

Vydyne® R550

Polyamide 66

Ascend Performance Materials Operations LLC

Message:

Vydyne R550 is general-purpose, hydrolysis-resistant, 50% glass-fiber reinforced PA66 resin. Available in natural, it 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		E70062-249088		
Filler / Reinforcement		Glass Fiber,50% Filler by Weight		
Additive		Lubricant		
Features		Good Flow		
		Good Mold Release		
		High Rigidity		
		High Strength		
		Hydrolysis Resistant		
		Lubricated		
Uses		Gears		
		Housings		
		Power/Other Tools		
Agency Ratings		ASTM D 4066 PA011G50		
		ASTM D 6779 PA011G50		
UL File Number		E70062		
Appearance		Natural Color		
Forms		Pellets		
Processing Method		Injection Molding		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.58	--	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	0.50	--	%	

Equilibrium, 23°C, 50% RH	1.2	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	16800	15200	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	240	190	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	2.5	2.8	%	ISO 527-2
Flexural Modulus (23°C)	16000	11200	MPa	ISO 178
Flexural Stress (23°C)	350	270	MPa	ISO 178
Poisson's Ratio	0.40	--		ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	14	15	kJ/m ²	
23°C	15	21	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	91	95	kJ/m ²	
23°C	95	110	kJ/m ²	
Notched Izod Impact Strength				ISO 180
-30°C	16	18	kJ/m ²	
23°C	17	21	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	255	--	°C	ISO 75-2/A
Melting Temperature	260	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C, 2.00 mm	1.2E-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	125	--	°C	
1.50 mm	125	--	°C	
3.00 mm	125	--	°C	
RTI Imp				UL 746
0.750 mm	110	--	°C	
1.50 mm	110	--	°C	
3.00 mm	110	--	°C	
RTI Str				UL 746
0.750 mm	130	--	°C	
1.50 mm	130	--	°C	

3.00 mm	130	--	°C	
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity (0.750 mm)	1.0E+13	--	ohms·cm	IEC 60093
Dielectric Strength (1.00 mm)	22	--	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	--		
Additional Information	Dry	Conditioned		Test Method
Automotive Materials - (thickness d = 1mm)	+	--		FMVSS 302
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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