

Vydyne® R540

Polyamide 66

Ascend Performance Materials Operations LLC

Message:

Vydyne R540 is general-purpose, hydrolysis-resistant, 40% glass-fiber reinforced PA66 resin. Available in natural, it is specifically designed to maximize the retention of physical properties when exposed to anti-freeze solutions at elevated temperatures. This product is also lubricated for improved flow and offers superior surface appearance.

Glass-reinforced Vydyne resins provide higher heat distortion temperature, resistance to creep and better dimensional stability when compared with unreinforced PA66. These products have good chemical resistance to a broad range of chemicals including gasoline, hydraulic fluids and most solvents. Typical Applications/End Uses:

To come

General Information				
UL YellowCard		E70062-100521434		
Filler / Reinforcement		Glass Fiber,40% Filler by Weight		
Additive		Lubricant		
Features		Antifreeze Resistant		
		Fatigue Resistant		
		Gasoline Resistance		
		Good Chemical Resistance		
		Good Flow		
		Hydrolysis Resistant		
		Lubricated		
Agency Ratings		Solvent Resistant		
Agency Ratings		ASTM D 4066 PA011G40		
		ASTM D 6779 PA011G40		
UL File Number		E70062		
Appearance		Natural Color		
Forms		Pellets		
Processing Method		Injection Molding		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.46	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 23°C, 2.00 mm	0.90	--	%	
Flow : 23°C, 2.00 mm	0.40	--	%	
Water Absorption				ISO 62
23°C, 24 hr	0.60	--	%	
Equilibrium, 23°C, 50% RH	1.5	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method

Tensile Modulus (23°C)	14100	11100	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	220	165	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	3.0	4.0	%	ISO 527-2
Flexural Modulus (23°C)	12300	9300	MPa	ISO 178
Flexural Stress (23°C)	335	250	MPa	ISO 178
Poisson's Ratio	0.40	--		ISO 527
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-30°C	12	11	kJ/m ²	
23°C	12	19	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179
-30°C	80	87	kJ/m ²	
23°C	90	92	kJ/m ²	
Notched Izod Impact Strength				ISO 180
-30°C	13	13	kJ/m ²	
23°C	14	19	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	260	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	252	--	°C	ISO 75-2/A
Melting Temperature	260	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C, 2.00 mm	1.7E-5	--	cm/cm/°C	
Transverse : 23 to 55°C, 2.00 mm	1.0E-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 (3.00 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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