

Vydyne® R433H BK0746

polyamide 66



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.

General

Regional Availability	• North America	• Europe	• Asia Pacific
Additive	• Heat Stabilizer	• Lubricant	
Features	• Balanced Stiffness/Toughness • Good Dimensional Stability • Good Tensile Strength • Oil Resistant	• Chemical Resistant • Good Heat Resistance • Good Toughness • Solvent Resistant	• Gasoline Resistant • Good Rigidity • Lubricated
Agency Rating	• ASTM, D4066 PA016G33	• ASTM, D6779 PA016G33	
Automotive Specifications	• Chrysler MS-DB-41_CPN2735		
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		

Physical

	dry	cond.	Unit	Test Standard
Density	1.35	-	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 23°C, 2.00 mm	1.0	*	%	
Flow : 23°C, 2.00 mm	0.6	*	%	
Water Absorption				ISO 62
23°C, 24 hr	1	*	%	
Equilibrium, 23°C, 50% RH	1.3	*	%	

Mechanical

	dry	cond.	Unit	Test Standard
Tensile Modulus (23°C)	9600	6200	MPa	ISO 527-2
Tensile Stress (Yield, 23°C)	150	103	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	151	102	MPa	ISO 527-2
Tensile Strain (Yield, 23°C)	3.3	7.4	%	ISO 527-2
Tensile Strain (Break, 23°C)	3.6	8.5	%	ISO 527-2
Flexural Modulus (23°C)	8400	6000	MPa	ISO 178

Vydyne® R433H BK0746

polyamide 66



Flexural Strength (23°C)	215	132	MPa	ISO 178
Impact	dry	cond.	Unit	Test Standard
Charpy Notched Impact Strength				ISO 179/1eA
+23°C	24	27	kJ/m²	
-30°C	17	16	kJ/m²	
-40°C	17	15	kJ/m²	
Charpy Unnotched Impact Strength				ISO 179/1eU
+23°C	96	96	kJ/m²	
-30°C	100	92	kJ/m²	
-40°C	95	95	kJ/m²	
Notched Izod Impact Strength				ISO 180/1A
+23°C	24	27	kJ/m²	
-30°C	17	18	kJ/m²	
-40°C	16	18	kJ/m²	
Thermal	dry	cond.	Unit	Test Standard
Heat Deflection Temperature				ISO 75-2/A
1.80 MPa, Unannealed	245	241	°C	
0.45 MPa, Unannealed	260	258	°C	
Melting Temperature	262	*	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C, 2.00 mm	16	*	E-6/K	
Transverse : 23 to 55°C, 2.00 mm	11	*	E-6/K	
Injection	Value	Unit		
Drying Temperature	80	°C		
Drying Time	4	h		
Rear Temperature	280 - 310	°C		
Middle Temperature	280 - 310	°C		
Front Temperature	280 - 310	°C		
Nozzle temperature	280 - 310	°C		
Processing (Melt) Temperature	285 - 305	°C		
Mold Temperature	65 - 95	°C		

