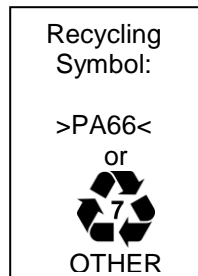
 <b>TYPICAL MATERIAL PROPERTIES</b>	 <b>NYLON 66</b> General Purpose	<b>SPECIFICATION NUMBER MTS1001CSU</b>			
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**DESCRIPTION**

This material is a non-Halogenated, non-corrosive injection molding grade nylon. It is lubricated to facilitate machine feed and mold release.

Commercial Name: ..... Nylon 66  
Catalog Code: ..... PA66  
Chemical Name: ..... Polyamide 66  
Used On: ..... Cable ties



**GENERAL PERFORMANCE CHARACTERISTICS**

Heat Stabilized None  
Impact Lower resistance to impact.  
Moisture Sensitivity Tensile strength and flexibility will change with change in moisture  
UV Resistance Black ties have good resistance due to the percentage of carbon black  
Other colors or natural are poor

**PERFORMANCE ADDITIVES**

Glass None  
Mineral None  
Carbon Yes (black only)  
Halogens None in colors or natural. Black has a small amount of iodine for stabilization

**PROCESS ADDITIVES**

Fillers None  
Lubricants Internal  
Shrink Additives None

**CONDITIONING:** Follow standard cable tie conditioning practice


**CHEMICAL RESISTANCE**

Acids Limited; attacked by strong acids  
Bases Excellent at room temp.; attacked by strong bases at elevated temps  
Solvents Generally excellent; some absorption causing plasticization and dimension changes  
Gasoline Good  
Oil Good  
Salt Water Very Good  
Sodium Chloride Very Good  
Zinc Chloride Some attack or considerable absorption at 73°F (23°C), material not suitable for contact unless limited product life is acceptable  
Calcium Chloride Little or no attack, little to some absorption, little to some reduction in mechanical properties

**MAJOR TOXIC ELEMENTS**

No significant hazard associated with this material.  
This product is slightly toxic based on toxicity studies. No adverse health effects are expected to develop if only small amounts (less than a mouthful) are swallowed. No adverse effects were reported following studies with rats and dogs fed a similar nylon resin material in their diet for three months.

Latex, Natural Rubber, Natural Rubber Latex, Dry Natural Rubber, Natural Latex, Isoprene, and Polyisoprene are not used in the manufacture of this material and therefore, should not be present at detectable levels.

 <b>TYPICAL MATERIAL PROPERTIES</b>	<b>NYLON 66</b> General Purpose	<b>SPECIFICATION NUMBER MTS1001CSU</b>		
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**APPROVALS** (Check with factory for specific automotive approval if not shown)

GM	GMP.PA66.005
Ford	WSK-M4D647-A
Chrysler	MSDB41 CPN1938
ASTM	D4066 PA0111

**PROPERTIES CHART**

	<b>Dry</b>	<b>Units</b>	<b>Test Method</b>
<b>FLAMMABILITY</b>			
Flammability – Thickness: (0.7, 1.5 & 3.0 mm)	V-2	-	UL 94
<b>PHYSICAL</b>			
Density	1.14 (0.041)	g/cm <sup>3</sup> (lb/in <sup>3</sup> )	ISO 1183
Water Absorption – 24 hrs Immersion Equilibrium @ 50% RH	1.3-1.4 2.4-2.6	%	ISO 62
Mold Shrinkage – 2.0 mm Parallel 2.0 mm Normal	1.4-1.9 1.4-2.1	%	ISO 294-4
<b>MECHANICAL</b>			
Tensile Strength @ Yield	82-85 (11.9-12.3)	MPa (kpsi)	ISO 527
Elongation @ Yield	4.2-4.5	%	ISO 527
Elongation @ Break	25-50	%	ISO 527
Tensile Modulus	3100-3400 (450-493)	MPa (kpsi)	ISO 527
Flexural Modulus	2800-3000 (410-435)	MPa (kpsi)	ISO 178
Notched Charpy Impact - @23°C (73°F) @-30°C (-22°F)	4.6-6.1 (2.19-2.90)	KJ/m <sup>2</sup> (ft-lb/in <sup>2</sup> )	ISO 179
<b>THERMAL</b>			
Continuous Operating Temp RTI Strength @ 1.5 mm	-40 to 85 (-40 to 185)	°C (°F)	UL 746
RTI Electrical @ 0.71, 1.5 & 3.0 mm	130 (266)	°C (°F)	UL 746
RTI Impact @ 0.71, 1.5 & 3.0 mm	75 (167)	°C (°F)	UL 746
Heat Deflection Temp @ 0.45 MPa (65 psi) @ 1.80 MPa (261 psi)	200-205 (392-401) 66-74 (151-165)	°C (°F)	ISO 75
CLTE @ 2mm, Normal 23-55°C (73-130°F) @ 2mm, Parallel 23-55°C (73-130°F)	0.8-1.2 1.0-1.1	10 <sup>-4</sup> /°C	ISO 11359 / ASTM E381

This document is intended as a general guide, in the material selection for a product, but does not guarantee satisfactory performance. All materials selected must be thoroughly tested in its intended application to determine its suitability. Consult a HellermannTyton Representative for assistance in the final material selection.

The information contained herein is believed to be accurate at the time of printing. However, this information has been obtained from a variety of sources and has not been independently verified by HellermannTyton Corporation; therefore, we cannot warrant fitness for a particular application. Furthermore, HellermannTyton Corporation reserves the right to make changes to this document, at any time, without notice to our customers.