

**Product Texts**

Vydyne R433H BK0746 is designed to reinforce downgauged steel and aluminum used in vehicle body-in-white (BIW) structures, helping reduce weight without sacrificing safety or comfort.

R433H BK0746 has improved energy absorption over traditional glass-filled PA66, helping reduce noise, vibration and harshness (NVH) and absorbing impact energy from crashes. Using R433H BK0746 in the BIW structure reinforces sheet metal, helping manufacturers shave substantial weight and improve efficiency. Trends in lightweight and NVH are becoming even more paramount with the growth of Electric Vehicles. Vydyne R433H BK0746 has excellent performance attributes to support applications where this will be of prime importance such as battery frames and housings.

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Molding shrinkage, parallel	0.6 / *	%	ISO 294-4, 2577
<sup>[C]</sup> Molding shrinkage, normal	1.0 / *	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Tensile Modulus	9600 / 6200	MPa	ISO 527
<sup>[C]</sup> Yield stress	150 / 103	MPa	ISO 527
<sup>[C]</sup> Yield strain	3.3 / 7.4	%	ISO 527
Flexural modulus, 23°C	8400 / 6000	MPa	ISO 178
Flexural strength	210 / 130	MPa	ISO 178
<sup>[C]</sup> Charpy impact strength, +23°C	96 / 96	kJ/m <sup>2</sup>	ISO 179/1eU
<sup>[C]</sup> Charpy impact strength, -30°C	100 / 92	kJ/m <sup>2</sup>	ISO 179/1eU
<sup>[C]</sup> Charpy notched impact strength, +23°C	24 / 27	kJ/m <sup>2</sup>	ISO 179/1eA
<sup>[C]</sup> Charpy notched impact strength, -30°C	17 / 16	kJ/m <sup>2</sup>	ISO 179/1eA
Izod notched impact strength, +23°C	21 / 29	kJ/m <sup>2</sup>	ISO 180/1A
Izod notched impact strength	15 / -	kJ/m <sup>2</sup>	ISO 180/1A
Temperature	-40	°C	-

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Melting temperature, 10°C/min	262 / *	°C	ISO 11357-1/-3
<sup>[C]</sup> Temp. of deflection under load, 1.80 MPa	245 / *	°C	ISO 75-1/-2
<sup>[C]</sup> Temp. of deflection under load, 0.45 MPa	260 / *	°C	ISO 75-1/-2
<sup>[C]</sup> Coeff. of linear therm. expansion, parallel	16 / *	E-6/K	ISO 11359-1/-2
<sup>[C]</sup> Coeff. of linear therm. expansion, normal	11 / *	E-6/K	ISO 11359-1/-2
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	V-2 / *	class	IEC 60695-11-10
Thickness tested	0.4 / *	mm	-
<b>ASTM Data</b>			
UL 94 Flame rating	V-2	-	UL 94
Thickness tested	0.4	mm	-

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
<b>ISO Data</b>			
Electric strength	28 / -	kV/mm	IEC 60243-1

Other properties	dry / cond	Unit	Test Standard
<sup>[C]</sup> Water absorption	1 / *	%	Sim. to ISO 62
<sup>[C]</sup> Humidity absorption	1.3 / *	%	Sim. to ISO 62
<sup>[C]</sup> Density	1350 / -	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

**Features**

Acoustical Barrier Properties

**Chemical Resistance**

General Chemical Resistance, Solvent Resistance, Oil Resistance

**Applications**

Automotive, Encapsulation

**Regional Availability**

North America, Europe, Asia Pacific