

Vydyne® R535HR BK0790

Ascend Performance Materials Operations LLC - Polyamide 66

General Information

Product Description

Vydyne R535HR BK0790 is a 35% glass filled, heat-stabilized PA66 based resin designed for injection molding applications. It was specifically developed to withstand long term exposure to coolants at temperatures up to 135 C. R535HR BK0790 maintains the excellent resistance typical of PA66 in chemicals, machine and motor oils, solvents and gasoline.

General

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Filler / Reinforcement	• Glass Fiber, 35% Filler by Weight		
Additive	• Heat Stabilizer	• Lubricant	
Features	• Chemical Resistant • Fatigue Resistant • Gasoline Resistant • Heat Stabilized	• Heat Stabilized - Organic • High Flow • Hydrolysis Resistant • Laser Markable	• Lubricated • Oil Resistant • Solvent Resistant
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		
Resin ID	• PA66-GF35		

Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.41	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 73°F, 0.0787 in	1.2	--	%	
Flow : 73°F, 0.0787 in	0.60	--	%	
Water Absorption (24 hr, 73°F)	1.0	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	1.60E+6	1.29E+6	psi	ISO 527-1
Tensile Stress (Break, 73°F)	29700	21900	psi	ISO 527-2
Tensile Strain (Break, 73°F)	3.9	5.2	%	ISO 527-2
Flexural Modulus (73°F)	1.54E+6	1.10E+6	psi	ISO 178
Flexural Stress (73°F)	42400	25700	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-40°F	4.8	4.7	ft·lb/in ²	
-22°F	4.8	5.2	ft·lb/in ²	
73°F	6.2	7.6	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-40°F	37	38	ft·lb/in ²	
-22°F	37	38	ft·lb/in ²	
73°F	42	45	ft·lb/in ²	
Notched Izod Impact Strength				ISO 180/1A
-40°F	4.8	5.7	ft·lb/in ²	
-22°F	4.8	5.2	ft·lb/in ²	
73°F	6.2	6.7	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	500	498	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	484	471	°F	ISO 75-2/A
Melting Temperature	500	--	°F	ISO 11357-3



Electrical	Dry	Conditioned	Unit	Test Method
Electric Strength (0.0394 in)	890	--	V/mil	IEC 60243-1

Processing Information

Injection	Dry	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.

