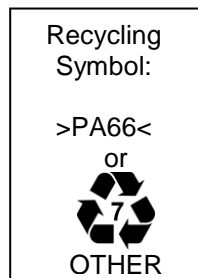


 TYPICAL MATERIAL PROPERTIES	NYLON 12 Low Viscosity UV & Heat Stabilized	SPECIFICATION NUMBER MTS1012CSU		
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DESCRIPTION

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



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

 TYPICAL MATERIAL PROPERTIES	NYLON 12 Low Viscosity UV & Heat Stabilized	SPECIFICATION NUMBER MTS1012CSU		
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PROPERTIES CHART

	Dry	Units	Test Method
<u>FLAMMABILITY</u>			
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
<u>PHYSICAL</u>			
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
<u>MECHANICAL</u>			
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
<u>THERMAL</u>			
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
<u>ELECTRICAL</u>			
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.

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.