

Vydyne® R515

 Ascend Performance Materials Operations LLC - *Polyamide 66*
General Information
Product Description

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

Material Status	• Commercial: Active
Availability	• Asia Pacific • Europe • North America
Filler / Reinforcement	• Glass Fiber, 15% Filler by Weight
Additive	• Lubricant
Features	• Chemical Resistant • Grease Resistant • Oil Resistant • Gasoline Resistant • High Rigidity • Solvent Resistant • Good Flow • High Strength • Good Mold Release • Lubricated
Agency Ratings	• 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	• AISIN TO20141124 - P-PA66-GF15-006 • MODINE GM2055
UL File Number	• E70062
Appearance	• Natural Color
Forms	• Pellets
Processing Method	• Injection Molding
Resin ID	• PA66-GF15

Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.24	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 73°F, 0.0787 in	1.0	--	%	
Flow : 73°F, 0.0787 in	0.50	--	%	
Water Absorption (24 hr, 73°F)	1.0	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	2.2	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	957000	580000	psi	ISO 527-1
Tensile Stress (Break, 73°F)	17400	11600	psi	ISO 527-2
Tensile Strain (Break, 73°F)	3.0	13	%	ISO 527-2
Flexural Modulus (73°F)	856000	471000	psi	ISO 178
Flexural Stress (73°F)	24700	16000	psi	ISO 178
Poisson's Ratio (73°F)	0.40	--		ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°F	2.9	2.5	ft·lb/in ²	
73°F	2.9	3.6	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F	15	18	ft·lb/in ²	
73°F	19	20	ft·lb/in ²	
Notched Izod Impact Strength				ISO 180/1A
-22°F	2.7	2.6	ft·lb/in ²	
73°F	3.1	3.3	ft·lb/in ²	



Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	496	--	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	466	--	°F	ISO 75-2/A
Melting Temperature	500	--	°F	ISO 11357-3
CLTE - Flow (73 to 131°F, 0.0787 in)	1.7E-5	--	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F, 0.0787 in)	6.2E-5	--	in/in/°F	ISO 11359-2
RTI Elec				UL 746B
0.030 in	248	--	°F	
0.06 in	248	--	°F	
0.12 in	248	--	°F	
RTI Imp				UL 746B
0.030 in	185	--	°F	
0.06 in	185	--	°F	
0.12 in	221	--	°F	
RTI Str				UL 746B
0.030 in	239	--	°F	
0.06 in	248	--	°F	
0.12 in	248	--	°F	
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity (0.0394 in)	1.0E+13	--	ohms·cm	IEC 60093
Electric Strength (0.0394 in)	610	--	V/mil	IEC 60243-1
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 746A
0.030 in	PLC 0	--		
0.06 in	PLC 0	--		
0.12 in	PLC 0	--		
High Voltage Arc Tracking Rate (HVTR) (0.118 in)	PLC 1	--		UL 746A
Hot-wire Ignition (HWI)				UL 746A
0.030 in	PLC 4	--		
0.06 in	PLC 4	--		
0.12 in	PLC 4	--		
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.030 in	HB	--		
0.06 in	HB	--		
0.12 in	HB	--		

Processing Information

Injection	Dry Unit
Drying Temperature	176 °F
Drying Time	4.0 hr
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

¹ Typical properties: these are not to be construed as specifications.

