

# Vydyne® R535 polyamide 66



Vydyne R535 is general-purpose, hydrolysis-resistant, 35% glass-fiber reinforced PA66 resin. This product is 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, 35% Filler by Weight			
Additive	• Lubricant			
Features	• Antifreeze Resistant • Fatigue Resistant • Gasoline Resistance	• Good Chemical Resistance • Good Flow • Hydrolysis Resistant	• Lubricated • Solvent Resistant	
Agency Ratings	• ASTM D 4066 PA011G35	• ASTM D 6779 PA011G35		
Automotive Specifications	• CHRYSLER MS-DB-41 CPN4018 Color: Black • DAEWOO EDS-M-5164-11 • FEDERAL LP410A • FORD WSK-M4D642-A Color: Black • FORD WSK-M4D642-A2 Color: Black	• FORD WSK-M4D752-A Color: Black • GM GMP.PA66.040 Color: Black • GM GMP.PA66.040 Color: Natural • GM GMW3038P-PA66-GF30H Color: Black • GM GMW3038P-PA66-GF30H Color: Natural	• OPEL QK 003013 H Color: Black • OPEL QK 003013 H Color: Natural • OPEL QK 003013 HW Color: Black • TagAZ TAMS-8723-01	
UL File Number	• E70062			
Appearance	• Natural Color			
Forms	• Pellets			
Processing Method	• Injection Molding			
Physical	Dry	Conditioned	Unit	Test Method
Density (73°F)	1.41	--	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 0.0787 in	0.90	--	%	
Flow : 0.0787 in	0.40	--	%	
Water Absorption (73°F, 24 hr)	0.80	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	1.6	--	%	ISO 62

Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	1.68E+6	1.23E+6	psi	ISO 527-2
Tensile Stress (Break, 73°F)	30500	21800	psi	ISO 527-2
Tensile Strain (Break, 73°F)	3.0	5.0	%	ISO 527-2
Flexural Modulus (73°F)	1.52E+6	1.02E+6	psi	ISO 178
Flexural Stress (73°F)	43500	29700	psi	ISO 178
Poisson's Ratio (73°F)	0.40	--		ISO 527
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°F	5.2	5.7	ft·lb/in <sup>2</sup>	
73°F	5.7	6.7	ft·lb/in <sup>2</sup>	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F	33	40	ft·lb/in <sup>2</sup>	
73°F	38	43	ft·lb/in <sup>2</sup>	
Notched Izod Impact Strength				ISO 180
-22°F	5.2	5.7	ft·lb/in <sup>2</sup>	
73°F	5.7	6.7	ft·lb/in <sup>2</sup>	
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	482	--	°F	
Melting Temperature	500	--	°F	ISO 11357-3
CLTE - Flow (73 to 131°F)	1.1E-5	--	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F)	5.8E-5	--	in/in/°F	ISO 11359-2
RTI Elec				UL 746
0.0295 in	248	--	°F	
0.0591 in	248	--	°F	
0.118 in	248	--	°F	
RTI Imp				UL 746
0.0295 in	185	--	°F	
0.0591 in	185	--	°F	
0.118 in	221	--	°F	
RTI Str				UL 746
0.0295 in	239	--	°F	
0.0591 in	248	--	°F	
0.118 in	248	--	°F	

Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity (0.0295 in)	1.0E+13	--	ohm·cm	IEC 60093
Dielectric Strength (0.0394 in)	610	--	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

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

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