

Vydyne® 66B

Polyamide 66

Ascend Performance Materials Operations LLC

Message:

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 Information	
UL YellowCard	E70062-249070
Features	Kosher certification
	Rigidity, high
	High molecular weight
	High strength
	Solvent resistance
	Good melt strength
	Good chemical resistance
	Gasoline resistance
	Oil resistance
	Good toughness
	General
	Viscosity, High
Uses	Bar
	Films
	monofilament
	Industrial application
	Pipe fittings
	Sheet
	Profile
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 compliance		
UL File Number		E70062		
Appearance		Natural color		
Forms		Particle		
Processing Method		Extrusion		
Multi-Point Data		Isothermal Stress vs. Strain (ISO 11403-1)		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.14	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Vertical flow direction: 2.00mm	2.0	--	%	ISO 294-4
Flow direction: 2.00mm	2.1	--	%	ISO 294-4
Water Absorption				ISO 62
Saturated, 23°C	8.5	--	%	ISO 62
Equilibrium, 23°C, 50% RH	2.5	--	%	ISO 62
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	ISO 527-2/1A
Fracture, 23°C	55.0	70.0	MPa	ISO 527-2/1A
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 ²	ISO 179/1eA
23°C	6.0	23	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	No Break	No Break		ISO 179/1eU
23°C	No Break	No Break		ISO 179/1eU
Notched Izod Impact				ISO 180
-30°C	6.0	6.0	kJ/m ²	ISO 180
23°C	6.0	25	kJ/m ²	ISO 180
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	195	--	°C	ISO 75-2/B

1.8 MPa, not annealed	70.0	--	°C	ISO 75-2/A
Melting Temperature	260	--	°C	ISO 11357-3
Linear thermal expansion coefficient				ISO 11359-2
Flow: 23 to 55°C, 2.00mm	1.0E-4	--	cm/cm/°C	ISO 11359-2
Lateral: 23 to 55°C, 2.00mm	1.0E-4	--	cm/cm/°C	ISO 11359-2
RTI Elec				UL 746
0.710 mm	130	--	°C	UL 746
1.50 mm	130	--	°C	UL 746
3.00 mm	130	--	°C	UL 746
RTI Imp				UL 746
0.710 mm	75.0	--	°C	UL 746
1.50 mm	75.0	--	°C	UL 746
3.00 mm	75.0	--	°C	UL 746
RTI				UL 746
0.710 mm	85.0	--	°C	UL 746
1.50 mm	85.0	--	°C	UL 746
3.00 mm	85.0	--	°C	UL 746
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
0.710 mm	PLC 0	--		UL 746
1.50 mm	PLC 0	--		UL 746
3.00 mm	PLC 0	--		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 0	--		UL 746
Hot-wire Ignition (HWI)				UL 746
0.710 mm	PLC 4	--		UL 746
1.50 mm	PLC 3	--		UL 746
3.00 mm	PLC 2	--		UL 746
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.710 mm	HB	--		UL 94
1.50 mm	HB	--		UL 94
3.00 mm	V-2	--		UL 94
Glow Wire Flammability Index				IEC 60695-2-12
0.710 mm	850	--	°C	IEC 60695-2-12

1.50 mm	850	--	°C	IEC 60695-2-12
3.00 mm	960	--	°C	IEC 60695-2-12
Glow Wire Ignition Temperature				IEC 60695-2-13
0.710 mm	700	--	°C	IEC 60695-2-13
1.50 mm	700	--	°C	IEC 60695-2-13
3.00 mm	700	--	°C	IEC 60695-2-13
Oxygen Index	28	--	%	ASTM D2863
Extrusion	Dry	Unit		
Cylinder Zone 1 Temp.	250 - 295		°C	
Cylinder Zone 2 Temp.	250 - 295		°C	
Cylinder Zone 3 Temp.	250 - 295		°C	
Cylinder Zone 4 Temp.	250 - 295		°C	
Cylinder Zone 5 Temp.	250 - 295		°C	
Melt Temperature	270 - 295		°C	
Die Temperature	270 - 295		°C	
Extrusion instructions				

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

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