Vydyne® R533H NT

polyamide 66

Vydyne R533H NT is a general purpose, 33% glass-filled, heat-stabilized PA66 based resin designed for injection molding applications. R533H NT offers improved 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	• Heat Stabilizer	• Lubricant	
Features	• Good Mold Release • High Rigidity	• Heat Stabilized • High Strength	• High Flow • Lubricated
Agency Rating	• ASTM, D4066 PA012G35 • EU, 10/2011 • SAE, J1639 PA1116	• ASTM, D6779 PA012G35 • EU, 2023/2006	• EC, 1935/2004 • FDA, 21 CFR 177.1500
Automotive Specifications	• Aisin TO20141124 - P-PA66-GF33-805 • Toyota TSM5603G, Class 2B, Rev 5 (compliance)	• Aptiv M5543V	• Stellantis MS-DB-41 CPN 2043
UL File Number	• E70062		
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		

Physical	dry	cond.	Unit	Test Standard
Density	1.40	-	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	0.8	*	%	
Equilibrium, 23°C, 50% RH	1.7	*	%	

Mechanical	dry	cond.	Unit	Test Standard
Tensile Modulus (23°C)	10600	7900	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	205	145	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	3	5	%	ISO 527-2
Flexural Modulus (23°C)	10200	6500	MPa	ISO 178
Flexural Strength (23°C)	290	200	MPa	ISO 178
Poisson's Ratio (23°C)	0.4			ISO 527-2

Vydyne® R533H NT

polyamide 66

Impact	dry	cond.	Unit	Test Standard
Charpy Notched Impact Strength				ISO 179/1eA
+23°C	11	14	kJ/m²	
-30°C	10	12	kJ/m²	
Charpy Unnotched Impact Strength				ISO 179/1eU
+23°C	80	90	kJ/m²	
-30°C	70	85	kJ/m²	
Notched Izod Impact Strength				ISO 180/1A
+23°C	12	14	kJ/m²	
-30°C	10	12	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	21	*	E-6/K	
Transverse : 23 to 55°C, 2.00 mm	110	*	E-6/K	
RTI Elec				UL 746
0.750 mm	140		°C	
1.50 mm	140		°C	
3.00 mm	140		°C	
RTI Imp				UL 746
0.750 mm	125		°C	
1.50mm	125		°C	
3.00 mm	125		°C	
RTI Str				UL 746
0.750 mm	140		°C	
1.50 mm	140		°C	
3.00 mm	140		°C	

Electrical	dry	cond.	Unit	Test Standard
Volume Resistivity (1.00 mm)	1E11	-	Ohm*m	IEC 60093
Dielectric Strength (1.00 mm)	20	-	kV/mm	IEC 60243
Arc Resistance (3.00 mm)	6			ASTM D 495
Comparative Tracking Index (3.00 mm)	250 - 399		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 3		
3.00 mm	PLC 4		

Flammability	Value	Unit	Test Standard
Flammability			UL 94
0.750 mm	HB		
1.50 mm	HB		
3.00 mm	HB		
Glow Wire Flammability Index			IEC 60695-2-12
0.750 mm	725	°C	
1.50 mm	700	°C	
3.00 mm	875	°C	
Glow Wire Ignition Temperature			IEC 60695-2-13
0.750 mm	750	°C	
1.50 mm	725	°C	
3.00 mm	750	°C	

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

North America
+1 888 927 2363

Europe
+32 10 608 600

Asia
+86 21 2315 0888

Disclaimer

NOTICE: Although the information and recommendations set forth herein (hereinafter " information") are presented in good faith and believed to be correct as of the date hereof, Ascend Performance Materials Operations makes no representation or warranties as to the completeness of accuracy thereof.

Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purpose prior to use. In no event will Ascend Performance Materials Operations be responsible for damages of any nature whatsoever resulting in the use of or reliance upon information or the products to which information refers. Nothing contained herein is to be construed as a recommendation to use any product, equipment or formulation in conflict with any patent, and Ascend Performance Materials Operations makes no representation or warranty, express or implied, that use thereof will not infringe any patent. No representation or warranties, either express or implied, of merchantability fitness for a particular purpose or of any other nature are made hereunder with respect to information or product to which information refers.

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.