

Vydyne® R515

Polyamide 66

Ascend Performance Materials Operations LLC

Message:

Vydyne R515 is general-purpose, 15% glass-fiber reinforced PA66 resin.

Typical Applications/End Uses:

To come

General Information				
UL YellowCard		E70062-100521434		
Filler / Reinforcement		Glass Fiber, 15% Filler by Weight		
Additive		Lubricant		
Features		Gasoline Resistance		
		Good Chemical Resistance		
		Good Flow		
		Good Mold Release		
		Grease Resistant		
		Heat Stabilized		
		High Rigidity		
		High Strength		
		Lubricated		
		Oil Resistant		
Uses		Automotive Under the Hood		
		Gears		
		Housings		
		Power/Other Tools		
Agency Ratings		ASTM D 4066 PA0111G15		
		ASTM D 6779 PA0111G15		
UL File Number		E70062		
Appearance		Natural Color		
Forms		Pellets		
Processing Method		Injection Molding		
Physical	Dry	Conditioned	Unit	Test Method
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	0.50	--	%	
Water Absorption				ISO 62
23°C, 24 hr	1.0	--	%	
Equilibrium, 23°C, 50% RH	2.2	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	6600	4000	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	120	80.0	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	3.0	13	%	ISO 527-2
Flexural Modulus (23°C)	5900	3250	MPa	ISO 178
Flexural Stress (23°C)	170	110	MPa	ISO 178
Poisson's Ratio	0.40	--		ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-30°C	6.0	5.3	kJ/m ²	
23°C	6.0	7.5	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179
-30°C	32	38	kJ/m ²	
23°C	39	43	kJ/m ²	
Notched Izod Impact Strength				ISO 180
-30°C	5.7	5.4	kJ/m ²	
23°C	6.6	7.0	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	258	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	241	--	°C	ISO 75-2/A
Melting Temperature	260	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C, 2.00 mm	3.0E-5	--	cm/cm/°C	
Transverse : 23 to 55°C, 2.00 mm	1.1E-4	--	cm/cm/°C	
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	85.0	--	°C	
1.50 mm	85.0	--	°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	Conditioned	Unit	Test Method
Volume Resistivity (0.750 mm)	1.0E+13	--	ohms·cm	IEC 60093
Dielectric Strength (1.00 mm)	24	--	kV/mm	IEC 60243
Arc Resistance (3.00 mm)	PLC 5	--		ASTM D495
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)	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	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.750 mm	HB	--		
1.50 mm	HB	--		
3.00 mm	HB	--		
Injection	Dry	Unit		
Drying Temperature	80.0		°C	
Drying Time	4.0		hr	
Suggested Max Regrind	25		%	
Rear Temperature	280 to 310		°C	
Middle Temperature	280 to 310		°C	
Front Temperature	280 to 310		°C	
Nozzle Temperature	280 to 310		°C	
Processing (Melt) Temp	285 to 305		°C	
Mold Temperature	65.0 to 95.0		°C	

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