

Vydyne® R550XHT BK0763

Ascend Performance Materials Operations LLC - Polyamide 66

General Information

Product Description

Vydyne R550XHT BK0763 is a 50% glass-filled, heat-stabilized PA66 based resin, specifically designed to withstand long term exposure to elevated temperatures up to 210°C.

General

Material Status	• Commercial: Active
Availability	• Asia Pacific • Latin America • Europe • North America
Filler / Reinforcement	• Glass Fiber, 50% Filler by Weight
Additive	• Heat Stabilizer • Lubricant
Features	• Chemical Resistant • Heat Stabilized • Oil Resistant • Heat Aging Resistant • Lubricated • Outstanding Surface Finish
Appearance	• Black
Forms	• Pellets
Processing Method	• Injection Molding
Resin ID	• PA66-GF50

Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.56	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 73°F, 0.0787 in	1.1	--	%	
Flow : 73°F, 0.0787 in	0.60	--	%	
Water Absorption (24 hr, 73°F)	1.1	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	1.4	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	2.38E+6	1.51E+6	psi	ISO 527-1
Tensile Stress (Break, 73°F)	32900	20700	psi	ISO 527-2
Tensile Strain (Break, 73°F)	3.0	4.9	%	ISO 527-2
Flexural Modulus (73°F)	2.19E+6	1.39E+6	psi	ISO 178
Flexural Stress (73°F)	48600	27000	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	6.7	7.6	ft·lb/in ²	
-22°F	6.7	7.1	ft·lb/in ²	
73°F	8.1	10	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-40°F	48	47	ft·lb/in ²	
-22°F	52	47	ft·lb/in ²	
73°F	46	52	ft·lb/in ²	
Notched Izod Impact Strength				ISO 180/1A
-40°F	6.7	7.1	ft·lb/in ²	
-22°F	7.1	7.6	ft·lb/in ²	
73°F	7.6	10	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	489	486	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	455	441	°F	ISO 75-2/A
Melting Temperature	498	--	°F	ISO 11357-3



CLTE - Flow (73 to 131°F, 0.0787 in)	6.1E-6	--	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F, 0.0787 in)	3.6E-5	--	in/in/°F	ISO 11359-2
Electrical	Dry	Conditioned	Unit	Test Method
Electric Strength (0.0394 in)	840	660	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.

