+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
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Vydyne® 22HSP BK

polyamide 66

Vydyne 22HSP BK is a general-purpose, unfilled, lubricated, heat stabilized PA66 resin. Designed principally for injection-molding fabrication, this product offers a combination of engineering properties characterized by high strength; rigidity; good toughness; high melt point; good surface lubricity; abrasion resistance; and resistance to many chemicals, machine and motor oils, solvents and gasoline. This product is designed to resist thermal degradation when exposed to warm climates.

General

Regional Availability	• North America	• Europe	• Asia Pacific
Additive	• Heat Stabilizer	• Lubricant	
Features	• Abrasion Resistance • Gasoline Resistant • Good Toughness • High Strength • Solvent Resistant	• Chemical Resistant • General Purpose • Heat Stabilized • Lubricated	• Fast Molding Cycle • Good Mold Release • High Rigidity • Oil Resistant
Agency Rating	• ASTM, D4066 PA0121 • MIL, M-20693B	• ASTM, D6779 PA0121 • RoHS Compliant	• FED, L-P-410A • SAE, J1639 PA0121 Z6
Automotive Specifications	• Chrysler MS-DB-41 CPN1899 • GM QK 002921	• Delphi M5507 • Mercedes-Benz DBL 5410	• GM GMW16036P-PA66 • VW VW 50180
UL File Number	• E70062		
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		

Physical	dry	cond.	Unit	Test Standard
Density	1.14	-	g/cm³	ISO 1183
Outdoor Suitability	f1		-	UL 746C

Mechanical	dry	cond.	Unit	Test Standard
Tensile Modulus (23°C)	3100	1600	MPa	ISO 527-2
Tensile Stress (Yield, 23°C)	89	57	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	81	48	MPa	ISO 527-2
Tensile Strain (Yield, 23°C)	4.8	20	%	ISO 527-2
Tensile Strain (Break, 23°C)	25	76	%	ISO 527-2
Flexural Modulus (23°C)	3200	1100	MPa	ISO 178
Flexural Strength (23°C)	102	29	MPa	ISO 178

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Impact	dry	cond.	Unit	Test Standard
Charpy Notched Impact Strength				ISO 179/1eA
+23°C	4.1	11	kJ/m²	
-30°C	2.8	2.7	kJ/m²	
-40°C	3.3	2.8	kJ/m²	
Charpy Unnotched Impact Strength				ISO 179/1eU
+23°C	N	N	kJ/m²	
-30°C	N	N	kJ/m²	
-40°C	N	N	kJ/m²	
Notched Izod Impact Strength				ISO 180/1A
+23°C	4.1	8.4	kJ/m²	
-30°C	4.1	5	kJ/m²	
-40°C	3.9	4.7	kJ/m²	

Thermal	dry	cond.	Unit	Test Standard
Heat Deflection Temperature				ISO 75-2/A
1.80 MPa, Unannealed	70	83	°C	
0.45 MPa, Unannealed	208	195	°C	
Melting Temperature	260	*	°C	ISO 11357-3
RTI Elec				UL 746
0.710 mm	140		°C	
1.50 mm	140		°C	
3.00 mm	140		°C	
RTI Imp				UL 746
0.710 mm	95		°C	
1.50mm	110		°C	
3.00 mm	110		°C	
RTI Str				UL 746
0.710 mm	115		°C	
1.50 mm	125		°C	
3.00 mm	125		°C	

Electrical	dry	cond.	Unit	Test Standard
Dielectric Strength (1.00 mm)	29	-	kV/mm	IEC 60243
Arc Resistance (3.00 mm)	6		-	ASTM D 495
Comparative Tracking Index (3.00 mm)	400 - 599		V	IEC 60112
High Amp Arc Ignition (HAI)				UL 746
0.710 mm	PLC 0		-	
1.50 mm	PLC 0		-	

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3.00 mm	PLC 0		-	
High Voltage Arc Tracking Rate (HVTR), 3.00 mm	PLC 0		-	UL 746
Hot-wire Ignition (HWI)				UL 746
0.710 mm	PLC 4		-	
1.50 mm	PLC 4		-	
3.00 mm	PLC 4		-	

Flammability	dry	cond.	Unit	Test Standard
Burning Rate, 2.00 mm			mm/min	ISO 3795
Flammability				UL 94
0.710 mm	V-2		-	
1.50 mm	V-2		-	
3.00 mm	V-2		-	
Glow Wire Flammability Index				IEC 60695-2-12
0.710 mm	825		°C	
1.50 mm	825		°C	
3.00 mm	960		°C	
Glow Wire Ignition Temperature				IEC 60695-2-13
0.710 mm	700		°C	
1.50 mm	700		°C	
3.00 mm	700		°C	
Oxygen index	24	*	%	EN ISO 4589-2

Injection	Value	Unit
Drying Temperature	≤ 70	°C
Drying Time	1 - 3	h
Rear Temperature	260 - 280	°C
Middle Temperature	270 - 285	°C
Front Temperature	280 - 290	°C
Nozzle temperature	280 - 300	°C
Processing (Melt) Temperature	285 - 300	°C
Mold Temperature	65 - 95	°C