Vydyne® 49H NT0745

Ascend Performance Materials Operations LLC - *Polyamide 66*

General Information

Product Description

Vydyne 49H NT0745 is a general-purpose, impact-modified, high modulus PA66 resin. 49H NT0745 is recognized for all the processing and property advantages inherent to PA66 with the addition of improved impact strength. This resin offers a well balanced combination of engineering properties characterized by high melt point, good surface lubricity, abrasion resistance, resistant to most chemicals including motor oils, transmission fluids, lubricants and fuels.

General			
Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Additive	• Heat Stabilizer	• Impact Modifier	
Features	• Abrasion Resistant • Chemical Resistant • Fast Molding Cycle • Gasoline Resistant	• General Purpose • Good Processability • Good Toughness • Heat Stabilized	• High Impact Resistance • Impact Modified • Oil Resistant • Solvent Resistant
Automotive Specifications	• FORD WSS-M4D706-B1	• GM GMW16447P-PA66-T1	
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		
Resin ID	• PA66-I		

Properties [1]

Physical	Dry	Conditioned	Unit	Test Method
Density	1.11	--	g/cm³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 73°F, 0.0787 in	1.9	--	%	
Flow : 73°F, 0.0787 in	2.6	--	%	
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus (73°F)	392000	203000	psi	ISO 527-1
Tensile Stress (Yield, 73°F)	10200	6960	psi	ISO 527-2
Tensile Strain (Break, 73°F)	19	86	%	ISO 527-2
Flexural Modulus (73°F)	377000	174000	psi	ISO 178
Flexural Stress (73°F)	11300	4350	psi	ISO 178
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179/1eA
-40°F	3.6	5.2	ft·lb/in²	
-22°F	4.2	5.7	ft·lb/in²	
73°F	4.4	9.5	ft·lb/in²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-40°F	No Break	No Break		
-22°F	No Break	No Break		
73°F	No Break	No Break		
Notched Izod Impact Strength				ISO 180/1A
-40°F	3.8	5.7	ft·lb/in²	
-22°F	3.8	5.7	ft·lb/in²	
73°F	3.9	9.5	ft·lb/in²	
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Deflection Temperature Under Load (66 psi, Unannealed)	415	--	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	153	--	°F	ISO 75-2/A

Melting Temperature	500	--	°F	ISO 11357-3
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Electric Strength (0.0394 in)	790	860	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.