

Vydyne® R435H BK0757

Ascend Performance Materials Operations LLC - Polyamide 66

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. 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 • Chemical Resistant • Gasoline Resistant • Good Dimensional Stability • Good Heat Resistance • Good Rigidity • Good Tensile Strength • Good Toughness • Heat Stabilized • Impact Modified • Lubricated • Oil Resistant • Solvent Resistant
Agency Ratings	• ASTM D4066 PA016G35 • ASTM D6779 PA016G35
Appearance	• Black
Forms	• Pellets
Processing Method	• Injection Molding
Resin ID	• PA66-I-GF35

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.39	g/cm ³	ISO 1183
Water Absorption (Equilibrium, 73°F, 50% RH)	1.4	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (73°F)	1.64E+6	psi	ISO 527-1
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	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-40°F	6.7	ft·lb/in ²	
73°F	8.6	ft·lb/in ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-40°F	47	ft·lb/in ²	
73°F	44	ft·lb/in ²	
Notched Izod Impact Strength			ISO 180/1A
-40°F	6.2	ft·lb/in ²	
73°F	8.1	ft·lb/in ²	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	500	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	478	°F	ISO 75-2/A
Melting Temperature	504	°F	ISO 11357-3

Processing Information


Injection	Nominal Value	Unit
Drying Temperature	176	°F
Drying Time	4.0	hr
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.

