

Vydyne® R530HR BK652

Ascend Performance Materials Operations LLC - Polyamide 66

General Information

Product Description

Vydyne R530HR BK0652 is a 30% 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. R530HR BK0652 offers improved flow with a black surface finish and 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, 30% Filler by Weight
Additive	• Heat Stabilizer • Lubricant
Features	• Antifreeze Resistant • Gasoline Resistant • Hydrolysis Resistant • Chemical Resistant • Heat Stabilized • Lubricated • Fatigue Resistant • High Flow • Solvent Resistant
Agency Ratings	• ASTM D4066 PA012G30 • ASTM D6779 PA012G30
Automotive Specifications	• BMW GS 93016 • MERCEDES BENZ DBL • VALEO NVB 15009-2 • CHERRY Q/SQR.S1-33-2012 CMP.PA66.G6 • 5406-PV22 ² • VINFAST VFDST00000300 • MAHLE BEHR SD2-181 ¹ • RENAULT AS26 • VOLKSWAGEN TL 52682 • MERCEDES BENZ DBL 5406-PV21 ² • STELLANTIS 01378_22_01205 • STELLANTIS MS-DB-41 CPN4018
Appearance	• Black
Forms	• Pellets
Processing Method	• Injection Molding
Resin ID	• PA66-GF30

 Properties³

Physical	Dry	Conditioned	Unit	Test Method
Density	1.37	--	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	0.50	--	%	
Water Absorption (24 hr, 73°F)	1.0	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	1.9	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	1.46E+6	1.06E+6	psi	ISO 527-1
Tensile Stress (Break, 73°F)	26000	18300	psi	ISO 527-2
Tensile Strain (Break, 73°F)	3.8	7.0	%	ISO 527-2
Flexural Modulus (73°F)	1.35E+6	957000	psi	ISO 178
Flexural Stress (73°F)	35800	23500	psi	ISO 178
Poisson's Ratio (73°F)	0.34	--		ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-40°F	4.8	4.8	ft·lb/in ²	
-22°F	5.2	5.2	ft·lb/in ²	
73°F	5.7	8.1	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-40°F	32	35	ft·lb/in ²	
-22°F	33	40	ft·lb/in ²	



73°F	41	49	ft·lb/in ²	
Notched Izod Impact Strength				ISO 180/1A
-40°F	4.8	5.2	ft·lb/in ²	
-22°F	4.8	5.2	ft·lb/in ²	
73°F	5.7	7.6	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	500	500	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	480	473	°F	ISO 75-2/A
Melting Temperature	500	--	°F	ISO 11357-3
CLTE - Flow (73 to 131°F, 0.0787 in)	1.3E-5	--	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F, 0.0787 in)	4.5E-5	--	in/in/°F	ISO 11359-2
Electrical	Dry	Conditioned	Unit	Test Method
Comparative Tracking Index (0.118 in)	600	--	V	IEC 60112

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 (AR.06576) Rev. 7

² compliance

³ Typical properties: these are not to be construed as specifications.

