

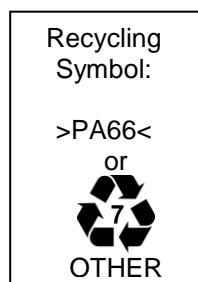
HellermannTyton TYPICAL MATERIAL PROPERTIES	NYLON 66 Impact Modified Heat Stabilized UV Resistant*	SPECIFICATION NUMBER MTS1011CSU		
		Issued By: GGG 11/10/98 Checked By: KAC 02/18/14	REVISION Level:...06 Date:...02/18/14 By:...LG ECN#:...012586	Page 1 Of 2

DESCRIPTION

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 Resistant" due to the uniform dispersion of Carbon Black (less than 2%) 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 SDCT312 which retained up to 85% of its original loop tensile strength with no deterioration of physical properties.

Commercial Name: Nylon 66, Impact Modified, Heat Stabilized, UV Resistant.
Catalog Code: PA66HIRHS (may also appear as HIRHS; IMHS)
Chemical Name: Polyamide 66
Used On: DCT & SDCT cable ties, BLC & SNPTMO clamps and other products not requiring a high flow or low viscosity index.



GENERAL PERFORMANCE CHARACTERISTICS

Heat Stabilized Very good
High Impact Very good
Moisture Sensitivity Low, will absorb moisture but not become brittle when dry
UV Resistance Very good

PERFORMANCE ADDITIVES

Glass None
Mineral None
Olefin Up to 20% (Impact Modifier) Olefin does not absorb moisture
Carbon Black Yes, contains less than 2%
Halogens None

PROCESS ADDITIVES

Fillers None
Lubricants Internal
Shrink Additives None

PROCESSING

Heat stabilized modifier has aided in the mold filling of thin hinge like sections, reducing brittleness and signs of burning

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 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 possible, not suitable for long term contact
Calcium Chloride Little or no attack, little to some absorption, little to some reduction in mechanical properties.

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MAJOR TOXIC ELEMENTS

No significant hazard associated with this material

APPROVALS

Ford, Chrysler, GM & ASTM

PROPERTIES CHART

	Dry	Units	Test Method
FLAMMABILITY			
Flammability @ 0.81, 1.5 & 3.0 mm	HB	-	UL 94
Oxygen index	22	%O ₂	ASTM D2863
PHYSICAL			
Specific Gravity	1.1	-(1)	ASTM D792
Water Absorption – 24 hrs	0.9	%	ASTM D570
MECHANICAL			
Tensile Strength	62.1 (9000)	MPa (psi)	ASTM D638
Elongation @Yield	5.0	%	ASTM D638
Elongation @Break	35.0	%	ASTM D638
Flex Modulus	2275.3 (330000)	MPa (psi)	ASTM D790
Flex Strength	72.4 (10500)	MPa (psi)	ASTM D790
Notched Izod Impact @ -40°C (-40°F) @ 23°C (73°F)	138.8 (2.6) 240.3 (4.5)	J/m (ft-lbf/in)	ASTM D256
THERMAL			
Continuous Operating Temp	-40 to 110 (-40 to 230)	°C (°F)	(2)
RTI Strength @ 1.5 mm	65 (149)	°C (°F)	UL 746
Deflection Temp. @ 0.455 MPa (66 psi) @ 1.82 MPa (264 psi)	213 (415) 79 (175)	°C (°F)	ASTM D648

(1) Quantity is unitless. Use g/cm³ to convert to other units.

(2) Values based on similar medium impact heat stabilized PA66 materials.

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.