



# HiDura™ MED AP NT0860

Ascend Performance Materials Operations LLC - Polyamide 66

## General Information

### Product Description

HiDura MED AP NT0860 is an unfilled resin designed for healthcare applications. It is a lubricated PA66 resin with fast cycle times even in large cavitation tools for higher productivity and can easily be colored. This product offers a combination of engineering properties characterized by high strength; rigidity; good toughness; high melt point; good surface lubricity; abrasion resistance; and resistance to many chemicals including disinfectants. The product is compliant to ISO 10993-5 and ISO 10993-10. It exhibits good property retention after most sterilization methods.

### General

Additive	<ul style="list-style-type: none"> <li>Lubricant</li> </ul>	<ul style="list-style-type: none"> <li>Mold Release</li> </ul>	<ul style="list-style-type: none"> <li>Nucleating Agent</li> </ul>
Features	<ul style="list-style-type: none"> <li>Abrasion Resistant</li> <li>Balanced Stiffness/Toughness</li> <li>Bromine Free</li> <li>Chemical Resistant</li> <li>Corrosion Resistant</li> <li>Ductile</li> <li>Excellent Processability</li> <li>Fast Molding Cycle</li> </ul>	<ul style="list-style-type: none"> <li>Good Colorability</li> <li>Good Electrical Properties</li> <li>Good Flow</li> <li>Good Mold Release</li> <li>Good Rigidity</li> <li>Good Stiffness</li> <li>Good Surface Finish</li> <li>Halogen Free</li> </ul>	<ul style="list-style-type: none"> <li>High Toughness</li> <li>Highly Crystalline</li> <li>Homopolymer</li> <li>Ignition Resistant</li> <li>Lubricated</li> <li>Medium Viscosity</li> <li>Nucleated</li> <li>Solvent Resistant</li> </ul>
Agency Ratings	<ul style="list-style-type: none"> <li>BSE/TSE Compliant</li> </ul>	<ul style="list-style-type: none"> <li>ISO 1043 PA66</li> </ul>	
Appearance	<ul style="list-style-type: none"> <li>Natural Color</li> </ul>		
Forms	<ul style="list-style-type: none"> <li>Pellets</li> </ul>		
Processing Method	<ul style="list-style-type: none"> <li>Injection Molding</li> </ul>	<ul style="list-style-type: none"> <li>Profile Extrusion</li> </ul>	
Resin ID	<ul style="list-style-type: none"> <li>PA66</li> </ul>		

## Properties <sup>1</sup>

Physical	Dry	Conditioned	Unit	Test Method
Density	1.14	--	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 73°F, 0.0787 in	2.0	--	%	
Flow : 73°F, 0.0787 in	2.0	--	%	
Water Absorption (24 hr, 73°F)	1.2	--	%	ISO 62
Water Absorption				ISO 62
Equilibrium, 73°F, 50% RH	2.4	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	421000	276000	psi	ISO 527-1
Tensile Stress (Yield, 73°F)	12900	8700	psi	ISO 527-2
Tensile Stress (Break, 73°F)	11700	7110	psi	ISO 527-2
Tensile Strain (Yield, 73°F)	4.8	20	%	ISO 527-2
Tensile Strain (Break, 73°F)	29	76	%	ISO 527-2
Flexural Modulus (73°F)	479000	160000	psi	ISO 178
Flexural Stress (73°F)	15200	4350	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
-22°F	2.4	3.3	ft·lb/in <sup>2</sup>	
73°F	2.9	11	ft·lb/in <sup>2</sup>	

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Impact	Dry	Conditioned	Unit	Test Method
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F	No Break	No Break		
73°F	No Break	No Break		
Notched Izod Impact Strength				ISO 180/1A
-22°F	2.4	3.3	ft·lb/in <sup>2</sup>	
73°F	2.9	11	ft·lb/in <sup>2</sup>	
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				ISO 75-2/B
66 psi, Unannealed	410	--	°F	
Deflection Temperature Under Load				ISO 75-2/A
264 psi, Unannealed	162	--	°F	
Melting Temperature	500	--	°F	ISO 11357-3
CLTE - Flow (73 to 131°F, 0.0787 in)	5.6E-5	--	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F, 0.0787 in)	5.6E-5	--	in/in/°F	ISO 11359-2
Flammability	Dry	Conditioned	Unit	Test Method
Oxygen Index <sup>2</sup>	26	--	%	ISO 4589-2

### Processing Information

Injection	Dry	Unit
Drying Temperature	158	°F
Drying Time	1.0 to 3.0	hr
Rear Temperature	500 to 536	°F
Middle Temperature	518 to 545	°F
Front Temperature	536 to 554	°F
Nozzle Temperature	536 to 572	°F
Processing (Melt) Temp	545 to 572	°F
Mold Temperature	149 to 203	°F

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> Railway Application