

Vydyne® 49H BK0743

 Ascend Performance Materials Operations LLC - *Polyamide 66*
General Information
Product Description

Vydyne 49H BK0743 is a general-purpose, impact-modified, high modulus PA66 resin. 49H BK0743 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 • General Purpose • High Impact Resistance • Chemical Resistant • Good Processability • Impact Modified • Fast Molding Cycle • Good Toughness • Oil Resistant • Gasoline Resistant • Heat Stabilized • Solvent Resistant
Automotive Specifications	• FORD WSS-M4D706-B1 • GM GMW16447P-PA66-T1
Appearance	• Black
Forms	• Pellets
Processing Method	• Injection Molding
Resin ID	• PA66-I

Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.12	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 73°F, 0.0787 in	2.2	--	%	
Flow : 73°F, 0.0787 in	2.6	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	392000	189000	psi	ISO 527-1
Tensile Stress (Yield, 73°F)	10300	6530	psi	ISO 527-2
Tensile Strain (Break, 73°F)	21	84	%	ISO 527-2
Flexural Modulus (73°F)	377000	160000	psi	ISO 178
Flexural Stress (73°F)	11300	4210	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-40°F	3.5	5.2	ft·lb/in ²	
-22°F	3.8	5.7	ft·lb/in ²	
73°F	4.3	10	ft·lb/in ²	
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	3.7	5.7	ft·lb/in ²	
-22°F	4.0	6.2	ft·lb/in ²	
73°F	3.8	10	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	387	--	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	153	189	°F	ISO 75-2/A



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

