

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. R533T offers standard flow and maintains the excellent resistance typical of PA66 in chemicals, machine and motor oils, solvents, and gasoline.

General

Regional Availability	• North America	• Europe	• Asia Pacific
Features	• Chemical Resistant	• High Tensile Strength	
Agency Rating	• ASTM, D4066 PA113G35	• ASTM, D6779 PA083G35	• SAE, J1639 PA1116 Z6
Automotive Specifications	• Chrysler MS-DB-41_CPN 2043	• Toyota TSM5603G-2B (compliance)	
Forms	• Pellets		
Processing Method	• Injection Molding		

Physical

	dry	cond.	Unit	Test Standard
Density	1.40	-	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 23°C, 2.00 mm	0.9	*	%	
Flow : 23°C, 2.00 mm	0.4	*	%	
Water Absorption				ISO 62
23°C, 24 hr	0.8	*	%	
Equilibrium, 23°C, 50% RH	1.8	*	%	

Mechanical

	dry	cond.	Unit	Test Standard
Tensile Modulus (23°C)	10200	7900	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	210	150	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	4	6	%	ISO 527-2
Flexural Modulus (23°C)	9500	6500	MPa	ISO 178
Flexural Strength (23°C)	290	205	MPa	ISO 178
Poisson's Ratio (23°C)	0.4	-		ISO 527-2

Impact

	dry	cond.	Unit	Test Standard
Charpy Notched Impact Strength				ISO 179/1eA
+23°C	12	14	kJ/m ²	
-30°C	8	12	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
+23°C	N	90	kJ/m ²	
-30°C	N	85	kJ/m ²	
Notched Izod Impact Strength				ISO 180/1A

Vydyne® R533T

polyamide 66



+23°C	12	14	kJ/m²
-30°C	10	12	kJ/m²

Thermal	dry	cond.	Unit	Test Standard
Heat Deflection Temperature				ISO 75-2/A
1.80 MPa, Unannealed	235	-	°C	
0.45 MPa, Unannealed	252	-	°C	
Melting Temperature	264	*	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C, 2.00 mm	21	*	E-6/K	
Transverse : 23 to 55°C, 2.00 mm	110	*	E-6/K	
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	
1.50mm	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	cond.	Unit	Test Standard
Volume Resistivity (1.00 mm)	1E12	-	Ohm*m	IEC 60093
Dielectric Strength (1.00 mm)	20	-	kV/mm	IEC 60243
Arc Resistance (3.00 mm)	5		-	ASTM D 495
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), 3.00 mm	PLC 1		-	UL 746
Hot-wire Ignition (HWI)				UL 746
0.750 mm	PLC 4		-	
1.50 mm	PLC 4		-	
3.00 mm	PLC 3		-	

Vydyne® R533T

polyamide 66



Flammability	Value	Unit	Test Standard
Flammability			UL 94
0.750 mm	HB	-	
1.50 mm	HB	-	
3.00 mm	HB	-	
Glow Wire Flammability Index			IEC 60695-2-12
0.750 mm	750	°C	
1.50 mm	725	°C	
3.00 mm	800	°C	
Glow Wire Ignition Temperature			IEC 60695-2-13
0.750 mm	775	°C	
1.50 mm	725	°C	
3.00 mm	750	°C	
Injection	Value	Unit	
Drying Temperature	80	°C	
Drying Time	4	h	
Rear Temperature	280 - 310	°C	
Middle Temperature	280 - 310	°C	
Front Temperature	280 - 310	°C	
Nozzle temperature	280 - 310	°C	
Processing (Melt) Temperature	285 - 305	°C	
Mold Temperature	65 - 95	°C	

