

Product Texts

Vydyne 49H BK03 is a general-purpose, impact-modified, high modulus PA66 resin. 49H 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
ISO Data			
^[C] Molding shrinkage, parallel	1.8 / *	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	1.6 / *	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	3000 / 2100	MPa	ISO 527
Yield stress	70 / 50	MPa	ISO 527
Stress at break	46 / 42	MPa	ISO 527
Strain at break	17 / 40	%	ISO 527
Flexural modulus, 23°C	2600 / 890	MPa	ISO 178
Flexural strength	81 / 27	MPa	ISO 178
^[C] Charpy impact strength, +23°C	N / N	kJ/m ²	ISO 179/1eU
^[C] Charpy impact strength, -30°C	N / N	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	13 / 43	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	11 / 10	kJ/m ²	ISO 179/1eA
Izod notched impact strength, +23°C	10 / 37	kJ/m ²	ISO 180/1A
Izod notched impact strength	9 / 15	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	69 / *	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	202 / *	°C	ISO 75-1/-2
^[C] Coeff. of linear therm. expansion, parallel	86 / *	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	122 / *	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)	750	°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)	750	°C	IEC 60695-2-13
GWIT - thickness tested (1)	0.75	mm	-
Glow Wire Ignition Temperature (GWIT)	775	°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	-
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	1E9 / -	Ohm*m	IEC 62631-3-1
^[C] Electric strength	14 / -	kV/mm	IEC 60243-1
^[C] Comparative tracking index	525 / -	-	IEC 60112
ASTM Data			
Arc Resistance	90 / -	s	ASTM D 495

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
^[C] Water absorption	1.3 / *	%	Sim. to ISO 62
^[C] Humidity absorption	2.3 / *	%	Sim. to ISO 62
^[C] Density	1110 / -	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, Black

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