

# UNSINTERED PTFE TAPES

## HIGH PERFORMANCE



**PLASTOLON™** unsintered PTFE tapes (a.k.a “extruded PTFE tapes”) have been a synonym of quality for over 30 years. ***With the best color and properties uniformity in the industry***, the Plastolon™ PTFE tapes continued to evolve and are now part of the Altamira Material Solutions family.

Natural, white or other colors, UV laser-markable or conductive, Altamira Material Solutions has the right PTFE tape solution for your application.

Altamira’s high performance extruded PTFE tapes provide **superior electrical properties** in addition to excellent chemical and mechanical properties of the standard version. High Performance tapes are recommended in critical wire and cable applications, especially those requiring arc propagation resistance (arc tracking).

The high performance tapes is also the best option for convoluted hoses and control cables (push/pull cables) where flexural strength is required.

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.

## FEATURES

- High performance insulation and jacketing materials
- Natural, Standard (White, Red, Blue, Yellow, Green, Black) and Special colors (Brown, Orange, Violet, Gray); custom color shades can be developed upon request.
- Natural and White can be as thin as 0.0015” (0.038mm). Other colors start 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
- 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 electrical performance
- All colors are RoHS, REACH and California Prop 65 compliant

## APPLICATIONS

- Control Cables (push-pull cables)
- Convoluted hoses
- Hook-up wire and cables
- Thermocouple wire
- Commercial and military airframe wiring
- Power feeders
- Data cables

## TYPICAL PROPERTIES

| Unsintered PTFE Tapes - High Performance                |                          |                         |                         |                         |                         |
|---|--------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Thickness   | 0.0020"<br>(0.051mm)     | 0.0025"<br>(0.064mm)    | 0.0030"<br>(0.076mm)    | 0.0035"<br>(0.089mm)    | 0.0040"<br>(0.102mm)    |
| Properties  |                          |                         |                         |                         |                         |
| Density (SPG)   | 1.6 g/cm <sup>3</sup>    |                         |                         |                         |                         |
| Tensile Strength <sup>1</sup><br>(Machine Direction)    | 3,400 psi<br>(23.4 MPa)  | 3,200 psi<br>(22.1 MPa) | 3,000 psi<br>(20.7 MPa) | 2,400 psi<br>(16.5 MPa) | 2,400 psi<br>(16.5 MPa) |
| Elongation at Break <sup>1</sup><br>(Machine Direction) | 150%                     | 150%                    | 200%                    | 230%                    | 250%                    |
| Dielectric Strength<br>(breakdown voltage)              | 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

COMMON AEROSPACE WIRE AND CABLE CONSTRUCTIONS

- Single Conductor wires: AS22759/80 – /96, EN2267-007, -009, -011
- Hook-up of electronic assemblies: NEMA WC 55021, NEMA HP3
- Airframe, single or multiple cores: BMS 13, ABS 0949, ABS 1356
- Flight test, thermocouple cable: ASN E0413, MBBN 3320, EN4049-004
- Special cables: NSA 935306
- Power Feeders: ASN E0438, NSA 935131, ABS 0949
- Data cables: BMS 13-80, AS6070

COLORS

|  |        | DARKEST  | LIGHTEST   | ACTUAL   | TAPE COLOR BEFORE SINTERING   |
|--|--------|--|--|--|---|
| <b>Standard Colors</b><br>Darkest and Lightest shades according MIL-STD-104 (Class 1) and EIA-359-A. | BLACK  |  |  --- 2.3/0.5    |  ECLIPSE BLACK      |    |
|  | RED    |  10RP 3/10      |  5.5R 5/27      |  VALENCIA RED       |    |
|  | BLUE   |  7.5B 3/8      |  5PB 5.2/25    |  MARINER BLUE      |   |
|  | YELLOW |  1.25Y 7.5/8  |  8.75Y 9.5/21 |  STARSHIP YELLOW  |  |
|  | GREEN  |  5GY 4/8      |  5G 6/31      |  EUCALYPTUS GREEN |  |
| <b>Special Colors</b><br>Darkest and Lightest shades according MIL-STD-104 (Class 1) and EIA-359-A.  | ORANGE |  10R 5/10     |  5YR 5/21     |  SIENNA ORANGE    |  |
|  | BROWN  |  7.5R 2.5/4.5 |  7.5YR 4.5/8  |  IRONSTONE BROWN  |  |
|  | VIOLET |  10PB 3/5.5   |  5P 5.5/31    |  STUDIO VIOLET    |  |
|  | GRAY   |  --- 4.5/0    |  --- 6/0.5    |  ALUMINUM GRAY    |  |

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