

Vydyne® R533 BK0661

Polyamide 66

Ascend Performance Materials Operations LLC

Message:

Vydyne R533 BK0661 is general-purpose, 33% glass-fiber reinforced PA66 resin. Available in black, it is an injection-molding grade that is lubricated for good machine feed, flow and mold release.

Glass-reinforced Vydyne resins provide higher heat distortion temperature, resistance to creep and better dimensional stability when compared with unreinforced PA66. These products have good chemical resistance to a broad range of chemicals including gasoline, hydraulic fluids and most solvents.

General Information				
Filler / Reinforcement		Glass Fiber,33% Filler by Weight		
Additive		Lubricant		
Features		Good Chemical Resistance		
		Good Corrosion Resistance		
		Good Dimensional Stability		
		Good Electrical Properties		
		Good Flow		
		Good Mold Release		
		Heat Stabilized		
		High Rigidity		
		High Strength		
		Lubricated		
		Non-Corrosive		
Uses		Appliance Components		
		Automotive Applications		
		Connectors		
		Electrical/Electronic Applications		
		Engineered Applications		
		Lighting Applications		
		Thin-walled Parts		
UL File Number		E70062		
Appearance		Natural Color		
Forms		Pellets		
Processing Method		Injection Molding		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.40	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 23°C, 2.00 mm	0.90	--	%	

Flow : 23°C, 2.00 mm	0.40	--	%	
Water Absorption				ISO 62
23°C, 24 hr	0.80	--	%	
Equilibrium, 23°C, 50% RH	1.7	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	10600	7900	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	205	145	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	3.0	5.0	%	ISO 527-2
Flexural Modulus (23°C)	10200	6500	MPa	ISO 178
Flexural Stress (23°C)	290	200	MPa	ISO 178
Poisson's Ratio	0.40	--		ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-30°C	10	12	kJ/m ²	
23°C	11	14	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179
-30°C	70	85	kJ/m ²	
23°C	80	90	kJ/m ²	
Notched Izod Impact Strength				ISO 180
-30°C	10	12	kJ/m ²	
23°C	12	14	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	260	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	250	--	°C	ISO 75-2/A
Melting Temperature	260	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C, 2.00 mm	2.1E-5	--	cm/cm/°C	
Transverse : 23 to 55°C, 2.00 mm	1.1E-4	--	cm/cm/°C	
RTI Elec				UL 746
0.750 mm	120	--	°C	
1.50 mm	120	--	°C	
3.00 mm	120	--	°C	
RTI Imp				UL 746
0.750 mm	100	--	°C	
1.50 mm	100	--	°C	
3.00 mm	105	--	°C	

RTI Str				UL 746
0.750 mm	125	--	°C	
1.50 mm	125	--	°C	
3.00 mm	125	--	°C	
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity (3.00 mm)	1.0E+14	--	ohms·cm	IEC 60093
Dielectric Strength (1.00 mm)	20	--	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
0.750 mm	PLC 0	--		
1.50 mm	PLC 0	--		
3.00 mm	PLC 0	--		
High Voltage Arc Tracking Rate (HVTR)	PLC 1	--		UL 746
Hot-wire Ignition (HWI)				UL 746
0.750 mm	PLC 4	--		
1.50 mm	PLC 4	--		
3.00 mm	PLC 4	--		
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.750 mm	HB	--		
1.50 mm	HB	--		
3.00 mm	HB	--		
Injection	Dry	Unit		
Drying Temperature	80.0		°C	
Drying Time	4.0		hr	
Suggested Max Regrind	25		%	
Rear Temperature	280 to 310		°C	
Middle Temperature	280 to 310		°C	
Front Temperature	280 to 310		°C	
Nozzle Temperature	280 to 310		°C	
Processing (Melt) Temp	285 to 305		°C	
Mold Temperature	65.0 to 95.0		°C	

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

