Vydyne® R530 NAT

polyamide 66

Vydyne R530 NAT is a general purpose, 30% glass-filled, high viscosity PA66 based resin designed for injection molding applications. R530 NAT offers standard flow with a natural surface finish and maintains the excellent resistance typical of PA66 in chemicals, machine and motor oils, solvents, and gasoline.

General

Additive	• Lubricant		
Features	• Antifreeze Resistant • Gasoline Resistant • Solvent Resistant	• Chemical Resistant • Good Flow	• Fatigue Resistant • Lubricated
Agency Rating	• ASTM, D4066 PA011G30 • EU, 10/2011	• ASTM, D6779 PA011G30 • EU, 2023/2006	• EC, 1935/2004 • FDA, 21 CFR 177.1500
Automotive Specifications	• Aisin TO20141124 - P-PA66-GF30-005		
UL File Number	• E70062		
Certifications	• Food approval 10/2011	• Food approval FDA 21 CFR	
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		

Physical	dry	cond.	Unit	Test Standard
Density	1.37	-	g/cm³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 23°C, 2.00 mm	0.9	*	%	
Flow : 23°C, 2.00 mm	0.4	*	%	
Water Absorption				ISO 62
23°C, 24 hr	0.9	*	%	
Equilibrium, 23°C, 50% RH	1.9	*	%	

Mechanical	dry	cond.	Unit	Test Standard
Tensile Modulus (23°C)	10000	7400	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	195	135	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	3	5	%	ISO 527-2
Flexural Modulus (23°C)	9600	6000	MPa	ISO 178
Flexural Strength (23°C)	270	190	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	11	13	kJ/m²	
-30°C	10	11	kJ/m²	
Charpy Unnotched Impact Strength				ISO 179/1eU
+23°C	75	85	kJ/m²	
-30°C	65	80	kJ/m²	
Notched Izod Impact Strength				ISO 180/1A
+23°C	12	13	kJ/m²	
-30°C	10	11	kJ/m²	

Thermal	dry	cond.	Unit	Test Standard
Heat Deflection Temperature				ISO 75-2/A
1.80 MPa, Unannealed	250	-	°C	
0.45 MPa, Unannealed	260	-	°C	
Melting Temperature	260	*	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C, 2.00 mm	22	*	E-6/K	
Transverse : 23 to 55°C, 2.00 mm	107	*	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)	1E12	-	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

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

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CAUTION: Do not use Ascend Performance Materials Operations MED grades in medical applications involving implantation in the human body or contact with internal body fluids or tissues for extended periods of time.