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Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°F	2.9	2.9	ft·lb/in ²	
73°F	2.9	11	ft·lb/in ²	
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 ²	
73°F	2.9	12	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				ISO 75-2/B
66 psi, Unannealed	383	--	°F	
Heat Deflection Temperature				ISO 75-2/A
264 psi, Unannealed	158	--	°F	
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
0.028 in	266	--	°F	
0.06 in	266	--	°F	
0.12 in	266	--	°F	
RTI Imp				UL 746
0.028 in	167	--	°F	
0.06 in	167	--	°F	
0.12 in	167	--	°F	
RTI Str				UL 746
0.028 in	185	--	°F	
0.06 in	185	--	°F	
0.12 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				IEC 60112
0.118 in	600	--	V	
High Amp Arc Ignition (HAI)				UL 746
0.028 in	PLC 0	--		
0.06 in	PLC 0	--		
0.12 in	PLC 0	--		
High Voltage Arc Tracking Rate (HVTR)	PLC 0	--		UL 746
Hot-wire Ignition (HWI)				UL 746
0.028 in	PLC 4	--		
0.06 in	PLC 3	--		
0.12 in	PLC 2	--		
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.028 in	HB	--		
0.06 in	HB	--		
0.12 in	V-2	--		

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Flammability	Dry	Conditioned	Unit	Test Method
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	--	%	ASTM D2863

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

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

¹ Typical properties: these are not to be construed as specifications.