 TYPICAL MATERIAL PROPERTIES	NYLON 66 Impact Modified Heat Stabilized UV Stabilized	SPECIFICATION NUMBER MTS1015CSU			
		Issued By: MEF 05/15/01	REVISION Level:...08 Date:...02/18/14 By...LG ECN#:...012586	Page 1 Of 2	
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DESCRIPTION

Heavy duty Nylon 66 for outdoor service and automotive/truck applications. Commonly used in automotive applications due to its resistance to impact, temperature, moisture, salt and petroleum products. The impact modifiers provide some increase in flexibility and maintain it through varying temperatures and moisture conditions.

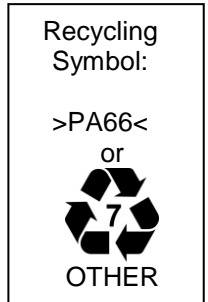
* Classified as "UV Stabilized" due to the uniform dispersion of Carbon Black or other UV absorbing additives that reduce deterioration of physical properties such as colors fading, surface chalking, loss of flexibility, brittleness and disintegration. This material has been proven to be UV resistant by a certified testing lab to withstand 5,000 hours of xenon arc (UV accelerated) exposure. The product tested was the WSR which retained up to 85% of its original loop tensile strength with no deterioration of physical properties.

Commercial Name: Nylon, Impact Modified, Heat Stabilized, UV Stabilized

Chemical Name: Hexamethylene Dodecanamide (a.k.a. Polyamide)

Catalog Code: PA66HIRHSUV, IMHSUV, HIHSUV

Used On: Cable ties, Automotive Parts and Mounts.



GENERAL PERFORMANCE CHARACTERISTICS

Heat Stabilized	Very Good
High Impact	Very Good
Moisture Sensitivity	Will absorb and desorb moisture but not become brittle when dry.
UV Resistance	Excellent

PERFORMANCE ADDITIVES

Glass	None
Mineral	None
Olefin	Up to 20% (Impact Modifier) Olefin does not absorb moisture
Carbon Black	Contains significant amount of carbon black or other UV absorbing additives to be considered UV stabilized.
Halogens	None

PROCESS ADDITIVES

Fillers	None
Lubricants	External
Shrink Additives	None

CONDITIONING


None: Impact modifier helps maintain flexibility (material absorbs less moisture compared to standard Nylon 66).

CHEMICAL RESISTANCE

Acids	Limited, attacked by strong acids.
Bases	Attacked by strong bases at elevated temperatures.
Solvents	Good
Gasoline	Good
Oil	Good
Salt Water	Very Good
Zinc Chloride	Some attack or considerable absorption. Not suitable for contact for long duration.

MAJOR TOXIC ELEMENTS

All constituents are encapsulated within the polymer system and therefore present no likelihood of exposure under normal conditions of processing and handling.

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APPROVALS

UL, Ford, GM, Chrysler, Federal FMVSS302

PROPERTIES CHART

	Dry	Units	Test Method
FLAMMABILITY			
Flammability Classification	HB	-	UL 94
PHYSICAL			
Density	1.10-1.11 (0.039-0.040)	g/cm ³ (lb/in ³)	ISO 1183
MECHANICAL			
Tensile Strength at Yield	60-60.8 (8700-8818)	MPa (psi)	ISO 527
Tensile Strain at Yield	6-7	%	ISO 527
Nominal Strain at Break	28-29	%	ISO 527
Tensile Modulus	2400-2430 (348-352)	MPa (kpsi)	ISO 527
Flexural Modulus	2200-2230 (319-323)	MPa (kpsi)	ISO 178
Charpy Impact (notched) @ 23°C	17-19 (8.08-9.04)	kJ/m ² (ft lb/in ²)	ISO 179/1eA
THERMAL			
Continuous Operating Temp RTI Strength @ 1.5 mm	-40 to 105-110 (-40 to 221-230)	°C (°F)	UL 746C
RTI Electrical 0.75 mm & 3.0 mm	130-140 (266-284)	°C (°F)	UL 746C
RTI Impact 0.75 mm 3.0 mm	65-105 (149-221) 105 (221)	°C (°F)	UL 746C
Heat Deflection Temperature 264 psi (1.8 MPa)	65-70 (149-158)	°C (°F)	ISO 75-1/-2
Melting Temperature	260-262 (500-504)	°C (°F)	ISO 11357-1/-3, ISO 3146
PROCESSING			
Melt Temperature Range	260-300 (500-570)	°C (°F)	-
Drying Time	1-4	Hours	-
Drying Temperature	80-140 (175-284)	°C (°F)	-
Mold Temperature Range	50-100 (120-212)	°C (°F)	-
Processing Moisture Content	<0.20	%	ASTM 6869

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.