

Product Texts

Vydyne R533H NAT is a general purpose, 33% glass-filled, heat-stabilized, high viscosity PA66 based resin designed for injection molding applications. R533H 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.

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
^[C] Molding shrinkage, parallel	0.4 / *	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	0.9 / *	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	10600 / 7900	MPa	ISO 527
^[C] Stress at break	205 / 145	MPa	ISO 527
^[C] Strain at break	3 / 5	%	ISO 527
Flexural modulus, 23°C	10200 / 6500	MPa	ISO 178
Flexural strength	290 / 200	MPa	ISO 178
^[C] Charpy impact strength, +23°C	80 / 90	kJ/m ²	ISO 179/1eU
^[C] Charpy impact strength, -30°C	70 / 85	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	11 / 14	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	10 / 12	kJ/m ²	ISO 179/1eA
Izod notched impact strength, +23°C	12 / 14	kJ/m ²	ISO 180/1A
Izod notched impact strength	10 / 12	kJ/m ²	ISO 180/1A
Temperature	-30	°C	-

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Melting temperature, 10°C/min	260 / *	°C	ISO 11357-1/-3
^[C] Temp. of deflection under load, 1.80 MPa	250 / *	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	260 / *	°C	ISO 75-1/-2
^[C] Coeff. of linear therm. expansion, parallel	21 / *	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	110 / *	E-6/K	ISO 11359-1/-2
^[C] Burning Behav. at 1.5 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	-
^[C] Burning Behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	0.8 / *	mm	-
Glow Wire Flammability Index (GWFI)	725	°C	IEC 60695-2-12
GWFI - thickness tested (1)	0.75	mm	-
Glow Wire Flammability Index (GWFI)	700	°C	IEC 60695-2-12
GWFI - thickness tested (2)	1.5	mm	-
Glow Wire Flammability Index (GWFI)	875	°C	IEC 60695-2-12
GWFI - thickness tested (3)	3	mm	-
Glow Wire Ignition Temperature (GWIT)	750	°C	IEC 60695-2-13
GWIT - thickness tested (1)	0.75	mm	-
Glow Wire Ignition Temperature (GWIT)	725	°C	IEC 60695-2-13
GWIT - thickness tested (2)	1.5	mm	-
Glow Wire Ignition Temperature (GWIT)	750	°C	IEC 60695-2-13
GWIT - thickness tested (3)	3	mm	-

ASTM Data

UL 94 Flame rating	HB	-	UL 94
Thickness tested	0.75	mm	-

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Volume resistivity	1E11 / -	Ohm*m	IEC 62631-3-1
^[C] Electric strength	20 / -	kV/mm	IEC 60243-1

[C] Comparative tracking index	325 / -	-	IEC 60112
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ASTM Data

Arc Resistance	90 / -	s	ASTM D 495
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[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
[C] Water absorption	0.8 / *	%	Sim. to ISO 62
[C] Humidity absorption	1.7 / *	%	Sim. to ISO 62
[C] Density	1400 / -	kg/m ³	ISO 1183

[C]: CAMPUS

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	4	h	-
Melt temperature	285 - 305	°C	-
Mold temperature	65 - 95	°C	-
Zone 1	280 - 310	°C	-
Zone 2	280 - 310	°C	-
Zone 3	280 - 310	°C	-
Nozzle temperature	280 - 310	°C	-

Characteristics

Processing

Injection Molding

Delivery form

Pellets, Natural Color

Additives

Lubricants, Release agent

Special Characteristics

Heat stabilized or stable to heat

Chemical Resistance

General Chemical Resistance, Solvent Resistance, Hydrolytically Stable, Oil Resistance

Certifications

Food contact, Food approval 10/2011, Food approval FDA 21 CFR

Applications

Automotive, General Purpose

Regional Availability

North America, Europe, Asia Pacific