

Vydyne® R530H NAT

Ascend Performance Materials Operations LLC - *Polyamide 66*

General Information

Product Description

Vydyne R530H NAT is a general purpose, 30% glass-filled, heat-stabilized, high viscosity PA66 based resin designed for injection molding applications. R530H 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

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight		
Additive	• Heat Stabilizer	• Lubricant	
Features	• Antifreeze Resistant • Chemical Resistant • Fatigue Resistant	• Gasoline Resistant • Good Flow • Heat Stabilized	• Lubricated • Solvent Resistant
Agency Ratings	• ASTM D4066 PA012G30 • ASTM D6779 PA012G30	• EC 1935/2004 • EU 10/2011	• EU 2023/2006 • FDA 21 CFR 177.1500
Automotive Specifications	• AISIN TO20141124 - P-PA66-GF30-807 • CHERRY Q/SQR.S1-33-2012 CMP.PA66.G6 • FORD WSS-M4D752-B1 • GM GMW16270P-PA66-GF30 • GM GMW3038P-PA66-GF30H	• GM GMW3038P-PA66-GF30J • MAHLE BEHR SD2-181 ¹ • MERCEDES BENZ DBL 5406-PV21 ² • TESLA TM-1006 V3 101130 • TESLA TM-1006 V3 201130	• TESLA TM-1006 V3 301130 • TOYOTA TSM 5603G Color: Class 2B, Rev 5 • VOLKSWAGEN TL 52682
UL File Number	• E70062		
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		
Resin ID	• PA66-GF30		

Properties ³

Physical	Dry	Conditioned	Unit	Test Method
Density	1.37	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 73°F, 0.0787 in	0.90	--	%	
Flow : 73°F, 0.0787 in	0.40	--	%	
Water Absorption (24 hr, 73°F)	0.90	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	1.9	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	1.45E+6	1.07E+6	psi	ISO 527-1
Tensile Stress (Break, 73°F)	28300	19600	psi	ISO 527-2
Tensile Strain (Break, 73°F)	3.0	5.0	%	ISO 527-2
Flexural Modulus (73°F)	1.39E+6	870000	psi	ISO 178
Flexural Stress (73°F)	39200	27600	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	4.8	5.2	ft-lb/in ²	
73°F	5.2	6.2	ft-lb/in ²	
Charpy Unnotched Impact Strength				ISO 179/1eU



-22°F	31	38	ft·lb/in ²	
73°F	36	40	ft·lb/in ²	
Notched Izod Impact Strength				ISO 180/1A
-22°F	4.8	5.2	ft·lb/in ²	
73°F	5.7	6.2	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	500	--	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	482	--	°F	ISO 75-2/A
Melting Temperature	500	--	°F	ISO 11357-3
CLTE - Flow (73 to 131°F, 0.0787 in)	1.2E-5	--	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F, 0.0787 in)	5.9E-5	--	in/in/°F	ISO 11359-2
RTI Elec				UL 746B
0.030 in	284	--	°F	
0.06 in	284	--	°F	
0.12 in	284	--	°F	
RTI Imp				UL 746B
0.030 in	248	--	°F	
0.06 in	248	--	°F	
0.12 in	248	--	°F	
RTI Str				UL 746B
0.030 in	257	--	°F	
0.06 in	284	--	°F	
0.12 in	284	--	°F	
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity (0.0394 in)	1.0E+13	--	ohms·cm	IEC 60093
Electric Strength (0.0394 in)	510	--	V/mil	IEC 60243-1
Arc Resistance (0.118 in)	PLC 6	--		ASTM D495
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 3	--		
0.12 in	PLC 4	--		
Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate (0.0787 in)	0.0	--	in/min	ISO 3795
Flame Rating				UL 94
0.030 in	HB	--		
0.06 in	HB	--		
0.12 in	HB	--		
Glow Wire Flammability Index				IEC 60695-2-12
0.030 in	1250	--	°F	
0.06 in	1250	--	°F	
0.12 in	1250	--	°F	
Glow Wire Ignition Temperature				IEC 60695-2-13
0.030 in	1290	--	°F	
0.06 in	1290	--	°F	
0.12 in	1290	--	°F	

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
Temperature	536 to 590	°F
(Melt) Temp	545 to 581	°F
Temperature	149 to 203	°F

¹ (AR.06576) Rev. 7

² compliance

³ Typical properties: these are not to be construed as specifications.

