



Vydyne® R435H BK0757

Ascend Performance Materials Operations LLC - Polyamide 66

Monday, November 4, 2019

General Information

Product Description

Vydyne R435H BK0757, is designed to reinforce downgauged steel and aluminum used in vehicle body-in-white (BIW) structures, helping reduce weight without sacrificing safety or comfort.

Vydyne R435H BK0757 has improved energy absorption over traditional glass-filled PA66, helping reduce noise, vibration and harshness (NVH) and absorbing impact energy from crashes. Using the new grade 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. R435H BK0757 has excellent properties to support applications where this will be of prime importance such as battery frames and housings.

General

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Filler / Reinforcement	• Glass Fiber, 35% Filler by Weight		
Additive	• Heat Stabilizer	• Impact Modifier	• Lubricant
Features	• Balanced Stiffness/Toughness	• Good Rigidity	• Lubricated • Oil Resistant • Solvent Resistant
	• Chemical Resistant	• Good Tensile Strength	
	• Gasoline Resistant	• Good Toughness	
	• Good Dimensional Stability	• Heat Stabilized	
	• Good Heat Resistance	• Impact Modified	
Uses	• Automotive Applications	• Handles	• Power/Other Tools
	• Automotive Under the Hood	• Lawn and Garden Equipment	• Pulleys
Agency Ratings	• ASTM D4066 PA016G35	• ASTM D6779 PA016G35	
	• ASTM D4066 PA018G35	• ASTM D6779 PA018G35	
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.39	--	g/cm ³	ISO 1183
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	1.64E+6	--	psi	ISO 527-2
Tensile Stress (Break, 73°F)	25100	--	psi	ISO 527-2
Tensile Strain (Break, 73°F)	2.9	--	%	ISO 527-2
Flexural Modulus (73°F)	1.46E+6	--	psi	ISO 178
Flexural Stress (73°F)	37700	--	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-40°F	6.7	--	ft·lb/in ²	
73°F	8.6	--	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179
-40°F	47	--	ft·lb/in ²	
73°F	44	--	ft·lb/in ²	
Notched Izod Impact Strength				ISO 180
-40°F	6.2	--	ft·lb/in ²	
73°F	8.1	--	ft·lb/in ²	

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Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature 66 psi, Unannealed	500	--	°F	ISO 75-2/B
Heat Deflection Temperature 264 psi, Unannealed	478	--	°F	ISO 75-2/A
Melting Temperature	504	--	°F	ISO 11357-3

Processing Information

Injection	Dry	Unit
Drying Temperature	176	°F
Drying Time	4.0	hr
Suggested Max Regrind	25	%
Rear Temperature	536 to 590	°F
Middle Temperature	536 to 590	°F
Front Temperature	536 to 590	°F
Nozzle Temperature	536 to 590	°F
Processing (Melt) Temp	545 to 581	°F
Mold Temperature	149 to 203	°F

Notes

¹ Typical properties: these are not to be construed as specifications.