

Vydyne® R550 polyamide 66



Vydyne R550 is general-purpose, hydrolysis-resistant, 50% glass-fiber reinforced PA66 resin. Available in natural, it is also lubricated for improved flow and offers superior surface appearance.

when compared with unreinforced PA66. These products have good chemical resistance to a broad range of chemicals including gasoline, hydraulic fluids and most solvents.

Glass-reinforced Vydyne resins provide higher heat distortion temperature, resistance to creep and better dimensional stability

Typical Applications/End Uses:
To come

General				
Material Status	• Commercial: Active			
Availability	• Asia Pacific	• Europe	• North America	
Filler / Reinforcement	• Glass Fiber, 50% Filler by Weight			
Additive	• Lubricant			
Features	• Good Flow • Good Mold Release	• High Rigidity • High Strength	• Hydrolysis Resistant • Lubricated	
Uses	• Gears	• Housings	• Power/Other Tools	
Agency Ratings	• ASTM D 4066 PA011G50 • ASTM D 6779 PA011G50			
Automotive Specifications	<ul style="list-style-type: none"> • 3M 11-0003-5762-1 • CHRYSLER MS-DB-41 CPN1900 Color: Black • CHRYSLER MS-DB-41 CPN2043 Color: Natural • CHRYSLER MS-DB-41 CPN2727 Color: Black • CHRYSLER MS-DB-41 CPN4014 Color: 100% Color Match • DAEWOO EDS-M-5165-02 	<ul style="list-style-type: none"> • FORD ESE-M4D287-A Color: Black • FORD ESE-M4D287-B • FORD ESE-M4D287-B Color: Black • FORD WSK-M4D663-A • FORD WSK-M4D663-A Color: Black • GM GMP.PA66.013 	<ul style="list-style-type: none"> • GM GMP.PA66.013 Color: Black • GM GMP.PA66.054 • GM GMP.PA66.054 Color: Black • SAE J1639 PA1116 • SAE J1639 PA1116 Color: Black • TagAZ TAMS-8729-01 	
UL File Number	• E70062			
Appearance	• Natural Color			
Forms	• Pellets			
Processing Method	• Injection Molding			
Physical	Dry	Conditioned	Unit	Test Method
Density	1.58	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 73°F, 0.0787 in	0.90	--	%	
Flow : 73°F, 0.0787 in	0.40	--	%	
Water Absorption (73°F, 24 hr)	0.50	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	1.2	--	%	ISO 62

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Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	2.44E+6	2.21E+6	psi	ISO 527-2
Tensile Stress (Break, 73°F)	34800	27600	psi	ISO 527-2
Tensile Strain (Break, 73°F)	2.5	2.8	%	ISO 527-2
Flexural Modulus (73°F)	2.32E+6	1.63E+6	psi	ISO 178
Flexural Stress (73°F)	50800	39200	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	6.7	7.1	ft·lb/in ²	
73°F	7.1	10	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F	43	45	ft·lb/in ²	
73°F	45	52	ft·lb/in ²	
Notched Izod Impact Strength				ISO 180
-22°F	7.6	8.6	ft·lb/in ²	
73°F	8.1	10	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				ISO 75-2/B
66 psi, Unannealed	500	--	°F	
Heat Deflection Temperature				ISO 75-2/A
264 psi, Unannealed	491	--	°F	
Melting Temperature	500	--	°F	ISO 11357-3
CLTE - Flow (73 to 131°F, 0.0787 in)	6.7E-6	--	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
0.0295 in	257	--	°F	
0.0591 in	257	--	°F	
0.118 in	257	--	°F	
RTI Imp				UL 746
0.0295 in	230	--	°F	
0.0591 in	230	--	°F	
0.118 in	230	--	°F	
RTI Str				UL 746
0.0295 in	266	--	°F	
0.0591 in	266	--	°F	
0.118 in	266	--	°F	

Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity (0.0295 in)	1.0E+13	--	ohm·cm	IEC 60093
Dielectric Strength (0.0394 in)	560	--	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
0.0295 in	PLC 0	--		
0.0591 in	PLC 0	--		
0.118 in	PLC 0	--		
High Voltage Arc Tracking Rate (HVTR)	PLC 1	--		UL 746
Hot-wire Ignition (HWI)				UL 746
0.0295 in	PLC 4	--		
0.0591 in	PLC 4	--		
0.118 in	PLC 4	--		
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.0295 in	HB	--		
0.0591 in	HB	--		
0.118 in	HB	--		
Additional Information	Dry	Conditioned	Unit	Test Method
Automotive Materials - (thickness d = 1mm)	+	--		FMVSS 302
Injection		Dry	Unit	
Drying Temperature		176	°F	
Drying Time		4.0	hr	
Suggested Max Regrind		25	%	
Rear Temperature		536 to 590	°F	
Middle Temperature		536 to 590	°F	
Front Temperature		536 to 590	°F	
Nozzle Temperature		536 to 590	°F	
Processing (Melt) Temp		545 to 581	°F	
Mold Temperature		149 to 203	°F	

Notes

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