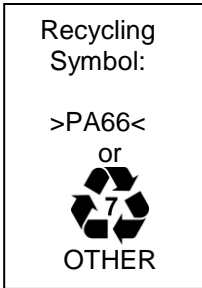


<b>HellermannTyton</b> TYPICAL MATERIAL PROPERTIES	NYLON 66 VO Flame Retardant	<b>SPECIFICATION NUMBER</b> <b>MTS1005CSU</b>			
		Issued By: MEF 11/12/97	REVISION Level:...01 Date:...02/18/14 By:...LG ECN#:...012586	Page 1 Of 2	
		Checked By: KAC 02/18/14			

**DESCRIPTION**

This material is a non-Halogenated, non-corrosive injection molding grade nylon with flame retardant additives. It is lubricated to facilitate machine feed and mold release. The flame retardant additive may reduce toughness and ductility properties when compared to general purpose, unreinforced Nylon 66.

Commercial Name: ..... Nylon 66, Flame Retardant  
Catalog Code: ..... PA66VO, VO  
Chemical Name: ..... Polyamide 66  
Used On: ..... Cable ties



**GENERAL PERFORMANCE CHARACTERISTICS**

Heat Stabilized	Low
High Impact	Low
Moisture Sensitivity	High
UV Resistance	Low

**PERFORMANCE ADDITIVES**

Glass	None
Mineral	None
Carbon	Negligible
Halogens	None.

**PROCESS ADDITIVES**

Fillers	None
Lubricants	Internal
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.

**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.

**APPROVALS**

UL File No. E70062

 <b>TYPICAL MATERIAL PROPERTIES</b>	<b>NYLON 66 VO</b> Flame Retardant	<b>SPECIFICATION NUMBER MTS1005CSU</b>		
		Issued By: MEF 11/12/97 Checked By: KAC 02/18/14	REVISION Level:...01 Date:...02/18/14 By...LG ECN#:...012586	Page <b>2</b> Of <b>2</b>

**PROPERTIES CHART**

	<b>Dry</b>	<b>Units</b>	<b>Test Method</b>
<b>FLAMMABILITY</b>			
Flammability – Thickness: (0.75, 1.5 & 3.0 mm)	V-0	-	UL 94
Oxygen index	29	%O <sub>2</sub>	ASTM D2863
<b>PHYSICAL</b>			
Specific Gravity	1.16 (0.041)	(1)	ISO 1183
Water Absorption @23°C - 24 hours	0.8	%	ISO 62
@23°C - Equilibrium at 50% RH	1.8		
<b>MECHANICAL</b>			
Tensile Strength @ Yield	75 (10878)	MPa (psi)	ISO 527
Elongation @Break	25	%	ISO 527
Elongation @ Yield	5.5	%	ISO 527
Tensile Modulus	5000 (725189)	MPa (psi)	ISO 527
Flex Modulus	3200 (464121)	MPa (psi)	ISO 178
Flex Strength	92 (13344)	MPa (psi)	ISO 178
Notched Charpy Impact @ 23°C	5.4 (2.57)	KJ/m <sup>2</sup> (ft-lb/in <sup>2</sup> )	ISO 179
@ -30°C	5.4 (2.57)		
Notched Izod Impact	6 (2.85)	KJ/m <sup>2</sup> (ft-lb/in <sup>2</sup> )	ISO 180
<b>THERMAL</b>			
Continuous Operating Temp	-40 to 100 (-40 to 212)	°C (°F)	UL 746B
RTI Strength @ 0.75, 1.5 & 3.0 mm			
Heat Deflection Temp @ 0.45 MPa (66 psi)	225 (437)	°C (°F)	ISO 75
@1.82 MPa (264 psi)	65 (149)		
Melting Point	244 (471)	°C (°F)	ISO 3146

(1) Quantity is unitless. Use g/cm<sup>3</sup> to convert to other units.

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.