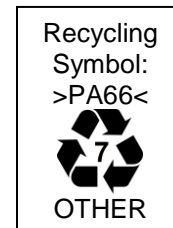


HellermannTyton. TYPICAL MATERIAL PROPERTIES	NYLON 66 Heat Stabilized	SPECIFICATION NUMBER MTS1004CSU			
		Issued By: DLP 1/15/98	REVISION Level:...05 Date:...02/18/14 By...LG ECN#:...012586	Page 1 Of 2	
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DESCRIPTION

This material is similar to general purpose, unreinforced Nylon 66. It has additives for heat stabilization to provide retention of physical properties in molded parts exposed to continuous or elevated temperatures.

Commercial Name: Nylon 66, Heat Stabilized
Catalog Code: PA66HS, HS
Chemical Name: Polyamide 66
Used On: Cable ties



GENERAL PERFORMANCE - CHARACTERISTICS

Heat Stabilized Excellent
High Impact Low
Moisture Sensitivity High
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 A small amount of iodine is added for heat stabilization.

PROCESS ADDITIVES

Fillers None
Lubricants Internal and External
Shrink Additives None

CONDITIONING

Follow cable tie conditioning standard.

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 Very 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.
Ethylene glycol Little or no attack, some absorption causing slight reduction in strength similar to water absorption.
Autoclave This material should not be affected when used in an autoclave steam sterilization process at temperatures up to 250°F (121°C) for 25 minutes.

MAJOR TOXIC ELEMENTS

No significant hazard associated with this material.

APPROVALS (check with factory for specific automotive approval if not shown)

GM GMP.PA66.018
Ford WSK-M4D648-A

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Chrysler
ASTM

MS-D841-1076
D4066-96 PA0121

PROPERTIES CHART

	Dry	Units	Test Method
FLAMMABILITY			
Flammability Classification: 0.71 mm	V-2	-	UL 94
Glow Wire Flammability Index 0.71 mm 1.50 mm 3.00 mm	825-850 (1517-1560) 825-960 (1517-1760) 960 (1760)	°C (°F)	IEC 60695-2-12
Glow Wire Ignition Temperature 0.71 mm 1.50 mm 3.00 mm	700-725 (1292-1340) 700-725 (1292-1340) 700-725 (1292-1340)	°C (°F)	IEC 60695-2-13
PHYSICAL			
Density	1.14 (0.041)	g/cm ³ (lb/in ³)	ISO 1183
Mold Shrinkage: Across flow: (2.0 mm) Flow: (2.0 mm)	1.3-1.4 1.4-1.6	%	ISO 294-4
MECHANICAL			
Tensile Strength @ Yield	83-85 (12000-12300)	MPa (psi)	ISO 527
Elongation @ Yield	4.3-10	%	ISO 527
Tensile Modulus	3000-3100 (43500-450000)	MPa (psi)	ISO 527
Flexural Modulus	2800-2900 (406100-420600)	MPa (psi)	ISO 178
Charpy Notched Impact (23°C)	5.0-6.6 (2.4-3.1)	KJ/m ² (ft lb/in ²)	ISO 179
Izod Notched Impact (23°C)	5.5 (2.6)	KJ/m ² (ft lb/in ²)	ISO 180
THERMAL			
Continuous Operating Temp RTI Strength @ 1.5 mm	-40 to 125 (-40 to 257)	°C (°F)	UL 746
RTI Electrical 0.71 mm	140 (284)	°C (°F)	UL 746
RTI Impact 0.71 mm 1.50 mm	95 (203) 110 (230)	°C (°F)	UL 746
Heat Deflection Temperature 66 psi (0.45 MPa) 264 psi (1.82 MPa)	195-200 (383-392) 70 (158)	°C (°F)	ISO 75

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.