

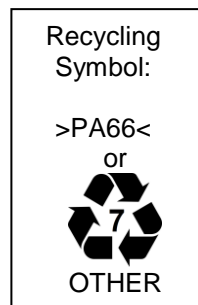
HellermannTyton TYPICAL MATERIAL PROPERTIES	NYLON 66 Impact Modified Heat Stabilized UV Stabilized	SPECIFICATION NUMBER MTS1015CSU		
		Issued By: MEF 05/15/01 Checked By: KAC 06/05/18	REVISION Level:...10 Date:...06/05/18 By...LG ECN#:...014480	Page 1 Of 2

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 (may also appear as IMHSUV, HIHSUV on older products)
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	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
Tensile Modulus	2400-2779 (348-403)	MPa (kpsi)	ISO 527
Flexural Modulus	2200-2303 (319-334)	MPa (kpsi)	ISO 178
Charpy Notched Impact @ 23°C @ -40°C	17-19 (8.08-9.04) 10.9-12 (5.2-5.7)	kJ/m ² (ft lb/in ²)	ISO 179
Izod Notched Impact @ 23°C	17-18.1 (8.1-8.6)	kJ/m ² (ft lb/in ²)	ISO 180
THERMAL			
Continuous Operating Temp RTI Strength @ 1.5 mm	-40 to 105-115 (-40 to 221-239)	°C (°F)	UL 746B
RTI Electrical 0.75 mm & 3.0 mm	130-140 (266-284)	°C (°F)	UL 746B
RTI Impact, 0.75 mm 3.0 mm	65-105 (149-221) 75-105 (167-221)	°C (°F)	UL 746B
Heat Deflection Temperature 264 psi (1.8 MPa)	65-70 (149-158)	°C (°F)	ISO 75-2/A
Melting Temperature	260-262 (500-504)	°C (°F)	ISO 11357-1/-3, ISO 3146
PROCESSING			
Melt Temperature Range	260-305 (518-581)	°C (°F)	-

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.