

PTFE CELLOFLON[®] TAPES

Unsintered PTFE Celloflon[®] tapes -
UV laser markable

Low density PTFE Celloflon[®] tapes

Low density PTFE Celloflon[®] tapes -
High Tensile Strength



Axon' Cable specialises in the manufacture of custom-designed wires, cables, cable assemblies and cable components including PTFE tubes and tapes for high-tech markets.

Based on its long-term expertise in cables, Axon' Cable offers three types of PTFE tapes:

- Unsintered PTFE Celloflon® tapes – including UV laser markable versions
- Low density PTFE Celloflon® tapes
- Low density PTFE Celloflon® tapes – High Tensile strength

UNSINTERED PTFE CELLOFLON® TAPES

Reference	Axon' Tape (µm)			Density (g/cm³)	Width (mm)		
	AT050 to AT100	AT105 to AT200	AT205 to AT300		L200	L190 to L130	L125 to L005
Thickness (µm) 5µm per 5µm	50 to 100	105 to 200	205 to 300	Tol. 1.60 +0.15/ -0.07 g/ cm³	200mm mini	Width +/- 1mm in 0.5mm step	Width +/- 0.3mm in 0.5mm steps
Thickness process capability	Cpk >1.33 +/- 9 µm	Cpk >1.33 +/- 9 µm	Range +/- 10 µm				
Tensile strength (DaN/mm²)	>1.2	> 1.0	> 0.5				
MOQ			100kg				

You can order tapes:

- with thicknesses from 50 (0.050 mm) to 300 µm (0.30mm),
- with widths from 5mm to 200mm.

Irrespective of the thickness chosen, the density is 1.60g/cm³ (D160). For other densities, please contact us. The MOQ depends on the width.

Tape colors

Non markable tapes



A = natural is opaque before sintering / transparent after sintering
Colors are pale before sintering. Colors indicated in this document are not contractual.

UV markable tapes



UV laser markability in compliance with:
- EN3475: mask marking
- EN4650: vector marking
UV markable color are pale before and after sintering.

Codification examples

AT076D160L040^L				
AT	076	D160	L040	^L
Axon' tape	Thickness: 76µm	Density: 1.60g/cm³	Width: 40mm	White color

AT076D160L008.5^L				
AT	076	D160	L008.5	^L
Axon' tape	Thickness: 76µm	Density: 1.60g/cm³	Width: 8.5mm	White color

LOW DENSITY PTFE CELLOFLON® TAPES

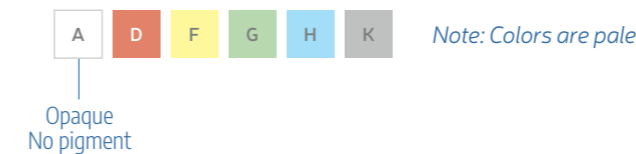
Reference	Axon' Tape (µm)			Density (g/cm³)		Width (mm)
	AT050 to AT100	AT105 to AT200	AT205 to AT300	D070	D050	
Thickness (µm) in 5µm steps	50 to 100	105 to 200	205 to 300	0.7 +/- 0.1 g/cm³	0.5 +/- 0.1 g/cm³	Width +/- 0.5mm in 0.5mm steps
Thickness tolerance	Nom. thickness +/- 10 µm	Nom. thickness +/- 10 µm	Nom. thickness +/- 10 µm			
Tensile strength (DaN/mm²)	>1.2	> 1.0	> 0.7			
MOQ			10 (ten) Kg			

You can order tapes:

- with thicknesses from 50 (0.050 mm) to 300 µm (0.30mm), in 5 µm steps,
- with widths from 5 mm to 125 mm, in 0.5 mm steps,
- with a density of 0.50g/cm³ (D050) or 0.70g/cm³ (D070).

Low density PTFE tapes are not markable.

Tape colors



Codification example

AT050D070L010^H				
AT	050	D070	L010	^H
Axon' Tape	Thickness: 50µm	Density: 0.70g/cm³	Width: 10mm	Blue color

LOW DENSITY PTFE CELLOFLON® TAPES - HIGH TENSILE STRENGTH

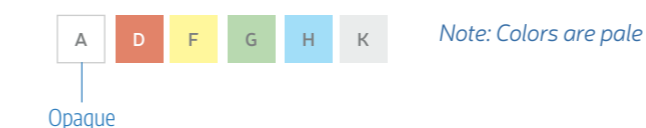
Reference	Axon' Tape (µm)	Density (g/cm³)		Width (mm)
		D070	D050	
Thickness (µm) in 10µm steps	100 to 250	0.7 +/- 0.1 g/cm³	0.5 +/- 0.1 g/cm³	Width +/- 0.5mm in 0.5mm steps
Thickness tolerance (µm)	Nom. thickness +/- 10µm			
Tensile strength (DaN/mm²)	> 2.0			
MOQ				

You can order tapes:

- with thicknesses from 100 (0.100 mm) to 250 µm (0.25mm), in 10 µm steps.
- with widths from 5 mm to 50 mm, in 0.5 mm steps.
- with a density of 0.50g/cm³ (D050) or 0.70g/cm³ (D070). For other densities, please contact us.
- with high tensile strength > 2.0NaD/mm².

Low density PTFE tapes are not markable.

Tape colors



Codification example

ATII100D070L020^G				
ATII	100	D070	L020	^G
Axon' Tape, high tensile strength	Thickness: 100µm	Density: 0.70g/cm³	Width: 20mm	Green color

AXON' PTFE TAPES VERSUS COMPETITION: AXON' IN THE LEAD!

Comparison of Axon' PTFE tapes versus competitors, for tapes with 50 to 100µm thicknesses.

Characteristics	Comparative characteristics				Advantages of Axon' tapes
	Axon' Cable	Aeromil tapes	Sealing tapes		
Thickness (µm)	50 to 100		50 to 100		Tape thickness with tight tolerances: weight saving.
Capability for +/- 9 µm (cpk)	1.50 to 2.0	>1.33 +/- 9 µm	0.8 to 1.0 +/- 15 µm	0.8 to 1.33 +/- 10 µm	Better capability for Axon' tape: constant mass, diameter stability = guaranteed cable weight Advantage for avionics applications: weight saving.
Tensile strength (N/mm ²)	> 18		> 15		A higher tensile strength for quicker wrapping: better productivity for the customer.
Density (g/cm ³)	1.53 to 1.75 <i>Low density is usually 0.5 to 0.7 g/cm³</i>		1.53 to 1.75		These data correspond to PTFE values.
Transversal elongation (%)	> 600		> 300		High percentage of transversal elongation: limitation of cracks on the overlap after sintering.
Spool weight (kg)	> 65		< 30		Optimized continuous lengths on the same spool + Bigger spool packaging = production time saving for the customer.
Abrasion resistance (cycles)	> 280150 > 138 00021000 > 24 0006600 > 1400480		RET20135^B REE1427^B RE2619^H RET2819^L		Abrasion resistance of Axon' tapes largely exceed the values defined in the EN3475 standard and is 2 to 4 times higher than competition tapes used for values measured to EN3475 standard for:

UV LASER MARKABILITY



Markable PTFE tapes are available in **white, green, blue, yellow** and **grey**. These colors provide a high contrast. Axon' UV laser markable PTFE tapes are in compliance with:

- **EN3475:** mask marking. This is the most common standard. The tape is marked with a single flash. The result is more homogeneous than with vector marking.
- **EN4650:** vector marking. The laser moves to mark the support. The traces of the laser can usually be seen.

- Both standards state 50% of contrast before ageing and 40% after ageing.
- Axon' tapes are markable with different kinds of devices including Laselec, Spectrum or Keyence.

Tape types ended with **GUU, FUV, HUV, KUV, LUV** are markable. For these references, Axon' guarantees marking readability after 169 hours in an oven at 310°C. (cf. EN3475).

WINDING-UP, PACKAGING & STORAGE CONDITIONS



Winding-up

The type of winding depends on tape widths:

- 5 mm to 12.5 mm width: step pack (traverse winding)
- 12.5 mm to 190 mm width: flat-pad pancake spool
- > 200 mm: mother roll

Mother roll packaging

- **Palet:** 800 x 1200 mm
 - **Height:** 1500 mm max
 - **Weight:** 510 Kg max
 - **Spools:** 5 max per palet
- Note:** for step packs and flat-pad pancake spools packaging. Please contact us.



Storage conditions

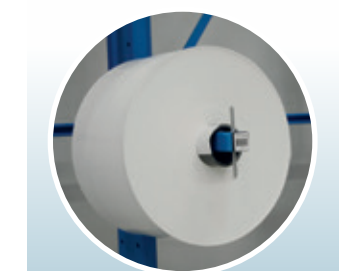
- **Storage temperature:** 15°C to 19°C to avoid "layer to layer stickings".
- Avoid **exposure** to sunlight.
- Must be stored in **plastic bags** to avoid dust.
- When handling the spool, do not touch the product directly. **Please manipulate the mandrel.**



The spool shall not be stored vertically to avoid compressions of the layers.



If horizontally stored, please avoid vibrations.



Storing on a vertical axis is highly recommended.



Axon' tape manufacturing line is equipped with a collecting station which treats air and emissions. Filtration is carried out by activated carbon which captures gases. The collected gases are then treated by a waste treatment company.



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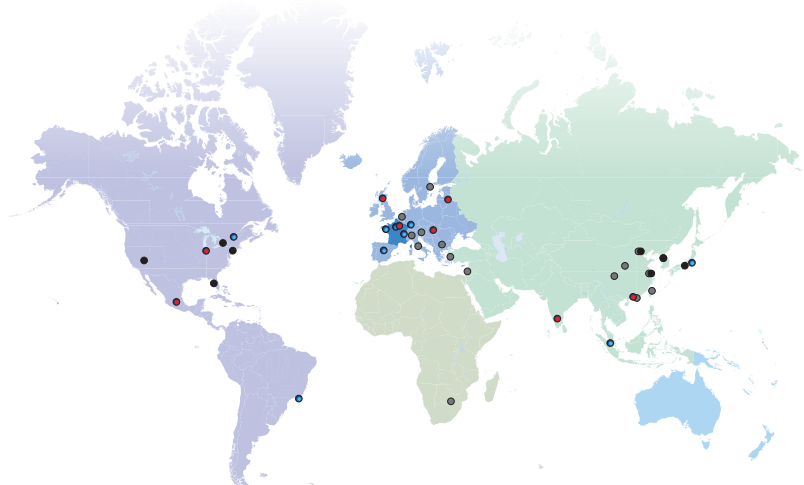
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