HellermannTyton TYPICAL MATERIAL PROPERTIES	NYLON 12 Low Viscosity UV & Heat Stabilized	SPECIFICATION NUMBER **MTS1012CSU**		
		Issued By: VM 04/08/13 Checked By: KAC 02/18/14	REVISION Level:...02 Date:..02/18/14 By:..LG ECN#:..012586	Page 1 Of 2

DESCRIPTION

Nylon 12 low viscosity, UV and heat stabilized is a high flow material suitable for injection molding HT cable ties and other less difficult to fill routing and clipping components. This partially crystalline Polyamide 12 base compound has a very low water absorption. Therefore products maintain their dimensions in environments with varying humidity levels, while maintaining a high tenacity, a low coefficient of friction and good chemical resistance. More resistant to chemicals than Nylon 66. This material is excellent for UV light exposure resistance. Current cost comparison: Nylon 12 is 7 times the cost of Nylon 66.

Commercial Name:..... Nylon 12
Catalog Code:..... PA12, N12
Chemical Name: ..... Polyamide 12
Typically Used On:..... Cable Ties

Recycling Symbol:

>PA66<
or
7
OTHER

GENERAL PERFORMANCE CHARACTERISTICS

Heat Stabilized	Good
High Impact	Good
Moisture Sensitivity	Good
UV Resistance	Excellent

PERFORMANCE ADDITIVES

Glass	None
Mineral	None
Carbon	0.5 % Carbon black for enhanced UV stability.
Halogens	None

PROCESS ADDITIVES

Fillers	None
Lubricants	Internal
Shrink Additives	None

CONDITIONING

Not normally needed. This material absorbs little moisture.

CHEMICAL RESISTANCE

Acids	Limited; attacked by strong acids; more resistant than nylon 6/6.
Bases	Excellent
Solvents	Excellent
Gasoline	Excellent
Oil	Excellent
Salt Water	Very Good

MAJOR TOXIC ELEMENTS

None

APPROVALS

None

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PROPERTIES CHART

	Dry	**Units**	**Test Method**
FLAMMABILITY			
UL Flammability	HB	-	UL 94, *Mfg
Glow Wire Flammability Index: 0.0787 in (2.0 mm)	960 (1760)	°C (°F)	IEC 60695-2-12
Glow Wire Ignition Temperature: 0.0787 in (2.0 mm)	850 (1560)	°C (°F)	IEC 60695-2-13
PHYSICAL			
Density	1.01 (0.036)	g/cm^3 (lb/in^3)	ISO 1183
Water Absorption: Saturation, 73°F (23°C) Equilibrium, 73°F (23°C)	1.4 0.7	%	ISO 62
Viscosity Number	120	cm^3/g	ISO 307
MECHANICAL			
Tensile Strength @ Yield	46 (6670)	MPa (psi)	ISO 527-2
Tensile Strain @ Yield @ Break	6.0 >50	%	ISO 527-2
Tensile Modulus	1400 (203k)	MPa (Psi)	ISO 527-2
Charpy Notched Impact Strength -22°F (-30°C), Complete Break 73°F (23°C), Complete Break	 2.4 (5.0) 1.9 (4.0)	 ft-lb/in^2 (KJ/m^2)	ISO 179/1eA
Charpy Unnotched Impact Strength -22°F (-30°C), Complete Break 73°F (23°C), Complete Break	 No Break No Break	 ft-lb/in^2 (KJ/m^2)	ISO 179/1eU
THERMAL			
Continuous Operating Temp (Type 1A, 4 mm)	-40 to 120 (-40 to 248)	°C (°F)	*Mfg
Heat Deflection Temp: 66 psi (0.45 MPa) Unannealed 264 psi (1.8 MPa) Unannealed	120 (248) 50 (122)	°C (°F)	ISO 75-2/B ISO 75-2/A
ELECTRICAL			
Comparative Tracking Index: Solution A (50 drops value) Solution A (100 drops value)	 >600 600	 V	IEC 60112

* Mfg: Raw material vendor test results

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.
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