

Vydyne® R550HT BK02

Ascend Performance Materials Operations LLC - *Polyamide 66*

General Information

Product Description

Vydyne R550HT BK02 is a 50% glass-filled, heat-stabilized PA66 based resin designed for injection molding applications. It was specifically developed to withstand long term exposure to elevated temperatures up to 190°C. R550HT BK02 offers improved flow with an improved 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, 50% Filler by Weight		
Additive	• Heat Stabilizer	• Lubricant	
Features	• Good Mold Release	• High Flow	• High Strength
	• Heat Stabilized	• High Rigidity	• Lubricated
Agency Ratings	• ASTM D6779 PA012G50		
UL File Number	• E70062		
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		
Resin ID	• PA66-GF50		

Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.59	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 73°F, 0.0787 in	0.80	--	%	
Flow : 73°F, 0.0787 in	0.30	--	%	
Water Absorption (24 hr, 73°F)	1.1	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	1.2	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	2.47E+6	1.74E+6	psi	ISO 527-1
Tensile Stress (Break, 73°F)	33400	23400	psi	ISO 527-2
Tensile Strain (Break, 73°F)	2.5	3.5	%	ISO 527-2
Flexural Modulus (73°F)	2.28E+6	1.52E+6	psi	ISO 178
Flexural Stress (73°F)	50800	31200	psi	ISO 178
Poisson's Ratio (73°F)	0.40	--		ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-40°F	7.1	7.1	ft·lb/in ²	
-22°F	7.1	7.1	ft·lb/in ²	
73°F	7.6	10	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-40°F	48	48	ft·lb/in ²	
-22°F	52	48	ft·lb/in ²	
73°F	46	57	ft·lb/in ²	
Notched Izod Impact Strength				ISO 180/1A
-40°F	7.6	7.6	ft·lb/in ²	
-22°F	7.6	7.6	ft·lb/in ²	
73°F	7.6	9.5	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method



Deflection Temperature Under Load (66 psi, Unannealed)	493	487	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	475	462	°F	ISO 75-2/A
Melting Temperature	500	--	°F	ISO 11357-3
Electrical	Dry	Conditioned	Unit	Test Method
Electric Strength (0.0394 in)	740	--	V/mil	IEC 60243-1
Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate (0.0787 in)	0.0	--	in/min	ISO 3795

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.

