

Vydyne® R550H NT0755

Ascend Performance Materials Operations LLC - *Polyamide 66*

General Information

Product Description

Vydyne R550H NT0755 is a general purpose 50% glass-filled PA66 based resin designed for injection molding applications. R550H NT0755 is specifically designed to provide high stiffness and maximum retention of physical properties when exposed to heat and/or hydrolytic environments.

General

Material Status	• Commercial: Active
Availability	• Asia Pacific • Europe • North America
Filler / Reinforcement	• Glass Fiber, 50% Filler by Weight
Additive	• Heat Stabilizer • Lubricant
Features	• General Purpose • Good Processability • High Strength • Good Flow • Good Stiffness • High Tensile Strength • Good Heat Resistance • Heat Stabilized • Lubricated
UL File Number	• E70062
Appearance	• Natural Color
Forms	• Pellets
Processing Method	• Injection Molding
Resin ID	• PA66-GF50

Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.60	--	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)	1.2	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	2.55E+6	2.07E+6	psi	ISO 527-1
Tensile Stress (Break, 73°F)	36800	29700	psi	ISO 527-2
Tensile Strain (Break, 73°F)	2.3	3.0	%	ISO 527-2
Flexural Modulus (73°F)	2.39E+6	1.77E+6	psi	ISO 178
Flexural Stress (73°F)	55100	37900	psi	ISO 178
Poisson's Ratio (73°F)	0.36	--		ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-40°F	7.6	7.6	ft·lb/in ²	
-22°F	7.6	7.6	ft·lb/in ²	
73°F	7.6	9.0	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-40°F	47	50	ft·lb/in ²	
-22°F	48	49	ft·lb/in ²	
73°F	48	53	ft·lb/in ²	
Notched Izod Impact Strength				ISO 180/1A
-40°F	7.6	7.1	ft·lb/in ²	
-22°F	7.6	7.6	ft·lb/in ²	
73°F	7.1	8.1	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	502	498	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	486	482	°F	ISO 75-2/A



Melting Temperature	500	--	°F	ISO 11357-3
CLTE - Flow (73 to 131°F, 0.0787 in)	7.2E-6	--	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F, 0.0787 in)	3.5E-5	--	in/in/°F	ISO 11359-2
RTI Elec				UL 746B
0.030 in	284	--	°F	
0.06 in	284	--	°F	
0.12 in	284	--	°F	
RTI Imp				UL 746B
0.030 in	266	--	°F	
0.06 in	266	--	°F	
0.12 in	266	--	°F	
RTI Str				UL 746B
0.030 in	284	--	°F	
0.06 in	284	--	°F	
0.12 in	284	--	°F	
Electrical	Dry	Conditioned	Unit	Test Method
Electric Strength (0.0394 in)	890	610	V/mil	IEC 60243-1
High Amp Arc Ignition (HAI)				UL 746A
0.030 in	PLC 0	--		
0.06 in	PLC 0	--		
0.12 in	PLC 0	--		
High Voltage Arc Tracking Rate (HVTR) (0.118 in)	PLC 1	--		UL 746A
Hot-wire Ignition (HWI)				UL 746A
0.030 in	PLC 4	--		
0.06 in	PLC 3	--		
0.12 in	PLC 4	--		
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.030 in	HB	--		
0.06 in	HB	--		
0.12 in	HB	--		
Glow Wire Flammability Index				IEC 60695-2-12
0.030 in	1250	--	°F	
0.06 in	1250	--	°F	
0.12 in	1760	--	°F	
Glow Wire Ignition Temperature				IEC 60695-2-13
0.030 in	1290	--	°F	
0.06 in	1290	--	°F	
0.12 in	1380	--	°F	
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

