

**Product Texts**

Vydyne 47H BK03 is general-purpose, medium impact-modified, heat stabilized PA66 resin. The product offers improved resistance to thermal degradation.

47H BK03 is recognized for all the processing and property advantages inherent to PA66 with the addition of improved impact strength. This resin offers a well balanced combination of engineering properties characterized by high melt point, good surface lubricity, abrasion resistance and resistance to many chemicals, machine and motor oils, solvents and gasoline.

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Molding shrinkage, parallel	1.8 / *	%	ISO 294-4, 2577
<sup>[C]</sup> Molding shrinkage, normal	1.6 / *	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Tensile Modulus	2800 / 1700	MPa	ISO 527
Yield stress	60 / 45	MPa	ISO 527
Stress at break	52 / 40	MPa	ISO 527
Strain at break	22 / 60	%	ISO 527
Flexural modulus, 23°C	2400 / 1000	MPa	ISO 178
Flexural strength	75 / 26	MPa	ISO 178
<sup>[C]</sup> Charpy impact strength, +23°C	N / N	kJ/m <sup>2</sup>	ISO 179/1eU
<sup>[C]</sup> Charpy impact strength, -30°C	N / N	kJ/m <sup>2</sup>	ISO 179/1eU
<sup>[C]</sup> Charpy notched impact strength, +23°C	16 / 55	kJ/m <sup>2</sup>	ISO 179/1eA
<sup>[C]</sup> Charpy notched impact strength, -30°C	11 / 17	kJ/m <sup>2</sup>	ISO 179/1eA
Izod notched impact strength, +23°C	15 / 44	kJ/m <sup>2</sup>	ISO 180/1A
Izod notched impact strength	12 / 18	kJ/m <sup>2</sup>	ISO 180/1A
Temperature	-30	°C	-

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Melting temperature, 10°C/min	260 / *	°C	ISO 11357-1/-3
<sup>[C]</sup> Temp. of deflection under load, 1.80 MPa	64 / *	°C	ISO 75-1/-2
<sup>[C]</sup> Temp. of deflection under load, 0.45 MPa	185 / *	°C	ISO 75-1/-2
<sup>[C]</sup> Coeff. of linear therm. expansion, parallel	111 / *	E-6/K	ISO 11359-1/-2
<sup>[C]</sup> Coeff. of linear therm. expansion, normal	136 / *	E-6/K	ISO 11359-1/-2
<sup>[C]</sup> Burning Behav. at 1.5 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	-
<sup>[C]</sup> Burning Behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	0.8 / *	mm	-
Glow Wire Flammability Index (GWFI)	700	°C	IEC 60695-2-12
GWFI - thickness tested (1)	0.75	mm	-
Glow Wire Flammability Index (GWFI)	775	°C	IEC 60695-2-12
GWFI - thickness tested (2)	1.5	mm	-
Glow Wire Flammability Index (GWFI)	700	°C	IEC 60695-2-12
GWFI - thickness tested (3)	3	mm	-
Glow Wire Ignition Temperature (GWIT)	725	°C	IEC 60695-2-13
GWIT - thickness tested (1)	0.75	mm	-
Glow Wire Ignition Temperature (GWIT)	800	°C	IEC 60695-2-13
GWIT - thickness tested (2)	1.5	mm	-
Glow Wire Ignition Temperature (GWIT)	725	°C	IEC 60695-2-13
GWIT - thickness tested (3)	3	mm	-
<b>ASTM Data</b>			
UL 94 Flame rating	HB	-	UL 94
Thickness tested	0.75	mm	-

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Volume resistivity	1E9 / -	Ohm*m	IEC 62631-3-1
<sup>[C]</sup> Electric strength	12 / -	kV/mm	IEC 60243-1
<sup>[C]</sup> Comparative tracking index	525 / -	-	IEC 60112
<b>ASTM Data</b>			
Arc Resistance	90 / -	s	ASTM D 495

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
<sup>[C]</sup> Water absorption	1.2 / *	%	Sim. to ISO 62
<sup>[C]</sup> Humidity absorption	2.3 / *	%	Sim. to ISO 62
<sup>[C]</sup> Density	1100 / -	kg/m <sup>3</sup>	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, Black

### Additives

Lubricants

### Special Characteristics

High impact or impact modified, Heat stabilized or stable to heat

### Chemical Resistance

General Chemical Resistance, Solvent Resistance, Oil Resistance

### Applications

Automotive, Electrical and Electronical, General Purpose

### Regional Availability

North America, Europe, Asia Pacific