

Vydyne® R515

polyamide 66



Vydyne R515 is a general purpose, 15% glass-filled, high viscosity PA66 based resin designed for injection molding applications. R515 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
Additive	• Lubricant		
Features	• Chemical Resistant • Good Mold Release • High Strength • Solvent Resistant	• Gasoline Resistant • Grease Resistant • Lubricated	• Good Flow • High Rigidity • Oil Resistant
Agency Rating	• ASTM, D4066 PA011G15 • EU, 10/2011 • SAE, J1639 PA1112	• ASTM, D6779 PA011G15 • EU, 2023/2006	• EC, 1935/2004 • FDA, 21 CFR 177.1500
Automotive Specifications	• Modine GM2055		
UL File Number	• E70062		
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		

Physical

	dry	cond.	Unit	Test Standard
Density	1.24	-	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 23°C, 2.00 mm	1.0	*	%	
Flow : 23°C, 2.00 mm	0.5	*	%	
Water Absorption				ISO 62
23°C, 24 hr	1	*	%	
Equilibrium, 23°C, 50% RH	2.2	*	%	

Mechanical

	dry	cond.	Unit	Test Standard
Tensile Modulus (23°C)	6600	4000	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	120	80	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	3	13	%	ISO 527-2
Flexural Modulus (23°C)	5900	3250	MPa	ISO 178
Flexural Strength (23°C)	170	110	MPa	ISO 178
Poisson's Ratio (23°C)	0.4		-	ISO 527-2

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Impact	dry	cond.	Unit	Test Standard
Charpy Notched Impact Strength				ISO 179/1eA
+23°C	6	7.5	kJ/m ²	
-30°C	6	5.3	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
+23°C	39	43	kJ/m ²	
-30°C	32	38	kJ/m ²	
Notched Izod Impact Strength				ISO 180/1A
+23°C	6.6	7	kJ/m ²	
-30°C	5.7	5.4	kJ/m ²	

Thermal	dry	cond.	Unit	Test Standard
Heat Deflection Temperature				ISO 75-2/A
1.80 MPa, Unannealed	241	-	°C	
0.45 MPa, Unannealed	258	-	°C	
Melting Temperature	260	*	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C, 2.00 mm	30	*	E-6/K	
Transverse : 23 to 55°C, 2.00 mm	112	*	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	85		°C	
1.50mm	85		°C	
3.00 mm	105		°C	
RTI Str				UL 746
0.750 mm	115		°C	
1.50 mm	120		°C	
3.00 mm	120		°C	

Electrical	dry	cond.	Unit	Test Standard
Volume Resistivity (1.00 mm)	1E11	-	Ohm*m	IEC 60093
Dielectric Strength (1.00 mm)	24	-	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

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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 4	-	

Flammability	Value	Test Standard
Flammability		UL 94
0.750 mm	HB	
1.50 mm	HB	
3.00 mm	HB	

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

