

Product Texts

Vydyne R543H BK02 is a general purpose, 43% glass-filled, heat-stabilized PA66 based resin designed for injection molding applications. R543H BK02 offers improved flow with a black 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	14800 / 11300	MPa	ISO 527
^[C] Stress at break	225 / 170	MPa	ISO 527
^[C] Strain at break	3 / 4	%	ISO 527
Flexural modulus, 23°C	12500 / 9400	MPa	ISO 178
Flexural strength	340 / 250	MPa	ISO 178
^[C] Charpy impact strength, +23°C	92 / 95	kJ/m ²	ISO 179/1eU
^[C] Charpy impact strength, -30°C	87 / 90	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	14 / 20	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	13 / 14	kJ/m ²	ISO 179/1eA
Izod notched impact strength, +23°C	13 / 19	kJ/m ²	ISO 180/1A
Izod notched impact strength	13 / 13	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	252 / *	°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	16 / *	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	102 / *	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	-
^[C] Oxygen index	25 / *	%	ISO 4589-1/-2
Glow Wire Flammability Index (GWFI)	675	°C	IEC 60695-2-12
GWFI - thickness tested (1)	0.75	mm	-
Glow Wire Flammability Index (GWFI)	675	°C	IEC 60695-2-12
GWFI - thickness tested (2)	1.5	mm	-
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
GWFI - thickness tested (3)	3	mm	-
Glow Wire Ignition Temperature (GWIT)	700	°C	IEC 60695-2-13
GWIT - thickness tested (1)	0.75	mm	-
Glow Wire Ignition Temperature (GWIT)	700	°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	1E10 / -	Ohm*m	IEC 62631-3-1

[C] Electric strength	29 / 20	kV/mm	IEC 60243-1
[C] Comparative tracking index	500 / -	-	IEC 60112
ASTM Data			
Arc Resistance	150 / -	s	ASTM D 495

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
[C] Water absorption	0.6 / *	%	Sim. to ISO 62
[C] Humidity absorption	1.5 / *	%	Sim. to ISO 62
[C] Density	1500 / -	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

Additives

Lubricants, Release agent

Special Characteristics

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

Features

Creep Resistance

Chemical Resistance

General Chemical Resistance, Solvent Resistance, Grease Resistance, Oil Resistance

Applications

Automotive, General Purpose

Regional Availability

North America, Europe, Asia Pacific