

**HiDura™ ThermaPlus 24XLR8 NT0823**

Ascend Performance Materials Operations LLC - Polyamide 66

**General Information**
**Product Description**

HiDura ThermaPlus 24XLR8 NT0823 is a heat stabilized PA66 product designed for injection molding applications that is designed to maintain mechanical properties after extended exposure to temperatures up to 160 C.

**General**

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Additive	• Heat Stabilizer	• Lubricant	
Features	• Balanced Stiffness/Toughness	• Good Toughness	• Lubricated
	• Chemical Resistant	• Heat Stabilized	• Oil Resistant
	• Gasoline Resistant	• High Elongation	• Solvent Resistant
	• Good Flow	• High Heat Resistance	
	• Good Mold Release	• High Tensile Strength	
Agency Ratings	• ASTM D4066 PA0121		
UL File Number	• E70062		
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		
Resin ID	• PA66		

**Properties <sup>1</sup>**

<b>Physical</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Density	1.14	--	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 73°F, 0.0787 in	1.9	--	%	
Flow : 73°F, 0.0787 in	1.8	--	%	
Water Absorption (24 hr, 73°F)	1.9	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	2.5	--	%	ISO 62
<b>Mechanical</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Tensile Modulus (73°F)	377000	145000	psi	ISO 527-1
Tensile Stress (Yield, 73°F)	11300	9860	psi	ISO 527-2
Tensile Strain (Break, 73°F)	50	> 50	%	ISO 527-2
Flexural Modulus (73°F)	406000	131000	psi	ISO 178
Flexural Stress (73°F)	12500	3190	psi	ISO 178
Poisson's Ratio (73°F)	0.30	--		ISO 527-2
<b>Impact</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Charpy Notched Impact Strength				ISO 179/1eA
-40°F	2.4	2.5	ft·lb/in <sup>2</sup>	
-22°F	3.1	3.5	ft·lb/in <sup>2</sup>	
73°F	3.1	12	ft·lb/in <sup>2</sup>	
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	3.0	2.2	ft·lb/in <sup>2</sup>	
-22°F	2.9	3.8	ft·lb/in <sup>2</sup>	
73°F	2.6	8.6	ft·lb/in <sup>2</sup>	



<b>Thermal</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Deflection Temperature Under Load (66 psi, Unannealed)	367	--	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	142	--	°F	ISO 75-2/A
Melting Temperature	500	--	°F	ISO 11357-3
CLTE - Flow (73 to 131°F, 0.0787 in)	5.7E-5	--	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F, 0.0787 in)	6.9E-5	--	in/in/°F	ISO 11359-2
RTI Elec				UL 746B
0.030 in	302	--	°F	
0.06 in	302	--	°F	
0.12 in	302	--	°F	
RTI Imp				UL 746B
0.030 in	257	--	°F	
0.06 in	257	--	°F	
0.12 in	257	--	°F	
RTI Str				UL 746B
0.030 in	302	--	°F	
0.06 in	302	--	°F	
0.12 in	302	--	°F	
<b>Electrical</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Electric Strength (0.0394 in)	740	690	V/mil	IEC 60243-1

### Processing Information

<b>Injection</b>	<b>Dry Unit</b>
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.

