

# UNSINTERED PTFE TAPES

## UV LASER MARKABLE – EV Series



Technetics' EV Series of unsintered PTFE tapes (a.k.a. "Extruded Tapes") are High Performance tapes (MAX Series) with the addition of UV Laser Markability properties meeting most of aircraft wiring standards (AS22759, BMS 13, EN2267 and more).

Different options are available depending on the markings' contrast required, starting at a minimum of 55% markings' contrast.

### APPLICATIONS:

- **Commercial and military aircraft wiring**
- **Any application where UV laser markability is required/desired**

### FEATURES

- Standard (White, Red, Blue, Yellow, Green, Black/Gray) and Special colors (Brown, Orange, Violet); custom color shades can be developed upon request.
- Thickness starting at 0.0020" (0.051mm)
- Widths from 5/32 (4mm) to 7" (178mm)
  - Check our [Widths and Packages flyer](#) for details on winding types
- Homopolymer or copolymer materials
- High tensile strength in addition to long continuous lengths help wire and cable producers to improve efficiency by enabling

faster wrapping speeds while minimizing changeovers

- Physical and mechanical properties meet ASTM D6585 and AS22759
- High temperature of operation
- Continuous long lengths from 3,000ft (914m) up to 13,500ft (4115m)
- Excellent chemical resistance, mechanical and chemical performance
- All colors are RoHS, REACH and California Prop 65 compliant

### COMMON AEROSPACE WIRE AND CABLE CONSTRUCTIONS

- Single Conductor wires: AS22759/80 – /96, EN2267-008, -010, -012
- Signal and low voltage power cables: NEMA WC 27500, EN2714
- Airframe, single or multiple cores: BMS 13, ABS 0949, ABS 1356
- Flight test cables: ASN E0409, E0410, E0411, E0412, AS
- Fire Resistant cables: ASN E0437, ECS 0741, ECS 0742, EN2346-003, -005, EN4608-004
- Data cables: BMS 13-80, BMS 13-83, AS6070/5 and /7

### UV LASER MARKABILITY – CONTRAST LEVELS

Product Version	Initial Contrast (MIN)	After Thermal Ageing (MIN)	Availability	Suitable for constructions <sup>2)</sup>
EV-S	55%	N/A	All Colors	EN3838; EN2267-008 and -010; AS6070/5 and /7; AS22759/80 - /96, some NEMA WC 27500
EV-E	60%	40%	White, Yellow, Black	Some BMS 13 series; some NEMA WC5700; some AS22759; some EN and ABS constructions

<sup>2)</sup> The list provided is not meant to be comprehensive but serve as an indication of common wire standards that require different levels of markings' contrast

**TYPICAL PROPERTIES**

		<b>Unsintered PTFE Tapes - UV Laser Markable</b>				
<b>Thickness</b>		<b>0.0020"</b> <b>(0.051mm)</b>	<b>0.0025"</b> <b>(0.064mm)</b>	<b>0.0030"</b> <b>(0.076mm)</b>	<b>0.0035"</b> <b>(0.089mm)</b>	<b>0.0040"</b> <b>(0.102mm)</b>
<b>Properties</b>						
<b>Density (SPG)</b>		1.6 g/cm <sup>3</sup>				
<b>Tensile Strength <sup>1</sup> (Machine Direction)</b>		3,500 psi (24.1 MPa)	3,300 psi (22.8 MPa)	2,800 psi (19.3 MPa)	2,400 psi (16.5 MPa)	2,400 psi (16.5 MPa)
<b>Elongation at Break <sup>1</sup> (Machine Direction)</b>		150%	150%	200%	200%	250%
<b>Dielectric Strength (breakdown voltage)</b>		2,000 V/mil (78.7 kV/mm)				

The values above are for reference only and should not be used as specification

<sup>1</sup> Different colors and base resins may lead to different values

**COLORS**

		<b>DARKEST</b>	<b>LIGHTEST</b>	<b>ACTUAL</b>	<b>TAPE COLOR BEFORE SINTERING</b>
<b>Standard Colors</b> Darkest and Lightest shades according AS22759.	<b>GRAY / BLACK</b>	 --- 7/0	 --- 8.5/0	 HEATHER BLACK	
	<b>RED</b>	 10RP 7/4	 5R 8/6	 ORCHID RED	
	<b>BLUE</b>	 5PB 7/4	 7.5PB 8/6	 TROPICAL BLUE	
	<b>YELLOW</b>	 5Y 8/4	 10Y 9/6	 MILAN YELLOW	
	<b>GREEN</b>	 2.5G 7/2	 7.5G 9/6	 MONTECARLO GREEN	
<b>Special Colors</b> Darkest and Lightest shades according AS22759.	<b>ORANGE</b>	 10R 6/8	 2.5YR 7/10	 TUMBLEWEED ORANGE	
	<b>BROWN</b>	 7.5R 7/2	 2.5R 9/4	 WAFER BROWN	
	<b>VIOLET</b>	 2.5P 7/4	 7.5R 7.5/8	 MELROSE VIOLET	

Warning: Properties shown on this document are typical. Your specific application should not be undertaken without independent study and evaluation for suitability. For specific application recommendations, consult Technetics PTFE & Polymer Solutions. While the utmost care has been used in compiling this document, we assume no responsibility for errors. This edition cancels all previous issues. Subject to change without notice.