



Vydyne® R535HT BK653

Ascend Performance Materials Operations LLC - Polyamide 66

Monday, November 4, 2019

General Information

Product Description

Vydyne R535HT BK653 is a 35% glass-filled, heat-stabilized PA66 based resin. Available in black, this product is also lubricated for improved flow and offers superior surface appearance. Specifically designed for high-temperature applications, Vydyne R535HT BK653 can withstand elevated temperatures up to 190°C for an extended period of time.

General

Material Status	• Commercial: Active
Availability	• Asia Pacific • Europe • North America
Filler / Reinforcement	• Glass Fiber, 35% Filler by Weight
Additive	• Heat Stabilizer • Lubricant
Features	• Antifreeze Resistant • Gasoline Resistant • Lubricated • Chemical Resistant • Heat Stabilized • Solvent Resistant • Fatigue Resistant • High Flow
Uses	• Automotive Under the Hood • Charge Air Systems • High Temperature Applications
Agency Ratings	• ASTM D4066 PA114G35 • ASTM D6779 PA084G35
Automotive Specifications	• RENAULT AS23a
UL File Number	• E70062
Appearance	• Black
Forms	• Pellets
Processing Method	• Injection Molding

ASTM & ISO Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.42	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 0.0787 in	0.90	--	%	
Flow : 0.0787 in	0.40	--	%	
Water Absorption (24 hr, 73°F)	0.80	--	%	ISO 62
Water Absorption				ISO 62
Equilibrium, 73°F, 50% RH	1.6	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	1.62E+6	1.13E+6	psi	ISO 527-2
Tensile Stress (Break, 73°F)	29000	18900	psi	ISO 527-2
Tensile Strain (Break, 73°F)	3.2	3.0	%	ISO 527-2
Flexural Modulus (73°F)	1.48E+6	914000	psi	ISO 178
Flexural Stress (73°F)	40600	21000	psi	ISO 178
Poisson's Ratio	0.40	--		ISO 527
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°F	5.2	5.7	ft·lb/in ²	
73°F	5.7	8.6	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F	31	36	ft·lb/in ²	
73°F	36	40	ft·lb/in ²	

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Impact	Dry	Conditioned	Unit	Test Method
Notched Izod Impact Strength				ISO 180
-22°F	6.2	6.2	ft·lb/in ²	
73°F	6.7	8.6	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				ISO 75-2/B
66 psi, Unannealed	493	--	°F	
Heat Deflection Temperature				ISO 75-2/A
264 psi, Unannealed	464	--	°F	
Melting Temperature	500	--	°F	ISO 11357-3
CLTE - Flow (73 to 131°F)	1.1E-5	--	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F)	4.5E-5	--	in/in/°F	ISO 11359-2
Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate				ISO 3795
0.0787 in, Self-Extinguishing	0.0	--	in/min	

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.