

Vydyne® R533T polyamide 66



Vydyne R533T is a translucent 33% glass-fiber reinforced PA66 resin designed specifically for use in power-steering reservoirs and other applications where chemical resistance, whiteness and transmittance are required.

numerous applications due to an excellent balance of properties. Reduction in production costs, energy consumption and part weight are key advantages of Vydyne glass-reinforced PA66 resins over aluminum and/or zinc die-cast parts.

Vydyne R533T resin has tensile strength and modulus properties just below aluminum and zinc and can replace these metals in

Typical Applications/End Uses:
To come

General				
Material Status	• Commercial: Active			
Availability	• Asia Pacific	• Europe	• North America	
Filler / Reinforcement	• Glass Fiber, 33% Filler by Weight			
Features	• Good Chemical Resistance • High Tensile Strength			
Uses	• Automotive Under the Hood • Metal Replacement			
Agency Ratings	• ASTM D 4066 PA0111G35			
Automotive Specifications	• CHRYSLER MS-DB-41 CPN2043 • DAEWOO EDS-M-5165-01	• FORD WSA-M4D768-A • GM GMP.PA66.013	• SAE J1639 PA1116 Z6	
Appearance	• Translucent			
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 : 73°F, 0.0787 in	0.90	--	%	
Flow : 73°F, 0.0787 in	0.40	--	%	
Water Absorption (73°F, 24 hr)	0.80	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	1.8	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	1.48E+6	1.15E+6	psi	ISO 527-2
Tensile Stress (Break, 73°F)	30500	21800	psi	ISO 527-2
Tensile Strain (Break, 73°F)	4.0	6.0	%	ISO 527-2
Flexural Modulus (73°F)	1.38E+6	943000	psi	ISO 178
Flexural Stress (73°F)	42100	29700	psi	ISO 178
Poisson's Ratio	0.40	--		ISO 527-2

Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-22°F	3.8	5.7	ft·lb/in ²	
73°F	5.7	6.7	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179
-22°F	No Break	40 ft·lb/in ²		
73°F	No Break	43 ft·lb/in ²		
Notched Izod Impact Strength				ISO 180
-22°F	4.8	5.7	ft·lb/in ²	
73°F	5.7	6.7	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				ISO 75-2/B
66 psi, Unannealed	486	--	°F	
Heat Deflection Temperature				ISO 75-2/A
264 psi, Unannealed	455	--	°F	
Melting Temperature	507	--	°F	ISO 11357-3
CLTE - Flow (73 to 131°F, 0.0787 in)	1.2E-5	--	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F, 0.0787 in)	5.9E-5	--	in/in/°F	ISO 11359-2
Optical	Dry	Conditioned	Unit	Test Method
Transmittance	23.0	--	%	ASTM D1003
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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