

## PTFEflex

T6421 & T6431 series

Convoluted PTFE Hose Vacuum Wired with Stainless Steel Braid (Virgin/Antistatic)

**PTFE FLEX**



### Key features

- A wide operating temperature range (-70°C to +260°C)
- Inert to virtually all chemicals
- Very resistant to weathering/ageing unaffected by UV light, resistant to oxidation, surface fouling and discoloration.
- Non-flammable
- Lightweight
- Superior flex fatigue life
- Low permeability
- Lowest coefficient of friction of any known solid material
- Unlimited shelf life
- Solvent resistant

### Temperature range

-70°C to +260°C

| Available sizes | Colour  |
|-----------------|---|
| 1/4" - 6"       | Translucent PTFE with Stainless Steel Overbraid |

### Note:

\*This hose is available in both Virgin & Antistatic PTFE making it suitable for ATEX applications.

### Overview

A medium wall convoluted virgin/antistatic PTFE hose manufactured in accordance to FDA standards and suitable for the requirements of food, beverage, petrochemical, chemical, medical and pharmaceutical applications. Constructed from a helically convoluted inner tube, an external vacuum wire and an outer cover of AISI304 high tensile stainless steel braid which helps to stop elongational growth and increases working pressures.

### Applications

Convoluted PTFE hoses are designed to meet the stringent temperature, pressure and vacuum service requirements found in food, pharmaceutical, medical, beverage and dairy product application. Our PTFE hoses are very versatile and highly recommended for critical applications in many other industries including; Food/dairy handling and production, fluids associated with high temperatures, petrochemical & specialist chemical transferee, bottle filling, de-ionised water transfer, beverage service, handling and production, conveyance of cosmetic solutions, fluids associated with pharmaceutical and bio-medical transfer as well as production.

### Options

- Colour coded labelling system
- External cover colour is also available in red, yellow and white
- A range of end connections all manufactured from 316L stainless steel including; Triclover, DINN, RJT, SMS, BSPT
- Can be electropolished to <0.625µm Ra or <0.4µm Ra
- Full 3:1.B material batch traceability

### Standards, Accreditations & Registered compliances

| Virgin                  | Antistatic               |
|-------------------------|--------------------------|
| • BS EN ISO 9001:2008   | • BS EN ISO 9001:2008    |
| • FDA 21 CFR 177.1550   | • FDA 21 CFR 178.3287    |
| • 3A Sanitary Standards | • 3A Sanitary Standards  |
| • SAE J1737             | • SAE J1737              |
| • EN10204               | • EN10204                |
| • EN45014               | • EN45014                |
|                         | • ATEX Directive 94/9/EC |








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### T6421/T6431 - Convoluted PTFE Hose (Virgin & Antistatic)

| Size   |  (mm) |  (mm) |  (mm) |  (mm) |  (bar) |  (bar) |  (g/m) | Product Code (Virgin) | Product Code (Antistatic) |
|--------|--|--|--|--|---|---|---|-----------------------|---------------------------|
| 1/4"   | 7.00   | 14   | 0.76   | 25   | 35  | 170   | 150   | T6421-06              | T6431-06                  |
| 3/8"   | 9.65   | 19   | 0.76   | 25   | 35  | 170   | 203   | T6421-10              | T6431-10                  |
| 1/2"   | 13.08  | 21   | 0.89   | 50   | 50  | 250   | 220   | T6421-12              | T6431-12                  |
| 5/8"   | 16.00  | 25   | 0.89   | 65   | 35  | 170   | 320   | T6421-16              | T6431-16                  |
| 3/4"   | 19.00  | 30   | 1  | 55   | 60  | 290   | 540   | T6421-20              | T6431-20                  |
| 1"     | 25.40  | 38   | 1.2  | 85   | 40  | 210   | 890   | T6421-25              | T6431-25                  |
| 1 1/4" | 31.00  | 44   | 1.2  | 100  | 45  | 210   | 1180  | T6421-32              | T6431-32                  |
| 1 1/2" | 35.50  | 48   | 1.6  | 120  | 40  | 175   | 1710  | T6421-40              | T6431-40                  |
| 1 3/4" | 44.00  | 59   | 1.6  | 135  | 25  | 135   | 2450  | T6421-45              | T6431-45                  |
| 2"     | 47.50  | 63   | 1.6  | 165  | 25  | 135   | 2610  | T6421-50              | T6431-50                  |
| 2 1/2" | 60.25  | 80   | 1.6  | 230  | 14  | 60  | 3440  | T6421-65              | T6431-65                  |
| 3"     | 74.00  | 96   | 1.5  | 260  | 12  | 65  | 4710  | T6421-80              | T6431-80                  |
| 4"     | 100.00   | 128  | 2.5  | 300  | 10  | 40  | 5550  | T6421-100             | T6431-100                 |
| 6"     | 150.00   | 189  | 2.5  | 520  | 6   | 24  | 6750  | T6421-150             | T6431-150                 |

\*Safety factor of 4:1 ratio burst pressure to working pressure.

| PTFE Mechanical Properties |  |
|----------------------------|--|
| Density                    | 2200 kg/m <sup>3</sup>                     |
| Melting Point              | 600 K                                      |
| Thermal Expansion          | 112-125 · 10 <sup>-6</sup> K <sup>-1</sup> |
| Thermal Diffusivity        | 0.124 mm <sup>2</sup> /s                   |
| Young's Modulus            | 0.5 GPa                                    |
| Yield Strength             | 23 MPa                                     |
| Bulk Resistivity           | 1016 Ω·m                                   |
| Coefficient of Friction    | 0.05-0.10                                  |
| Dielectric Constant        | ε=2.1,tan(δ)<5(-4)                         |
| Dielectric Constant (60Hz) | ε=2.1,tan(δ)<2(-4)                         |
| Dielectric Strength (1MHz) | 60 MV/m                                    |

#### Other PTFE Products

- T6100 - Smoothbore Virgin PTFE Hose with Stainless Steel Braid
- T6110 - Smoothbore Antistatic PTFE Hose with Stainless Steel Braid
- T6421 - Convoluted Virgin Vacuum Wired PTFE Hose with Stainless Steel Braid
- T6431 - Convoluted Antistatic Vacuum Wired PTFE Hose with Stainless Steel Braid

#### Related Products

- Brewflex Hose range
- Silicone Hose & Tube
- Hygienic Fittings

#### Disclaimer

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