

# Technical Tubing and Hose

## PA Tubing

(P. 3-10)



**Fluids:** Compressed air, industrial fluids

**Materials:**

- 2 polyamide grades (semi-rigid and rigid)
- 7 colours

**Pressure:** 58 bar

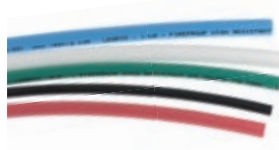
**Temperature:** -40°C to +100°C

**O.D. metric:** 3 mm to 16 mm

**O.D. inch:** on request

## Fireproof High Resistance PA Tubing

(P. 3-14)



**Fluids:** compressed air, coolants, lubricants

**Materials:**

- Polyamide with flame retardant additive
- 5 colours

**Pressure:** 50 bar

**Temperature:** -50°C to +100°C

**O.D. metric:** 4 mm to 12 mm

## Anti-Spark PA or PU Tubing, with or without PVC Sheath

(P. 3-16 & 24)



**Fluids :** compressed air, coolants, industrial fluids

**Materials :**

- Semi-rigid polyamide with PVC sheath
- Polyurethane ether with PVC sheath
- Single layer polyurethane ether
- 4 colours

**Pressure:** 36 bar max.

**Temperature:** -20°C to +80°C

**O.D. metric:** 4 mm to 14 mm

## PU Tubing

(P. 3-18)



**Fluids:** compressed air and food industry fluids ("crystal")

**Materials:**

- Polyurethane ester or ether
- Polyurethane food-grade "crystal"
- 7 colours

**Pressure:** 12 bar

**Temperature:** -20°C to +70°C

**O.D. metric:** 3 mm to 16 mm

**O.D. inch:** on request

## Antistatic PU Tubing

(P. 3-22)



**Fluids:** compressed air

**Materials:**

- Polyurethane with conductive particles
- Black (10<sup>2</sup> Ω.m)

**Pressure:** 10 bar

**Temperature:** -20°C to +70°C

**O.D. metric:** 3 mm to 12 mm

## PE Tubing

(P. 3-26)



**Fluids:** many fluids

**Materials:**

- Low density polyethylene
- 50% reticulated polyethylene, food-grade
- 7 colours

**Pressure:** 20 bar

**Temperature:** -40°C to +95°C

**O.D. metric:** 4 mm to 16 mm

**O.D. inch:** 1/8" to 1/2"

## FEP Tubing

(P. 3-28)



**Fluids:** many fluids

**Materials:**

- Fluoropolymer: fluorinated ethylene propylene, food-grade
- Transparent

**Pressure:** 28 bar

**Temperature:** -40°C to +150°C

**O.D. metric:** 4 mm to 12 mm

## PFA Tubing

(P. 3-30)



**Fluids:** many fluids

**Materials:**

- 3 grades of perfluoroalkoxy
- High purity food-grade, clear
- Standard food-grade, 3 "crystal" colours
- Antistatic (0.2 Ω.m), black

**Pressure:** 36 bar

**Temperature:** -196°C to +260°C

**O.D. metric:** 4 mm to 12 mm

## PA Multi-Tubing

(P. 3-32)



**Fluids:** compressed air, industrial fluids

**Materials:**

- Semi-rigid polyamide with PVC sheath
- 6 colours

**Pressure:** 24 bar

**Temperature:** -40°C to +80°C

**O.D. metric:** 4 mm to 8 mm

# Technical Tubing and Hose

## Twin PU Tubing

(P. 3-32)



**Fluids:** compressed air

**Materials:**

- Polyurethane ester
- 1 to 2 colours

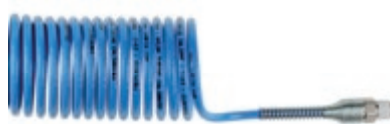
**Pressure:** 14 bar

**Temperature:** -20°C to +70°C

**O.D. metric:** 4 mm to 8 mm

## Recoil PA Tubing

(P. 3-34)



**Fluids:** compressed air, industrial fluids

**Materials:**

- Semi-rigid polyamide
- 2 colours
- Recoil tubing with fittings

**Pressure:** 20 bar

**Temperature:** -20°C to +80°C

**O.D. metric:** 6 mm and 8 mm

## Recoil PU Tubing

(P. 3-36)



**Fluids:** compressed air

**Materials:**

- Polyurethane ester or ether
- 3 colours
- With or without fittings

**Pressure:** 10 bar

**Temperature:** -20°C to +70°C

**O.D. metric:** 4 mm to 12 mm

**I.D. inch:** 3/8" and 19/32"

## Braided PU Recoil Hose

(P. 3-40)



**Fluids:** compressed air, industrial fluids

**Materials:**

- Translucent blue polyurethane, reinforced with a polyester braid
- Assembled with threaded fittings

**Pressure:** 15 bar

**Temperature:** -40°C to +75°C

**I.D. inch:** 1/4" and 5/16"

## Braided PVC Hose

(P. 3-42)



**Fluids:** compressed air, non-corrosive or alimentary fluids (translucent PVC)

**Materials:**

- Polyvinyl chloride with braided polyester
- Translucent (food-grade) or blue (industrial)

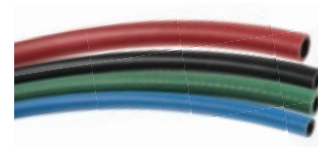
**Pressure:** 15 bar

**Temperature:** -25°C to +70°C

**I.D. metric:** 4 mm to 19 mm

## Self-Fastening NBR Hose

(P. 3-44)



**Fluids:** compressed air, coolants

**Materials:**

- Nitrile butadiene rubber reinforced with a polyamide braid
- 4 colours

**Pressure:** 16 bar

**Temperature:** -20°C to +100°C

**I.D. inch:** 1/4" to 3/4"

# Technical Tubing and Hose Range

## Flexible Calibrated Tubing

### Polyamide Tubing

Semi-Rigid PA



**1025P**  
**1100P**  
**2005P**  
**2010P**  
Page 3-11

Rigid PA



**1025L**  
Page 3-12

Fireproof PA



**1100P..R**  
Page 3-15

Anti-Spark PA with PVC Sheath



**1025P..V**  
**1100P..V**  
Page 3-17

### Polyurethane Tubing

PU Ester



**1025U**  
**1100U**  
**2003U**  
**2005U**  
**2010U**  
Page 3-19

PU Ether  
PU Ether Food-Grade "Crystal"



**1025U..R**  
**1100U..R**  
**2003U..R**  
**2005U..R**  
**2010U..R**  
Page 3-20

Antistatic PU



**1025U..A**  
**1100U..A**  
Page 3-23

PU Ether, Anti-Spark, Single Layer  
PU Ether, Anti-Spark with PVC Sheath



**1025U..V**  
**1100U..V**  
Page 3-25  
**1025U..K**  
**1100U..K**  
Page 3-25

### Polyethylene Tubing

Advanced PE



**1015Y..F**  
**1030Y..F**  
**1075Y..F**  
**1096Y..F**  
**1098Y..F**  
**1099Y..F**  
Page 3-27

Low Density PE



**1100Y**  
Page 3-27

### Fluoropolymer Tubing

FEP



**1005T**  
**1025T**  
Page 3-29

PFA



**1010T..P**  
**1050T..P**  
**1100T..P**  
Page 3-31

Antistatic PFA



**1010T..A**  
**1050T..A**  
Page 3-31

## Calibrated Multi-Tubing

### Polyamide Tubing with PVC Sheath

Semi-Rigid PA



**1010P..M**  
**1050P..M**  
Page 3-33

### Twin Polyurethane Tubing

Twin PU Ester



**1420U**  
Page 3-33

# Technical Tubing and Hose Range

## Calibrated Recoil Tubing

### Semi-Rigid Polyamide

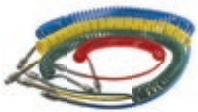
Assembled with Fittings



**1470P**  
**1471P**  
**1472P**  
Page 3-35

### Polyurethane Ester and Ether Tubing

Assembled with Fittings,  
Metallic Spring Guard



**1470U**  
**1471U**  
**1472U**  
Page 3-37

Assembled with Fittings,  
Plastic Spring Guard



**1445U..R**  
**1441U..R**  
**1442U..R**  
**1447U..R**  
Page 3-38

Coiled without Fittings



**1460U**  
**1461U**  
**1462U**  
Page 3-37

### Braided Polyurethane Hose

Assembled with Fittings,  
Plastic Spring Guard



**1445U..E**  
**1442U..E**  
**1447U..E**  
Page 3-41

## Calibrated Braided Hose

Clear Food-Grade PVC



**1025V**  
**1050V**  
Page 3-43

Blue PVC



**1025V..C**  
**1050V..C**  
Page 3-43

Self-Fastening NBR



**1040H**  
**1080H**  
**1100H**  
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## Accessories

**0694**  
Page 3-46



**0695**  
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**3000 71 11**  
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**3000 71**  
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**6000 71**  
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**0127**  
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**1827**  
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**Clip**  
Page 3-47



**0697**  
Page 3-47



# Packaging for Technical Tubing and Hose

## Tubepack®

- 5 m, 10 m, 25 m and 100 m lengths
- For polyamide, polyurethane, fluoropolymer, polyethylene and anti-spark tubing
- Optimisation of tubing storage
- Immediate identification of the type of tubing
- Integrated winder for easy handling



## Drums

- Up to 1000 m long
- For polyamide, polyurethane, fluoropolymer tubing, etc.
- Immediate identification of the tubing for easy handling
- Adapted to workshop reels



## Reels

- Up to 100 m
- Supplied with protective plastic film
- For braided tubing, special tubing (e.g. multi-tubing)



## Plastic Bags

- Ideal for merchandising
- Promotional tools
- Recoil tubing or tubing cut to the required length



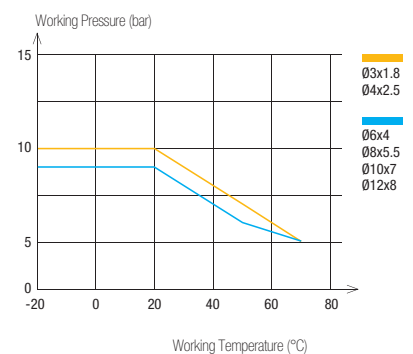
## Tube Marking

- Length indicated every metre:
  - time saved when cutting to exact length
  - remaining quantity is immediately identifiable (PA and PU)
- Custom marking upon request (marking, fluid identification, customer part number...)
- Traceability with marking of manufacturing batch



## How to Read the Graphs

- In the graphs in this chapter, each curve represents the acceptable maximum pressure at a given temperature, by diameter.
- Technical characteristics of Parker Legris tubing depend on the type of connection used.
- The vacuum capability of all tubing is 755 mm Hg (99% vacuum).



# Product Codes of Parker Legris Tubing and Hose

## Material

- H** = Self-Fastening NBR
- L** = Rigid Polyamide
- P** = Semi-Rigid Polyamide
- T** = Fluoropolymer
- U** = Polyurethane
- V** = PVC
- Y** = Polyethylene

## Type of Tubing

- P..A** = Antistatic PA
- P..R** = Fireproof PA
- P..V** = Anti-Spark PA with PVC Sheath
- T..A** = Antistatic PFA
- T..P** = PFA
- U..A** = Antistatic PU
- U..K** = Anti-Spark Single Layer PU
- U..R** = PU Ether
- U..V** = Anti-Spark PU with PVC Sheath
- Y..F** = Advanced PE (LIQUIfit®)

**2010 P 04 R 00 27**

### Packaging Code

**1** = Tubepack® or LIQUIfit® Drum

**2** = Long Length on Drum

### Length

**015** = 150 m  
**020** = 20 m  
**025** = 25 m  
**030** = 300 m  
**040** = 40 m  
**075** = 75 m  
**080** = 80 m  
**100** = 100 m

**003** = 300 m

**005** = 500 m

**010** = 1000 m

### O.D. Code

**03** = 3 mm  
**04** = 4 mm  
**06** = 6 mm  
**08** = 8 mm  
 .../...  
**1/4** = 56 mm  
 .../...

**10** = 10 mm

**04** = 4 mm  
**06** = 6 mm  
**08** = 8 mm  
**10** = 10 mm

**04** = 4 mm  
**06** = 6 mm

### Colour

**00** = ○ clear  
**01** = ● black  
**02** = ● green  
**03** = ● red  
**04** = ● blue  
**05** = ● yellow  
**06** = ● grey  
**07** = ● orange  
**08** = ○ crystal clear  
**09** = ● purple  
**10** = ○ white  
**12** = ● crystal green  
**13** = ● crystal red  
**14** = ● crystal blue  
**17** = ● crystal orange

### Special I.D.

**18** = 1.8 mm  
**27** = 2.7 mm  
**33** = 3.3 mm  
**75** = 7.5 mm  
**95** = 9.5 mm

## Tube Cutting to the Required Length

- Upon special request, customised cutting of the semi-rigid tubing (PA, PU, PE, FEP, PFA, ...)
- Cutting length from 30 mm to 14 m (+/- 2 mm precision)
- Marking upon request, in white or red
- Packaging according to customer requirements (bags/boxes/etc, ...)



# PA Tubing

**Tried-and-tested** for industrial or vehicle applications, PA tubing guarantees **excellent durability** due to its stable long-term mechanical properties.

Parker Legris' special grade of semi-rigid polyamide is manufactured according to our **Eco-Design** approach for higher performance.

## Product Advantages

### Tried-&-Tested Material

- Good chemical and humidity resistance
- Excellent material stability (mechanical and chemical)
- Continuous calibration during production for excellent reliability
- Two material grades: rigid and semi-rigid
- Bio-based semi-rigid material

### Versatility & Performance

- Wide range of working pressure and temperature
- Good vibration absorption
- Abrasion-resistant
- Remaining length marking
- Large choice of colours to facilitate circuit identification
- Silicone-free



**Applications**

- Packaging
- Tooling
- Compressed Air
- Motion Technologies
- Robotics
- Industrial Machinery

## Technical Characteristics

Tubing	Semi-Rigid PA	Rigid PA
Compatible Fluids	Compressed air, other fluids	Compressed air, lubricants, other fluids
Working Pressure	Vacuum to 50 bar	Vacuum to 58 bar
Working Temperature	-40°C to +100°C	-40°C to +80°C
Component Materials	Bio-based polyamide (68 shore D)	Polyamide (65 shore D)

### Regulations

#### Industrial

DI: 2002/95/EC (RoHS), 2011/65/EC  
DI: 97/23/EC (PED)  
RG: 1907/2006 (REACH)

#### Transportation

Chemical performance and resistance tested according to DIN 74324 -1 / DIN 73378 / ISO 7628

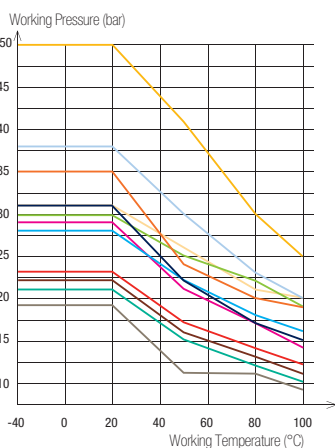
### Packaging

TubePack®: 25 m, 100 m  
Drum: 500 m, 1 000 m

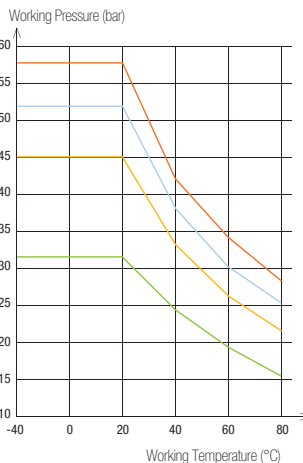
Reliable performance is dependent upon the type of fluid conveyed and fittings being used. Use is guaranteed with a vacuum of 755 mm Hg (99% vacuum).

### Performance of PA Tubing

#### Semi-Rigid



#### Rigid



Tube O.D.	Tube O.D. Tolerance
3 to 5 mm	+0.05 / -0.08
6 to 16 mm	+0.05 / -0.10

Connected to Parker Legris push-in fittings, the calibration of Parker Legris tubing ensures perfect sealing in accordance with NF E49-100.

## 1025P

### Semi-Rigid Polyamide (PA) Tubing

Tubepack® 25 m

Ø ext. (mm)	Ø int. (mm)	R	clear							kg
3	1.8	6	1025P03 00 18					1025P03 04 18		0.200
4	2	10	1025P04 00	1025P04 01	1025P04 02	1025P04 03	1025P04 04	1025P04 05	1025P04 06	0.318
	2.7	10	1025P04 00 27	1025P04 01 27	1025P04 02 27	1025P04 03 27	1025P04 04 27	1025P04 05 27	1025P04 06 27	0.254
5	3.3	15	1025P05 00 33	1025P05 01 33				1025P05 04 33		0.420
6	4	15	1025P06 00	1025P06 01	1025P06 02	1025P06 03	1025P06 04	1025P06 05	1025P06 06	0.535
8	6	25	1025P08 00	1025P08 01	1025P08 02	1025P08 03	1025P08 04	1025P08 05	1025P08 06	0.748
10	7.5	42	1025P10 00 75	1025P10 01 75				1025P10 04 75		1.135
	8	50	1025P10 00	1025P10 01	1025P10 02	1025P10 03	1025P10 04	1025P10 05	1025P10 06	0.989
12	9	47	1025P12 00 09	1025P12 01 09				1025P12 04 09		1.769
	10	90	1025P12 00	1025P12 01				1025P12 04	1025P12 05	1.345
14	11	80	1025P14 00 11	1025P14 01 11				1025P14 04 11		2.226
	12	116	1025P14 00	1025P14 01				1025P14 04		1.734
16	13	90	1025P16 00 13	1025P16 01 13	1025P16 02 13	1025P16 03 13	1025P16 04 13			2.500

Inch version tubing available upon request

## 1100P

### Semi-Rigid Polyamide (PA) Tubing

Tubepack® 100 m

Ø ext. (mm)	Ø int. (mm)	R	clear							kg
4	2	10	1100P04 00	1100P04 01	1100P04 02	1100P04 03	1100P04 04	1100P04 05	1100P04 06	1.152
	2.7	10	1100P04 00 27	1100P04 01 27	1100P04 02 27	1100P04 03 27	1100P04 04 27	1100P04 05 27	1100P04 06 27	0.893
5	3.3	15	1100P05 00 33	1100P05 01 33				1100P05 04 33		1.274
6	4	15	1100P06 00	1100P06 01	1100P06 02	1100P06 03	1100P06 04	1100P06 05	1100P06 06	1.799
8	6	25	1100P08 00	1100P08 01	1100P08 02	1100P08 03	1100P08 04	1100P08 05	1100P08 06	2.898
10	7.5	42	1100P10 00 75	1100P10 01 75				1100P10 04 75		4.400
	8	50	1100P10 00	1100P10 01	1100P10 02	1100P10 03	1100P10 04	1100P10 05		3.667
12	9	47	1100P12 00 09	1100P12 01 09				1100P12 04 09		5.600
	10	90	1100P12 00	1100P12 01				1100P12 04	1100P12 06	5.052
14	11	80	1100P14 00 11	1100P14 01 11				1100P14 04 11		5.200
	12	116	1100P14 00	1100P14 01				1100P14 04		4.800
16	13	90	1100P16 00 13	1100P16 01 13	1100P16 02 13	1100P16 03 13	1100P16 04 13			7.800

Inch versions: also available

## 2005P

### Semi-Rigid Polyamide (PA) Tubing

Drum 500 m

Ø ext. (mm)	Ø int. (mm)	R	clear							kg
8	6	25	2005P08 00	2005P08 01	2005P08 02	2005P08 03	2005P08 04	2005P08 05	2005P08 06	12.100
10	8	50	2005P10 00	2005P10 01	2005P10 02	2005P10 03	2005P10 04	2005P10 05		15.600

## 2010P

### Semi-Rigid Polyamide (PA) Tubing

Drum 1000 m

Ø ext. (mm)	Ø int. (mm)	R	clear							kg
4	2.7	10	2010P04 00 27	2010P04 01 27	2010P04 02 27	2010P04 03 27	2010P04 04 27	2010P04 05 27	2010P04 06 27	7.630
6	4	15	2010P06 00	2010P06 01	2010P06 02	2010P06 03	2010P06 04	2010P06 05	2010P06 06	16.600

### Tube Cutting to the Required Length

- Upon special request, customised cutting of the semi-rigid tubing (PA, PU, PE, FEP, PFA, ...)
- Cutting length from 30 mm to 14 m (+/- 2 mm precision)
- Marking upon request, in white or red
- Packaging according to customer requirements (bags/boxes/etc, ...)







# PA Tubing

## 1025L

### Rigid Polyamide (PA) Tubing

Tubepack® 25 m

Ø ext. (mm)	Ø int. (mm)	 R		kg
4	2.5	35	1025L04 01 25	0.190
6	4	45	1025L06 01	0.400
8	5	70	1025L08 01 05	0.760
	6	65	1025L08 01	0.760
10	6	85	1025L10 01 06	1.330

PA tubing can be connected to various fittings shown throughout this catalogue.

#### Tubing

##### Semi-Rigid PA



##### Rigid PA



#### Push-In Fittings

**LF 3000\*** P. 1-4



**LF 3600** P. 1-95



**LF 3800/LF 3900** P. 1-113



**LF 6100** P. 1-107



#### Compression Fittings

**Brass** P. 5-5



**Stainless Steel** P. 5-31



**Ferrules** P. 5-5





Flexible Calibrated Tubing

Technical Tubing  
and Hose

# Fireproof High Resistance PA Tubing

This **single layer fireproof** tubing not only combines excellent resistance to pressure, temperature and flame, but also guarantees **non-toxic smoke** resulting from burn-off. This tubing eliminates the need for a stripping tool, thus preventing the risk of tube damage prior to connection.

## Product Advantages

### Safety for On-Board Railway Equipment

- Designed for on-board equipment
- Excellent flame resistance: self-extinguishing
- Very little smoke generation
- Non-toxic combustion gases
- UV-resistant
- Extremely resistant to high pressure and temperature

### Innovative Single-Layer Solution

- Developed for demanding industrial applications
- Excellent spark resistance
- Economical alternative to PA tubing with PVC sheath
- Combines technical advantages of rigid and semi-rigid PA tubing
- 5 colours available
- Flow direction marking
- Silicone-free



**Applications**

- Railway
- Air Horns
- Industrial Machinery
- Pneumatic Doors
- Step-Units
- Centralised Lubrication
- Welding

## Technical Characteristics

<b>Compatible Fluids</b>	Compressed air, lubricants Other fluids: please consult us
<b>Working Pressure</b>	Vacuum to 50 bar
<b>Working Temperature</b>	-40°C to +100°C
<b>Component Materials</b>	Polyamide (63 shore D)

### Regulations

#### Railway

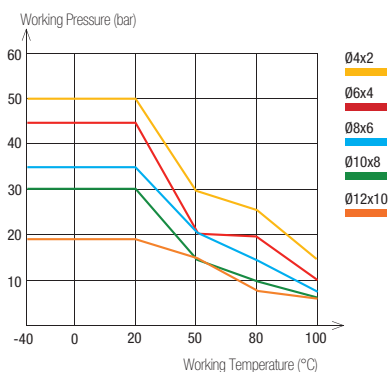
Pr EN 45545-2: HL3, R22, R24, R25  
NF F16101: I3 F2,  
DIN 5510-2: S4, SR2, ST2  
ISO 4892

#### Industrial

DI: 97/23/EC (PED)  
DI: 2002/95/EC (RoHS), 2011/65/EC  
RG: 1907/2006/EC (REACH)  
UL94 V-0 (Fire resistance)

Reliable performance is dependent upon the type of fluid conveyed and fittings being used. Use is guaranteed with a vacuum of 755 mm Hg (99% vacuum).

### Performance of Fireproof High Resistance PA Tubing



Tube O.D.	Tube O.D. Tolerance
4 mm	+0.05 / -0.08
6 to 12 mm	+0.05 / -0.10

### Packaging

Tube pack\*: 100 m





Connected to Parker Legris push-in fittings, the calibration of PA tubing ensures perfect sealing based on NF E49-100.

To calculate burst pressure, the values in this graph should be multiplied by 3.

# 1100P..R

## Fireproof High Resistant Polyamide (PA) Tubing

Tubepack® 100 m

Ø ext. (mm)	Ø int. (mm)	 R	 clear			kg
4	2	17	<a href="#">1100P04R00</a>	<a href="#">1100P04R01</a>	<a href="#">1100P04R04</a>	1.308
6	4	29	<a href="#">1100P06R00</a>	<a href="#">1100P06R01</a>	<a href="#">1100P06R04</a>	1.308
8	6	40	<a href="#">1100P08R00</a>	<a href="#">1100P08R01</a>	<a href="#">1100P08R04</a>	2.122
10	8	77	<a href="#">1100P10R00</a>	<a href="#">1100P10R01</a>	<a href="#">1100P10R04</a>	2.725
12	10	92	<a href="#">1100P12R00</a>	<a href="#">1100P12R01</a>	<a href="#">1100P12R04</a>	3.716

Other colours available on request with a minimum order quantity: for diameters 4 to 6 mm, 1000 m; for 8 mm, 500 m; for diameters 10 to 12 mm, 300 m.

### Related Products

Fireproof high resistance tubing can be connected to various fittings presented in Chapters 1 and 5.

#### Push-In Fittings

[LF 3000\\*](#)

P. 1-4

[LF 3600](#)

P. 1-95

[LF 3800/LF 3900](#)

P. 1-113

[LF 6100](#)

P. 1-107



#### Compression Fittings

[Brass](#)

P. 5-5

[Brass Tube Support](#)

P. 5-5



# Anti-Spark PA Tubing with PVC Sheath

A range of **flame and spark-resistant** PA tubing with superior resistance to impact and abrasion, improving equipment **durability**, particularly in areas subject to weld spatter.

## Product Advantages

**Spark Resistance** | Flame-retardant PVC jacket protects inner tubing  
Non-adhesive jacket facilitates sheath removal  
Excellent pressure resistance at high temperature

**Robustness & Durability** | Highly kink and crush-resistant  
Excellent compatibility with coolants  
Flow direction marking  
Silicone-free



Industrial Machinery  
Welding Robots  
Cooling  
Aggressive Environments

Applications

## Technical Characteristics

<b>Compatible Fluids</b>	Hot and cold water, refrigerated fluids, compressed air
<b>Working Pressure</b>	0 to 36 bar
<b>Working Temperature</b>	-20°C to +80°C
<b>Component Materials</b>	Polyamide & PVC Sheath

### Regulations

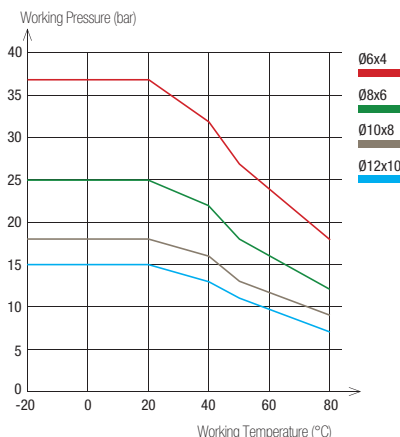
**Industrial**  
DI: 2002/95/EC (RoHS), 2011/65/EC  
DI: 97/23/EC (PED)  
RG: 1907/2006 (REACH)  
UL94 V-0 (Fire resistance)

### Packaging

Tube-pack\*: 25 m, 100 m

Reliable performance is dependent upon the type of fluid conveyed and fittings being used.

### Performance of Anti-Spark PA Tubing with PVC Sheath



O.D.	Tube O.D. Tolerance	PVC Sheath Thickness
<b>PVC Sheath 8 to 14 mm</b>	+0.10 / -0.10	1 mm
<b>Inner Tubing 6 to 12 mm</b>	+0.05 / -0.10	

Connected to Parker Legris push-in fittings, the calibration of PA tubing ensures perfect sealing based on NF E49-100 (semi-rigid PA inner tubing).

Tube O.D.	Sheath Removal Length for LF 3600 Push-In Fittings (mm)
4 mm	15± 1
6 mm	18± 1
8 mm	19± 1
10 mm	24± 1
12 mm	25± 1





For other fitting ranges, please consult us.

To calculate burst pressure, the values in this graph should be multiplied by 3.

## 1025P..V

Anti-Spark Polyamide (PA) Tubing





Tubepack® 25 m

Ø ext. (mm)	Ø int. (mm)					kg
6	4	25	1025P06V01	1025P06V03	1025P06V04	1,238
8	6	30	1025P08V01	1025P08V03	1025P08V04	1,693
10	8	55	1025P10V01	1025P10V03	1025P10V04	2,029
12	10	70	1025P12V01		1025P12V04	2,970

## 1100P..V

Anti-Spark Polyamide (PA) Tubing

Tubepack® 100 m

Ø ext. (mm)	Ø int. (mm)					kg
6	4	25	1100P06V01	1100P06V03	1100P06V04	2,338
8	6	30	1100P08V01	1100P08V03	1100P08V04	3,767
10	8	55	1100P10V01	1100P10V03	1100P10V04	4,767
12	10	70	1100P12V01		1100P12V04	6,567

## 6000 71 00

Stripping Tool for Anti-Spark Tubing

Technical polymer, stainless steel



6000 71 00

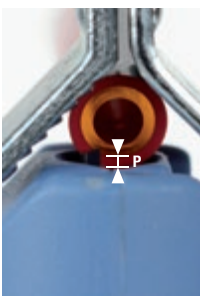
kg

0.098



## Working Principle

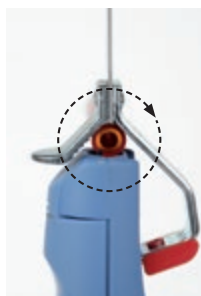
Stripping Tool 6000 71 00



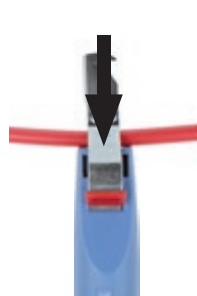
1. Place tube in stripping tool to adjust the blade height to the tube thickness.



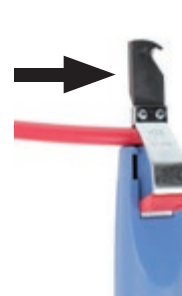
2. Blade height is adjusted using the wheel at the bottom of the handle.



3. Once adjustments have been made, perform a 360° rotation around the tube with the tool.



4. Push down firmly on the metal part of the tool in order to hold tube properly.



5. Move the tool to the end of the tube to create an axial opening of the sheath.



6. The tube is correctly stripped.

# PU Tubing

Polyurethane's **3 specific materials** - ether, ester and food-grade "crystal" - offer excellent flexibility and outstanding use in a wide range of applications, allowing for up to **50% space reduction** when compared to semi-rigid PA tubing.

## Product Advantages

### Excellent Mechanical Properties

- Consistent tensile strength for optimum longevity
- Optimal bend radius
- Good vibration absorption
- Unsurpassed abrasion resistance for a single layer tubing
- UV-resistant
- Superior vacuum capability due to surface hardness
- Remaining length marking
- Silicone-free

### 3 Material Grades

- PU ester: perfect for pneumatic applications
- PU ether: no water absorption ; superior chemical resistance to PU ester
- PU ether food-grade "crystal":
  - identification of fluids and circuits
  - chemical resistance superior to PU ether
  - improved longevity



**Applications**

- Food Process
- Robotics
- Cabling
- Pneumatics
- Automation
- In-Plant Automotive
- Rapid Cycles

## Technical Characteristics

<b>Compatible Fluids</b>	Compressed air, industrial fluids (depending on the material type)
<b>Working Pressure</b>	Vacuum to 12 bar
<b>Working Temperature</b>	-20°C to +70°C
<b>Component Materials</b>	Polyurethane ester (52 Shore D) Polyurethane ether (52 Shore D) Polyurethane ether food-grade "crystal" (52 Shore D)

### Regulations

#### Industrial

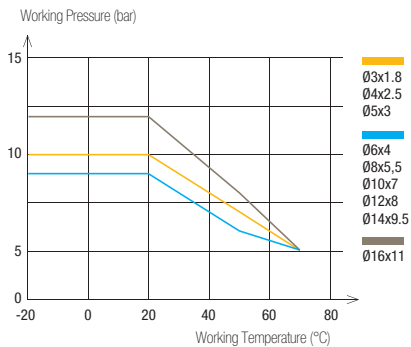
- DI: 2002/95/EC (RoHS), 2011/65/EC
- DI: 97/23/EC (PED)
- RG: 1907/2006 (REACH)

#### Food (PU ether food-grade "crystal")

- FDA: 21 CFR 177.2600, 178.3297, 176.170, 178.2010
- RG: 1935/2004 EC

Reliable performance is dependent upon the type of fluid conveyed and fittings being used. Use is guaranteed with a vacuum of 755 mm Hg (99% vacuum).

### Performance of PU Tubing



Tube O.D.	Tube O.D. Tolerance
3 to 8 mm	+0.10 / -0.10
10 to 16 mm	+0.15 / -0.15

### Packaging

- Tube pack\*: 25 m, 100 m
- Drum: 300 m, 500 m, 1 000 m








Connected to Parker Legris push-in fittings, the calibration of PU tubing ensures perfect sealing based on NF E49-101.

To calculate burst pressure, the values in this graph should be multiplied by 3.

## 1025U

### Polyurethane (PU) Ester Tubing

Tubepack® 25 m








Ø ext. (mm)	Ø int. (mm)								kg
3	1.8	8	1025U03 01 18						0.020
4	2.5	10	1025U04 01	1025U04 02	1025U04 03	1025U04 04	1025U04 05	1025U04 06	0.310
5	3	13	1025U05 01			1025U05 04			0.522
6	4	15	1025U06 01	1025U06 02	1025U06 03	1025U06 04	1025U06 05	1025U06 06	0.591
8	5.5	20	1025U08 01	1025U08 02	1025U08 03	1025U08 04	1025U08 05	1025U08 06	0.971
10	7	25	1025U10 01	1025U10 02		1025U10 04	1025U10 05	1025U10 06	1.467
12	8	35	1025U12 01	1025U12 02		1025U12 04	1025U12 05	1025U12 06	2.406
14	9.5	45	1025U14 01 95			1025U14 04 95			2.815
16	11	45	1025U16 01 11	1025U16 02 11	1025U16 03 11	1025U16 04 11			2.815

Inch tubing available upon request

## 1100U

### Polyurethane (PU) Ester Tubing

Tubepack® 100 m








Ø ext. (mm)	Ø int. (mm)								kg
4	2.5	10	1100U04 01	1100U04 02	1100U04 03	1100U04 04	1100U04 05	1100U04 06	1.092
5	3	13	1100U05 01			1100U05 04			1.092
6	4	15	1100U06 01	1100U06 02	1100U06 03	1100U06 04	1100U06 05	1100U06 06	2.064
8	5.5	20	1100U08 01	1100U08 02	1100U08 03	1100U08 04	1100U08 05	1100U08 06	3.610
10	7	25	1100U10 01			1100U10 04			6.105
12	8	35	1100U12 01			1100U12 04			8.610
14	9.5	45	1100U14 01 95			1100U14 04 95			11.215
16	11	45	1100U16 01 11	1100U16 02 11	1100U16 03 11	1100U16 04 11			12.176

Inch tubing available upon request

## 2003U

### Polyurethane (PU) Ester Tubing








Drum 300 m

Ø ext. (mm)	Ø int. (mm)								kg
10	7	25	2003U10 01	2003U10 02	2003U10 03	2003U10 04	2003U10 05	2003U10 06	16.600

## 2005U

### Polyurethane (PU) Ester Tubing








Drum 500 m

Ø ext. (mm)	Ø int. (mm)								kg
8	5.5	20	2005U08 01	2005U08 02	2005U08 03	2005U08 04	2005U08 05		17.100

## 2010U

### Polyurethane (PU) Ester Tubing









Drum 1000 m

Ø ext. (mm)	Ø int. (mm)								kg
4	2.5	12	2010U04 01	2010U04 02	2010U04 03	2010U04 04	2010U04 05	2010U04 06	9.840
6	4	15	2010U06 01	2010U06 02	2010U06 03	2010U06 04	2010U06 05	2010U06 06	20.460











## 1025U..R Polyurethane (PU) Ether Tubing

Tubepack® 25 m

Ø ext. (mm)	Ø int. (mm)									kg
4	2.5	12	1025U04R01	1025U04R04	1025U04R08	1025U04R12	1025U04R13	1025U04R14	1025U04R17	0.310
5	3	13			1025U05R08					0.522
6	4	15	1025U06R01	1025U06R04	1025U06R08	1025U06R12	1025U06R13	1025U06R14	1025U06R17	0.591
8	5.5	20	1025U08R01	1025U08R04	1025U08R08	1025U08R12	1025U08R13	1025U08R14	1025U08R17	0.971
10	7	25	1025U10R01	1025U10R04	1025U10R08			1025U10R14		1.467
12	8	35	1025U12R01	1025U12R04	1025U12R08			1025U12R14		2.406
14	9.5	45		1025U14R01 95						2.421
16	11	45			1025U16R08 11					2.815





## 1100U..R Polyurethane (PU) Ether Tubing

Tubepack® 100 m

Ø ext. (mm)	Ø int. (mm)									kg
4	2.5	12	1100U04R01	1100U04R04	1100U04R08	1100U04R12	1100U04R13	1100U04R14	1100U04R17	1.092
6	4	15	1100U06R01	1100U06R04	1100U06R08	1100U06R12	1100U06R13	1100U06R14	1100U06R17	2.064
8	5.5	20	1100U08R01	1100U08R04	1100U08R08	1100U08R12	1100U08R13	1100U08R14	1100U08R17	3.610
10	7	25			1100U10R08			1100U10R14		6.109
12	8	35			1100U12R04					8.610
14	9.5	45			1100U14R08 95					11.215
16	11	45			1100U16R08 11					12.176





## 2003U..R Polyurethane (PU) Ether Tubing

Drum 300 m

Ø ext. (mm)	Ø int. (mm)					kg
10	7	25	2003U10R01	2003U10R04	2003U10R08	16.600





## 2005U..R Polyurethane (PU) Ether Tubing

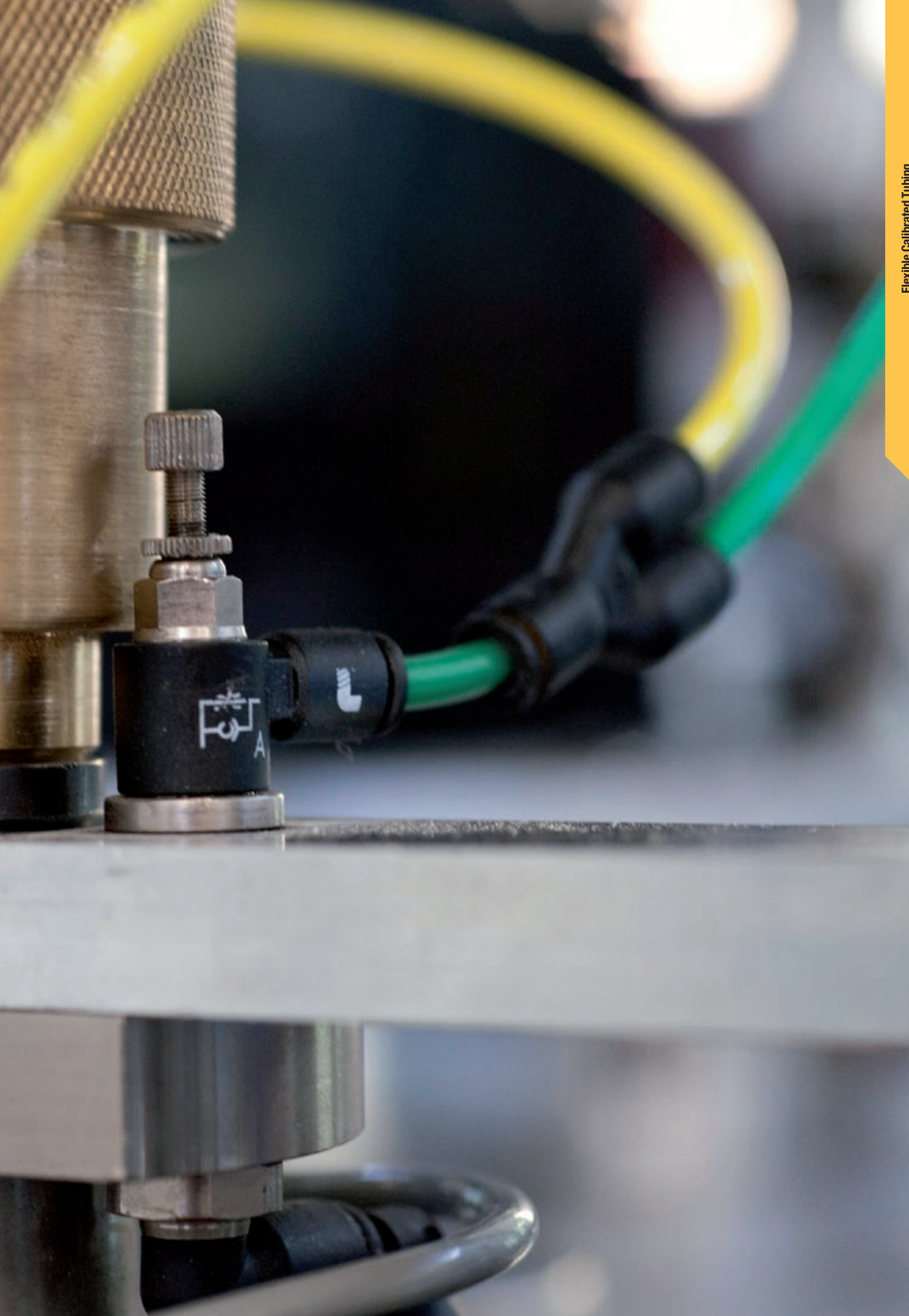
Drum 500 m

Ø ext. (mm)	Ø int. (mm)					kg
8	5.5	20	2005U08R01	2005U08R04	2005U08R08	15.600

## 2010U..R Polyurethane (PU) Ether Tubing

Drum 1000 m

Ø ext. (mm)	Ø int. (mm)					kg
4	2.5	12	2010U04R01	2010U04R04	2010U04R08	8.670
6	4	15	2010U06R01	2010U06R04	2010U06R08	18.600



# Antistatic PU Tubing

With a constant **10<sup>2</sup> Ω.m resistivity** across the entire thickness of the tubing wall, this tubing guarantees **perfect dissipation of accumulated static electricity**, thereby increasing safety.

## Product Advantages

**Security** | Low resistivity throughout the material  
 Suitable for ATEX\* areas  
 Superior longevity  
 Excellent vibration absorption  
 UV-resistant  
 Silicone-free

**Machinery Optimisation** | Minimum bend radius allowing maximum space saving  
 Good chemical resistance  
 Wide temperature range  
 Stable chemical characteristics throughout tubing



Antistatic Packaging  
 Pneumatics  
 Electronics  
 Spray Painting  
 Electrical Converters

Applications

## Technical Characteristics

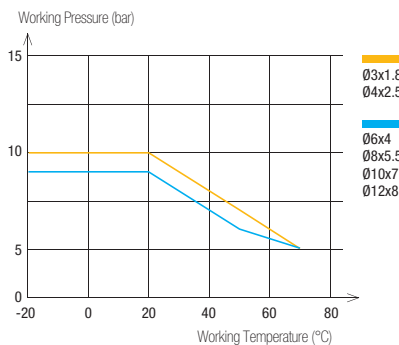
<b>Compatible Fluids</b>	Compressed air, industrial fluids
<b>Working Pressure</b>	Vacuum to 10 bar
<b>Working Temperature</b>	-20°C to +70°C
<b>Component Materials</b>	Polyurethane with conductive additive (50 shore D)

### Regulations

DI: 94/9/EC (ATEX\*)  
 DI: 1907/2006 (REACH)  
 DI: 2002/95/EC (RoHS), 2011/65/EC  
 \*For ATEX areas, please consult us

Reliable performance is dependent upon the type of fluid conveyed and fittings being used. Use is guaranteed with a vacuum of 755 mm Hg (99% vacuum).

### Performance of Antistatic PU Tubing



Tube O.D.	Tube O.D. Tolerance
3 to 8 mm	+0.10 / -0.10
10 to 12 mm	+0.15 / -0.15



**Packaging**  
 Tubepack\*: 25 m, 100 m

Connected to Parker Legris push-in fittings, the calibration of Parker Legris tubing ensures perfect sealing based on NF E49-101.

To calculate burst pressure, the values in this graph should be multiplied by 3.



## 1025U..A Anti-Static Polyurethane (PU) Ester Tubing

Tubepack® 25 m

Ø ext. (mm)	Ø int. (mm)	 R		kg
4	2.5	12	<a href="#">1025U04A01</a>	0.260
6	4	15	<a href="#">1025U06A01</a>	0.500
8	5.5	25	<a href="#">1025U08A01</a>	1.260

## 1100U..A Anti-Static Polyurethane (PU) Ester Tubing

Tubepack® 100 m

Ø ext. (mm)	Ø int. (mm)	 R		kg
3	1.8	10	<a href="#">1100U03A01</a>	0.836
4	2.5	12	<a href="#">1100U04A01</a>	1.092
6	4	15	<a href="#">1100U06A01</a>	2.064
8	5.5	25	<a href="#">1100U08A01</a>	3.610
10	7	35	<a href="#">1100U10A01</a>	6.105
12	8	45	<a href="#">1100U12A01</a>	8.610

Flexible Calibrated Tubing

Technical Tubing and Hose

### Related Products

To maintain the antistatic properties throughout the circuit, it is recommended that this tubing be used with metallic fittings.

#### Push-In Fittings

[LF 3600](#) P. 1-95



[LF 3800](#) P. 1-113



[LF 3900](#) P. 1-113



#### Compression Fittings

[Brass](#) P. 5-5



[Stainless Steel](#) P. 5-31



# Anti-Spark PU Tubing

Combining **outstanding spark resistance** with superb **flexibility**, this range is perfectly suited for welding applications.

Two types of PU - ether with PVC sheath or single layer ether - are available and allow **rapid installation** with Parker Legris push-in fittings.

## Product Advantages

### PU with PVC Sheath

- High resistance to kinking and abrasion
- Non-adhesive jacket facilitating sheath removal
- Fluid direction marking
- Self-extinguishing sheath, protecting the inner tubing
- Silicone-free

### Single Layer PU

- Minimum bend radius for maximum space saving
- Significant flexibility for rapid cycling
- Good chemical resistance
- Flow direction marking
- Fireproof material
- Silicone-free



- Applications
- Industrial Machinery
  - Compressed Air
  - Robotics
  - Mechanical Constraints
  - Cooling
  - Welding
  - Cabling

## Technical Characteristics

<b>Compatible Fluids</b>	Industrial fluids, compressed air, coolants
<b>Working Pressure</b>	Vacuum to 14 bar
<b>Working Temperature</b>	-20°C to +70°C
<b>Component Materials</b>	PU ether with PVC sheath PU ether single layer

Reliable performance is dependent upon the type of fluid conveyed and fittings being used. Use is guaranteed with a vacuum of 755 mm Hg (99% vacuum).

O.D. of Tube	Sheath Removal Length for LF 3600 (mm)
4 mm	15± 1
6 mm	18± 1
8 mm	19± 1
10 mm	24± 1
12 mm	25± 1

For other fitting ranges or other tube diameters, please consult us.

### Regulations

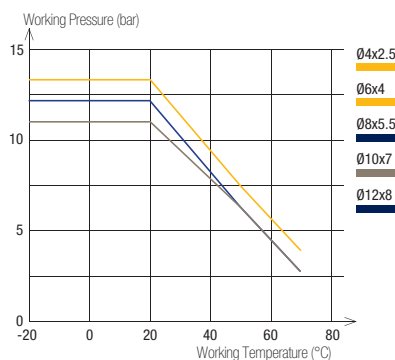
UL94 V-0 (Fire resistance)  
 DI: 2002/95/EC (RoHS),  
 2011/65/EC  
 RG: 1907/2006 (REACH)

### Packaging

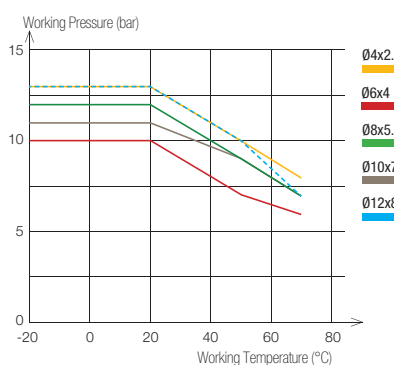
Tubepack\*: 25 m, 100 m

## Tubing Performance

### Anti-Spark PU Tubing, with PVC Sheath



### Anti-Spark PU Tubing, Single Layer



Tube O.D.	Tube O.D. Tolerance	Thickness and Tolerances of PVC Sheath
4 to 8 mm	+0.10 / -0.10	1mm +0.10 / -0.10
10 to 14 mm	+0.15 / -0.15	





Connected to Parker Legris push-in fittings, the calibration of Parker Legris tubing ensures perfect sealing based on NF E49-101 (inner tubing for sheathed or single layer tubing).

To calculate burst pressure, the values in these graphs should be multiplied by 3.  
 For diameter 14x9.5: tubing performances available upon request.

**1025U..V**

## Anti-Spark Sheath Polyurethane (PU) Ether Tubing





Tubepack® 25 m

Ø ext. (mm)	Ø int. (mm)					kg
6	4	12	<a href="#">1025U06V01</a>	<a href="#">1025U06V03</a>	<a href="#">1025U06V04</a>	1.200
8	5.5	20	<a href="#">1025U08V01</a>	<a href="#">1025U08V03</a>	<a href="#">1025U08V04</a>	1.620
10	7	25	<a href="#">1025U10V01</a>	<a href="#">1025U10V03</a>	<a href="#">1025U10V04</a>	2.900
12	8	35	<a href="#">1025U12V01</a>		<a href="#">1025U12V04</a>	4.030

**1100U..V**

## Anti-Spark Sheath Polyurethane (PU) Ether Tubing






Tubepack® 100 m

Ø ext. (mm)	Ø int. (mm)					kg
6	4	12	<a href="#">1100U06V01</a>	<a href="#">1100U06V03</a>	<a href="#">1100U06V04</a>	5.370
8	5.5	20	<a href="#">1100U08V01</a>	<a href="#">1100U08V03</a>	<a href="#">1100U08V04</a>	7.630
10	7	25	<a href="#">1100U10V01</a>	<a href="#">1100U10V03</a>	<a href="#">1100U10V04</a>	10.860
12	8	35	<a href="#">1100U12V01</a>		<a href="#">1100U12V04</a>	15.060

**1025U..K**

## Single Layer Anti-Spark Polyurethane (PU) Ether Tubing






Tubepack® 25 m

Ø ext. (mm)	Ø int. (mm)						kg
4	2.5	12	<a href="#">1025U04K01</a>		<a href="#">1025U04K03</a>		0.230
6	4	15	<a href="#">1025U06K01</a>		<a href="#">1025U06K03</a>	<a href="#">1025U06K04</a>	0.580
8	5.5	20	<a href="#">1025U08K01</a>	<a href="#">1025U08K02</a>	<a href="#">1025U08K03</a>	<a href="#">1025U08K04</a>	0.860
10	7	25	<a href="#">1025U10K01</a>	<a href="#">1025U10K02</a>	<a href="#">1025U10K03</a>	<a href="#">1025U10K04</a>	1.230
12	8	35	<a href="#">1025U12K01</a>	<a href="#">1025U12K02</a>	<a href="#">1025U12K03</a>	<a href="#">1025U12K04</a>	2.080
14	9.5	45			<a href="#">1025U14K03 95</a>		2.620

**1100U..K**

## Single Layer Anti-Spark Polyurethane (PU) Ether Tubing

Tubepack® 100 m

Ø ext. (mm)	Ø int. (mm)						kg
4	2,5	12	<a href="#">1100U04K01</a>				0.900
6	4	15	<a href="#">1100U06K01</a>		<a href="#">1100U06K03</a>	<a href="#">1100U06K04</a>	2.320
8	5,5	20	<a href="#">1100U08K01</a>	<a href="#">1100U08K02</a>	<a href="#">1100U08K03</a>	<a href="#">1100U08K04</a>	3.030
10	7	25	<a href="#">1100U10K01</a>	<a href="#">1100U10K02</a>	<a href="#">1100U10K03</a>	<a href="#">1100U10K04</a>	5.100
12	8	35	<a href="#">1100U12K01</a>	<a href="#">1100U12K02</a>	<a href="#">1100U12K03</a>	<a href="#">1100U12K04</a>	8.600
14	9,5	45			<a href="#">1100U14K03 95</a>		10.676

**6000 71 00**

## Stripping Tool for Anti-Spark Tubing

Technical polymer, stainless steel



6000 71 00

kg

0.098

Working principle of the stripping tool page 3-17



# PE Tubing

Parker Legris offers two types of polyethylene tubing: "**Advanced PE**" 50% reticulated and **Low Density PE**. Our range of "Advanced PE" is designed for demanding environments, especially that of water treatment, without compromising operator **safety**.

## Product Advantages

**Advanced PE**

- 50% reticulated material
- Best balance between flexibility and pressure/temperature resistance
- Resistant to a wide range of aggressive chemicals
- UV-stabilised: ideal for outdoor applications
- Approved for permanent contact with food and beverages
- Silicone-free

**Low Density PE**

- Excellent resistance to aggressive and corrosive agents
- Good technical trade-off
- Food-grade material
- Silicone-free



**Applications**

- Beverage
- Chemical
- Petrochemical
- Food Process
- Water
- Water Treatment

## Technical Characteristics

Tube	Advanced PE	Low Density PE
<b>Compatible Fluids</b>	Water, beverages and other fluids	Industrial fluids
<b>Working Pressure</b>	Vacuum to 16 bar	Vacuum to 20 bar
<b>Working Temperature</b>	-40°C to +95°C	-40°C to +60°C
<b>Component Materials</b>	High quality polyethylene: 50% reticulated PE 50% low density PE (44 shore D)	Low Density Polyethylene (44 shore D)

### Regulations

#### Advanced PE Tubing

FDA: 21 CFR 177.1520  
 RG: 1935/2004/EC  
 DI: 97/23/EC (PED)  
 DI: 2002/95/EC (RoHS), 2011/65/EC  
 NSF 42/58 (1/4" and 3/8" approved for 10 bar and 1/2" approved for 8 bar at room temperature)  
 NSF 51, 61 C-HOT  
 ACS (except for purple colour)  
 WRAS  
 RG: 1907/2006 (REACH)

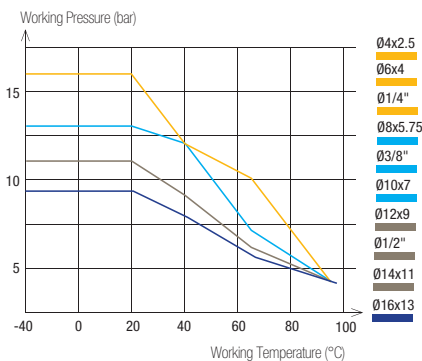
#### Low Density PE Tubing

FDA: 21 CFR 177.1520  
 DI: 2002/95/EC (RoHS), 2011/65/EC  
 DI: 97/23/EC (PED)

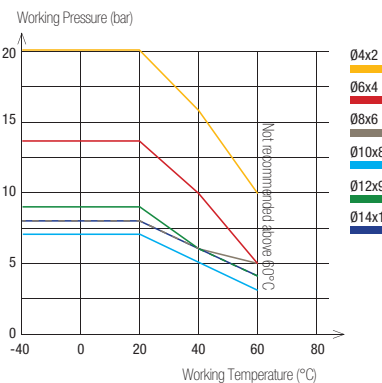
Reliable performance is dependent upon the type of fluid conveyed and fittings being used. Use is guaranteed with a vacuum of 755 mm Hg (99% vacuum).

### Tubing Performance

#### Advanced PE Tubing



#### Low Density PE Tubing



Tube O.D.	Tube O.D. Tolerance
1/4" to 1/2"	+0.10 / -0.10
4 to 16 mm	+0.10 / -0.10

Connected to Parker Legris push-in fittings, the calibration of Parker Legris tubing ensures perfect sealing.

#### Packaging

Advanced PE Tubing  
 Drum: 75 m, 150 m, 300 m  
 250 feet, 500 feet, 1 000 feet









PE Tubing  
 Tubepack®: 25 m, 100 m

To calculate burst pressure, the values in these graphs should be multiplied by 3.

**1015Y..F**

## Advanced Polyethylene (APE) Tubing









Drum 150 m

Ø ext. (mm)	Ø int. (mm)		 clear						 white	kg
4	2.5	16	1015Y04F00	1015Y04F01	1015Y04F02	1015Y04F03	1015Y04F04	1015Y04F05	1015Y04F10	4.914
6	4	32	1015Y06F00	1015Y06F01	1015Y06F02	1015Y06F03	1015Y06F04	1015Y06F05	1015Y06F10	5.434
8	5.75	40	1015Y08F00	1015Y08F01	1015Y08F02	1015Y08F03	1015Y08F04	1015Y08F05	1015Y08F10	3.279
10	7	40	1015Y10F00	1015Y10F01	1015Y10F02	1015Y10F03	1015Y10F04	1015Y10F05	1015Y10F10	5.318

**1030Y..F**

## Advanced Polyethylene (APE) Tubing









Drum 300 m

Ø ext. (mm)	Ø int. (mm)		 clear						 white	kg
4	2.5	16	1030Y04F00	1030Y04F01	1030Y04F02	1030Y04F03	1030Y04F04	1030Y04F05	1030Y04F10	2.860
6	4	32	1030Y06F00	1030Y06F01	1030Y06F02	1030Y06F03	1030Y06F04	1030Y06F05	1030Y06F10	5.318

**1075Y..F**

## Advanced Polyethylene (APE) Tubing









Drum 75 m

Ø ext. (mm)	Ø int. (mm)		 clear						 white	kg
12	9	55	1075Y12F00	1075Y12F01	1075Y12F02	1075Y12F03	1075Y12F04	1075Y12F05	1075Y12F10	3.852
14	11	75	1075Y14F00							5.850
16	13	95	1075Y16F01							7.550

**1096Y..F**

## Advanced Polyethylene (APE) Tubing









Drum 250 ft

Ø ext. (mm)	Ø int. (mm)		 clear						 white	kg
1/2	0.375	1.96	1096Y62F00	1096Y62F01	1096Y62F02	1096Y62F03	1096Y62F04	1096Y62F05	1096Y62F10	4.200

**1098Y..F**

## Advanced Polyethylene (APE) Tubing









Drum 500 ft

Ø ext. (mm)	Ø int. (mm)		 clear						 white	kg
1/4	0.170	0.78	1098Y56F00	1098Y56F01	1098Y56F02	1098Y56F03	1098Y56F04	1098Y56F05	1098Y56F10	2.334
3/8	0.250	1.18	1098Y60F00	1098Y60F01	1098Y60F02	1098Y60F03	1098Y60F04	1098Y60F05	1098Y60F10	5.518

**1099Y..F**

## Advanced Polyethylene (APE) Tubing



Drum 1000 ft

Ø ext. (mm)	Ø int. (mm)		 clear						 white	kg
1/4	0.170	0.78	1099Y56F00	1099Y56F01	1099Y56F02	1099Y56F03	1099Y56F04	1099Y56F05	1099Y56F10	4.718

## Low Density Polyethylene

**1100Y**

Tubepack® 100 m

Ø ext. (mm)	Ø int. (mm)		 clear	kg
4	2	25	1100Y04 00	0.910
6	4	35	1100Y06 00	1.500
8	6	55	1100Y08 00	2.140
10	8	80	1100Y10 00	2.710
12	9	65	1100Y12 00	4.750
14	11	80	1100Y14 00	5.650



# Fluoropolymer Tubing – FEP

**FEP** (fluorinated ethylene propylene) tubing is a **robust engineering fluoropolymer** which provides excellent fluid visibility and is perfect for flow control monitoring.

## Product Advantages

**Flow Control** | Transparent  
Flexible and non-flammable material  
Resistant to nearly all chemicals and solvents

**Tried-&-Tested Properties** | Excellent transmission of UV light  
Low friction coefficient  
Food-grade material  
Low permeability  
Easily weldable  
Silicone-free



**Applications**  
Instrumentation  
Food Process  
UV  
Gas Sampling  
Chemical  
Temperature Cycling  
Laboratory

## Technical Characteristics

<b>Compatible Fluids</b>	Industrial fluids
<b>Working Pressure</b>	0 to 28 bar
<b>Working Temperature</b>	-40°C to +150°C
<b>Component Materials</b>	Fluorinated ethylene propylene (pure) (55 Shore D)

### Regulations

#### Food

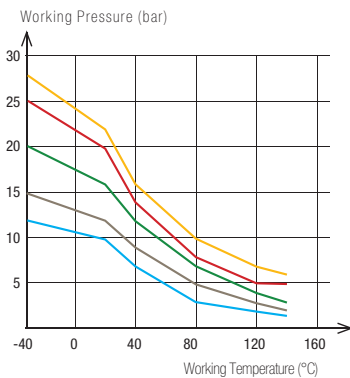
FDA: 21 CFR 177.1550  
RG: 1935/2004

#### Industrial

UL94 V-0 (Fire resistance)  
DI: 2002/95/EC (RoHS), 2011/65/EC  
DI: 97/23/EC (PED)  
RG: 1907/2006 (REACH)

Reliable performance is dependent upon the type of fluid conveyed and fittings being used.

### Performance of FEP Tubing



Tube O.D.	Tube O.D. Tolerance
4 mm	+0.05 / -0.05
6 to 10 mm	+0.07 / -0.07
12 mm	+0.10 / -0.10

### Packaging



Tube pack: 5 m, 25 m

Connected to Parker Legris push-in fittings, the calibration of Parker Legris tubing ensures perfect sealing.

## 1005T

### Fluoropolymer (FEP) Tubing



Tubepack® 5 m

Ø ext. (mm)	Ø int. (mm)	 R	 clear	kg
4	2.5	40	<a href="#">1005T04 00 25</a>	0.155
6	4	50	<a href="#">1005T06 00</a>	0.250
8	6	70	<a href="#">1005T08 00</a>	0.385
10	8	120	<a href="#">1005T10 00</a>	0.524
12	10	180	<a href="#">1005T12 00</a>	0.547

## 1025T

### Fluoropolymer (FEP) Tubing

Tubepack® 25 m

Ø ext. (mm)	Ø int. (mm)	 R	 clear	kg
4	2.5	40	<a href="#">1025T04 00 25</a>	0.506
6	4	50	<a href="#">1025T06 00</a>	1.025
8	6	70	<a href="#">1025T08 00</a>	1.431
10	8	120	<a href="#">1025T10 00</a>	1.693
12	10	180	<a href="#">1025T12 00</a>	1.913

## Related Products

Parker Legris stainless steel fittings are perfectly suited for use with fluoropolymer tubing (PFA, FEP).

### Push-In Fittings

[LF 3800](#) P. 1-77



[LF 3900](#) P. 1-77



### Compression Fittings

[Stainless Steel](#) P. 5-31



# Fluoropolymer Tubing - PFA

Parker Legris **PFA** (perfluoroalkoxy) tubing offers **10 times greater durability** than other fluoropolymer tubings (PTFE, FEP and PVDF) under severe chemical and mechanical conditions. This tubing range is available in **three material grades**, offering perfect compatibility with all applications, even in extreme environments.

## Product Advantages

### Great Versatility

- Exceptional chemical inertia
- A flexible alternative to stainless steel tubing
- Broad range of working temperatures, from cryogenic to extreme heat
- Non-stick properties allowing conveyance of many fluids & gases
- Outstanding resistance to ageing
- Fluoropolymer with the lowest permeability
- Non-flammable
- UV-transparent
- Tube marking on request
- Silicone-free

### Three Material Grades

- Clear High Purity PFA: to cover all applications, including those requiring maximum mechanical resistance
- Coloured PFA: for circuit identification
- Black Antistatic PFA: eliminates all risk of electrostatic discharge



- Food Process
- Fuel Cells
- Electrical/Electronics
- Aircraft
- Oil/Gas Industry
- Pharmaceutical
- Medical
- Chemical
- Clean Rooms

Applications

## Technical Characteristics

<b>Compatible Fluids</b>	Medical, bio-compatible, food process, gas, compressed air
<b>Working Pressure</b>	Vacuum to 36 bar
<b>Working Temperature</b>	-196°C to +260°C
<b>Component Materials</b>	Perfluoroalkoxy - 55 Shore D <ul style="list-style-type: none"> <li>• High Purity PFA</li> <li>• Translucent coloured PFA</li> <li>• Antistatic PFA</li> </ul>

Reliable performance is dependent upon the type of fluid conveyed and fittings being used. Use is guaranteed with a vacuum of 755 mm Hg (99% vacuum).

### Regulations

#### Medical

USP: Class VI (A)  
External communication devices

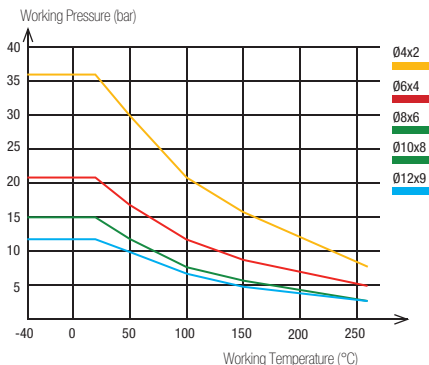
#### Industrial

UL94 V-0 (Fire resistance)  
DI: 2002/95/EC (RoHS), 2011/65/EC  
DI: 97/23/EC (PED)  
RG: 1907/2006 (REACH)  
DI: 94/09/EC (ATEX, black tubing)

#### Food Industry

FDA: 21 CFR 177.1550  
(clear, translucent coloured)  
RG: 1935/2004

### Performance of PFA Tubing



Tube O.D.	Tube O.D. Tolerance
4 to 8 mm	+0.10 / -0.10
10 to 12 mm	+0.15 / -0.15

### Packaging

TubePack®: 10 m, 50 m, 100 m






Connected to Parker Legris push-in fittings, the calibration of Parker Legris tubing ensures perfect sealing based on NF E49-100.

To calculate burst pressure, the values in this graph should be multiplied by 3.

**1010T..P**

## Fluoropolymer (FEP) Tubing






Tubepack® 10 m

Ø ext. (mm)	Ø int. (mm)						kg
4	2	12	<a href="#">1010T04P00</a>	<a href="#">1010T04P12</a>	<a href="#">1010T04P13</a>	<a href="#">1010T04P14</a>	0.087
6	4	34	<a href="#">1010T06P00</a>	<a href="#">1010T06P12</a>	<a href="#">1010T06P13</a>	<a href="#">1010T06P14</a>	0.237
8	6	60	<a href="#">1010T08P00</a>	<a href="#">1010T08P12</a>	<a href="#">1010T08P13</a>	<a href="#">1010T08P14</a>	0.410
10	8	95	<a href="#">1010T10P00</a>				0.723
12	9	120	<a href="#">1010T12P00</a>				1.148

**1050T..P**

## Fluoropolymer (FEP) Tubing



Tubepack® 50 m

Ø ext. (mm)	Ø int. (mm)						kg
4	2	12	<a href="#">1050T04P00</a>	<a href="#">1050T04P12</a>	<a href="#">1050T04P13</a>	<a href="#">1050T04P14</a>	0.435
6	4	34	<a href="#">1050T06P00</a>	<a href="#">1050T06P12</a>	<a href="#">1050T06P13</a>	<a href="#">1050T06P14</a>	1.185
8	6	60	<a href="#">1050T08P00</a>	<a href="#">1050T08P12</a>	<a href="#">1050T08P13</a>	<a href="#">1050T08P14</a>	2.050
10	8	95	<a href="#">1050T10P00</a>				3.615
12	9	120	<a href="#">1050T12P00</a>				5.740

**1100T..P**

## Fluoropolymer (FEP) Tubing



Tubepack® 100 m

Ø ext. (mm)	Ø int. (mm)			kg
4	2	12	<a href="#">1100T04P00</a>	0.870
6	4	34	<a href="#">1100T06P00</a>	2.370
8	6	60	<a href="#">1100T08P00</a>	4.100
10	8	95	<a href="#">1100T10P00</a>	7.230
12	9	120	<a href="#">1100T12P00</a>	11.480

**1010T..A**

## Fluoropolymer (FEP) Antistatic Tubing



Tubepack® 10 m

Ø ext. (mm)	Ø int. (mm)			kg
4	2	12	<a href="#">1010T04A01</a>	0.087
6	4	34	<a href="#">1010T06A01</a>	0.237
8	6	60	<a href="#">1010T08A01</a>	0.410

**1050T..A**

## Fluoropolymer (FEP) Antistatic Tubing

Tubepack® 50 m

Ø ext. (mm)	Ø int. (mm)			kg
4	2	12	<a href="#">1050T04A01</a>	0.435
6	4	34	<a href="#">1050T06A01</a>	1.185
8	6	60	<a href="#">1050T08A01</a>	2.050

# Multi-Tubing

Our range of multi-tubing combines high quality performance and **space optimisation** in complex pneumatic circuits **covering a wide range of environments**. Many possible **configurations** are available, depending on the pressure, temperature, flexibility and compatibility requirements.

## Product Advantages

### Sheathed PA Tubing

- PVC sheath resistant to external damage:
  - abrasion
  - weld spatter
  - aggressive fluids
- Helically wound: minimum bend radius, compact installation
- Simplified routing
- Easy identification of circuits
- Same technical performance as PA
- Possible number of tubes: from 2 to 12, with numbering
- Silicone-free

### Twin PU Ester Tubing

- Tubes fully joined for improved solidity
- External diameter maintained after separation
- Rapid identification of circuits
- Quick and easy installation
- Simplified routing
- 3 colour combinations available
- Silicone-free



**Applications**

- Pneumatics
- Automation
- Robotics
- Transportation
- In-Plant Automotive
- Process Industry

## Technical Characteristics

Tube	PA	PU
<b>Compatible Fluids</b>	Compressed air, chemicals, industrial fluids	Compressed air, industrial fluids
<b>Working Pressure</b>	Vacuum to 24 bar	0 to 14 bar
<b>Working Temperature</b>	-40°C to +80°C	-20°C to +70°C
<b>Component Materials</b>	Polyamide	Polyurethane ester

Reliable performance is dependent upon the type of fluid conveyed and fittings being used. Use is guaranteed with a vacuum of 755 mm Hg (99% vacuum).

### Regulations

#### Industrial

DI: 2002/95/EC (RoHS), 2011/65/EC  
 DI: 97/23/EC (PED)  
 RG: 1907/2006 (REACH)

Performance and chemical resistance according to DIN 73378

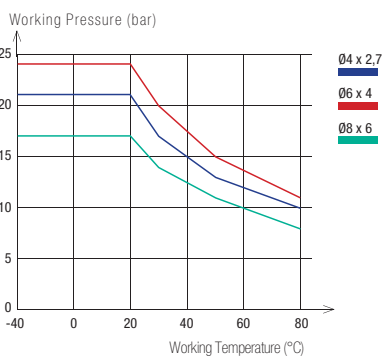
### Packaging

**Sheathed PA Tubing:**  
 Tubepack® 10 m, 50 m

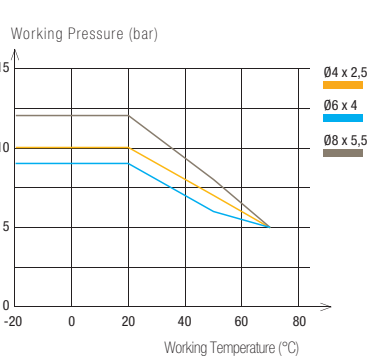
**Twin PU Ester Tubing:**  
 Tubepack® 25 m

### Tubing Performance

#### Sheathed PA Tubing



#### Twin PU Ester Tubing





Material	Tube O.D.	Tube O.D. Tolerance
PA	4 mm	+0.05 / -0.08
	6 to 8 mm	+0.05 / -0.10
PU	4 to 8 mm	+0.10 / -0.10

Connected to Parker Legris push-in fittings, the calibration of Parker Legris tubing ensures perfect sealing based on NF E49-100 (for semi-rigid PA) and NF E49-101 (for twin PU ester).

To calculate burst pressure, the values in these graphs should be multiplied by 3.



## 1010P..M Semi-Rigid Polyamide (PA) Multi-Tubing

Reel 10 m

Ø ext. (mm)	Ø int. (mm)		Number of tubes		kg
4	2.7	35	4	<a href="#">1010P04 00M04</a>	1.440
		45	7	<a href="#">1010P04 00M07</a>	1.920
6	4	55	4	<a href="#">1010P06 00M04</a>	2.300
		60	7	<a href="#">1010P06 00M07</a>	2.900
8	6	45	2	<a href="#">1010P08 00M02</a>	2.600





## 1050P..M Semi-Rigid Polyamide (PA) Multi-Tubing

Reel 50 m

Ø ext. (mm)	Ø int. (mm)		Number of tubes		kg
4	2.7	20	2	<a href="#">1050P04 00M02</a>	4.400
		35	4	<a href="#">1050P04 00M04</a>	6.600
		45	7	<a href="#">1050P04 00M07</a>	8.200
		55	12	<a href="#">1050P04 00M12</a>	15.200
6	4	45	2	<a href="#">1050P06 00M02</a>	8.400
		55	4	<a href="#">1050P06 00M04</a>	11.500
		60	7	<a href="#">1050P06 00M07</a>	12.500
8	6	45	2	<a href="#">1050P08 00M02</a>	13.000

## 1420U Twin Polyurethane (PU) Tubing

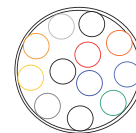
Tubepack® 25 m

Ø ext. (mm)	Ø int. (mm)					kg
4	2.5	12	<a href="#">1420U04 41</a>	<a href="#">1420U04 44</a>	<a href="#">1420U04 11</a>	0.620
6	4	15	<a href="#">1420U06 41</a>	<a href="#">1420U06 44</a>	<a href="#">1420U06 11</a>	1.182
8	5.5	20	<a href="#">1420U08 41</a>	<a href="#">1420U08 44</a>	<a href="#">1420U08 11</a>	1.942

### Colour Selection



Multi-Tubing  
Semi-Rigid PA/PVC Sheath



### Related Products

To complement the Multi-Tubing range, Parker Legris proposes multi-connectors, shown in Chapter 1.

#### Push-In Fittings

**Multi-Connector** P.1-31



# PA Recoil Tubing

Parker Legris recoil tubing has a **lasting memory after multiple uses**, offering an **alternative to reels** for excellent ergonomics and space saving.

The pre-assembled tubes are equipped with a protection spring, preventing damage to the ends.

## Product Advantages

### Excellent Mechanical Properties

- Low pressure drop
- Good chemical compatibility
- Self-retracting
- Identical technical performance to PA tubing
- Silicone-free

### Comprehensive Range

- Ready-to-use
- Various colours for circuit identification
- Available with pre-assembled connectors



- Applications**
- MRO
  - Pneumatic Tools
  - Transportation
  - Lubrication
  - Industrial Cleaning
  - Robotics
  - Car Washing

## Technical Characteristics

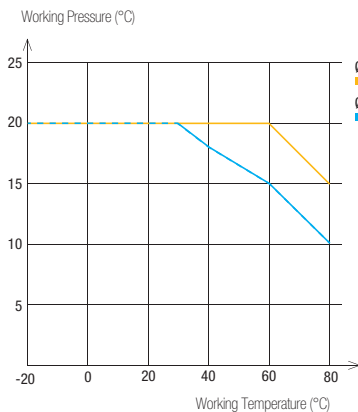
<b>Compatible Fluids</b>	Compressed air, lubricants, Other fluids: please consult us
<b>Working Pressure</b>	Vacuum to 20 bar
<b>Working Temperature</b>	-20°C to +80°C
<b>Component Materials</b>	Polyamide (60 Shore D)

### Regulations

- DI: 97/23/EC (PED)
- RG: 1907/2006 (REACH)
- DI: 2002/95/EC (RoHS), 2011/65/EC

Reliable performance is dependent upon the type of fluid conveyed and fittings being used. Use is guaranteed with a vacuum of 755 mm Hg (99% vacuum).

### Performance of PA Recoil Tubing



Tube O.D.	Passage	Tube O.D. Tolerance
6 mm	4 mm	+0.05 / -0.10
8 mm	6 mm	+0.05 / -0.10



### Packaging

- Plastic bags: 2m to 6 m
- Other lengths and colours on request

To calculate burst pressure, the values in these graphs should be multiplied by 3.

## 1470P

### Polyamide (PA) Recoil Tubing 2 m, Male BSPT Fitting



Ø ext. (mm)	Ø int. (mm)	BSPT Thread			Total Closed Length (mm)	O.D. of Coil (mm)	kg
6	4	R1/4	1470P06 04 13	1470P06 07 13	520	60	0.143
8	6	R1/4	1470P08 04 13	1470P08 07 13	560	70	0.174

Length of long straight section: 300 mm

Length of short straight section: 100 mm

## 1471P

### Polyamide (PA) Recoil Tubing 4 m, Male BSPT Fitting



Ø ext. (mm)	Ø int. (mm)	BSPT Thread			Total Closed Length (mm)	O.D. of Coil (mm)	kg
6	4	R1/4	1471P06 04 13	1471P06 07 13	640	60	0.199
8	6	R1/4	1471P08 04 13	1471P08 07 13	720	70	0.249

Length of long straight section: 300 mm

Length of short straight section: 100 mm

## 1472P

### Polyamide (PA) Recoil Tubing 6 m, Male BSPT Fitting

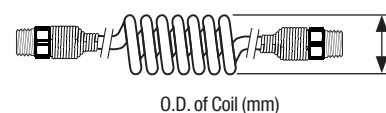
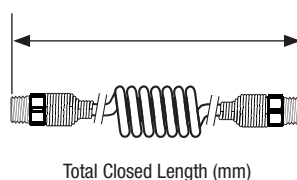
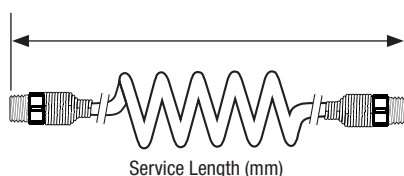
Ø ext. (mm)	Ø int. (mm)	BSPT Thread			Total Closed Length (mm)	O.D. of Coil (mm)	kg
6	4	R1/4	1472P06 04 13	1472P06 07 13	760	60	0.260
8	6	R1/4	1472P08 04 13	1472P08 07 13	880	70	0.329

Length of long straight section: 300 mm

Length of short straight section: 100 mm

## Dimensions for Recoil Tubing

Service length: maximum recommended operating length in order to ensure that the coil will continue to contract after multiple uses.





# PU Recoil Tubing

With its small coil diameter and good impact resistance, this polyurethane recoil tubing is perfect for installations requiring **flexibility** in confined spaces. Good resistance to shock and abrasion, together with a design integrating straight ends, allow for **easy and safe operation** of pneumatic equipment.

## Product Advantages

### Excellent Mechanical Properties

- Excellent coil memory
- Abrasion-resistant
- Perfect for rapid cycling applications
- Consistent tensile strength
- Optimum longevity
- Low pressure drop
- Lightweight with plastic protection spring
- Silicone-free

### Comprehensive Range

- Available in 2 materials: PU ester and PU ether
- With or without pre-assembled fittings
- Pre-assembled plastic or metal protection springs to prevent damage to equipment and tubing



**Applications**

- Workshops
- Tooling
- Pneumatics
- Motion Technologies
- Robotics
- Industrial Machinery

## Technical Characteristics

<b>Compatible Fluids</b>	Compressed air
<b>Working Pressure</b>	0 to 10 bar
<b>Working Temperature</b>	-20°C to +70°C (assembled tubing)
<b>Component Materials</b>	Polyurethane ester: 52 Shore D Polyurethane ether: 46 Shore D

### Regulations

**Industrial**  
 NF E49-101  
 DI: 2002/95/EC (RoHS), 2011/65/EC  
 DI: 97/23/EC (PED)  
 RG: 1907/2006 (REACH)

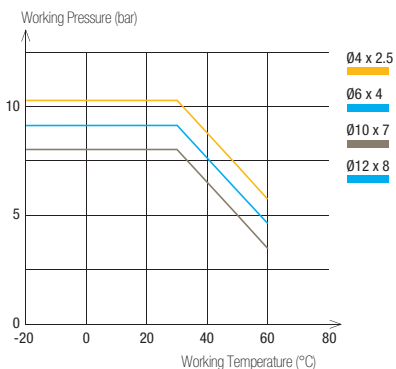
### Packaging

Plastic bags: from 2 m to 7.5 m

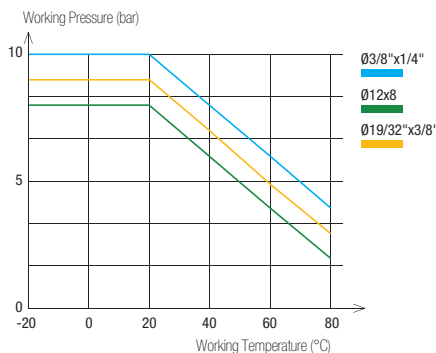
Reliable performance is dependent upon the type of fluid conveyed and fittings being used.

## Performance of PU Recoil Tubing

### PU Ester Recoil Tubing



### PU Ether Recoil Tubing






Tube O.D.	Tube I.D.	Tube O.D. Tolerance
4 to 8 mm	2.5 to 5.5 mm	+0.10 / -0.10
10 to 12 mm	7 to 8 mm	+0.15 / -0.15
3/8" and 19/32"	1/4" and 3/8"	+/- 0.005"

To calculate burst pressure, the values in these graphs should be multiplied by 3.

## 1470U




### Polyurethane (PU) Ester Recoil Tubing 2 m, Male BSPT Fitting

Ø ext. (mm)	Ø int. (mm)	BSPT Thread				Total Closed Length (mm)	O.D. of Coil (mm)	kg
4	2.5	R1/8	<a href="#">1470U04 03 10</a>	<a href="#">1470U04 04 10</a>	<a href="#">1470U04 05 10</a>	595	24	0.060
6	4	R1/4	<a href="#">1470U06 03 13</a>	<a href="#">1470U06 04 13</a>	<a href="#">1470U06 05 13</a>	630	32	0.060
8	5	R1/4	<a href="#">1470U08 03 13</a>	<a href="#">1470U08 04 13</a>	<a href="#">1470U08 05 13</a>	780	42	0.120
10	7	R1/4	<a href="#">1470U10 03 13</a>	<a href="#">1470U10 04 13</a>	<a href="#">1470U10 05 13</a>	780	62	0.160
12	8	R3/8	<a href="#">1470U12 03 17</a>	<a href="#">1470U12 04 17</a>	<a href="#">1470U12 05 17</a>	780	65	0.190

Length of long straight section, O.D. < 8 mm: 300 mm; Length of long straight section, O.D. ≥ 8 mm: 500 mm; Length of short straight section, for all O.D.: 100 mm

## 1471U




### Polyurethane (PU) Ester Recoil Tubing 4 m, Male BSPT Fitting

Ø ext. (mm)	Ø int. (mm)	BSPT Thread				Total Closed Length (mm)	O.D. of Coil (mm)	kg
4	2.5	R1/8	<a href="#">1471U04 03 10</a>	<a href="#">1471U04 04 10</a>	<a href="#">1471U04 05 10</a>	785	24	0.100
6	4	R1/4	<a href="#">1471U06 03 13</a>	<a href="#">1471U06 04 13</a>	<a href="#">1471U06 05 13</a>	850	32	0.160
8	5	R1/4	<a href="#">1471U08 03 13</a>	<a href="#">1471U08 04 13</a>	<a href="#">1471U08 05 13</a>	1000	42	0.200
10	7	R1/4	<a href="#">1471U10 03 13</a>	<a href="#">1471U10 04 13</a>	<a href="#">1471U10 05 13</a>	1000	62	0.230
12	8	R3/8	<a href="#">1471U12 03 17</a>	<a href="#">1471U12 04 17</a>	<a href="#">1471U12 05 17</a>	1140	65	0.260

Length of long straight section, O.D. < 8 mm: 300 mm; Length of long straight section, O.D. ≥ 8 mm: 500 mm; Length of short straight section, for all O.D.: 100 mm

## 1472U


### Polyurethane (PU) Ester Recoil Tubing 6 m, Male BSPT Fitting

Ø ext. (mm)	Ø int. (mm)	BSPT Thread				Total Closed Length (mm)	O.D. of Coil (mm)	kg
8	5	R1/4	<a href="#">1472U08 03 13</a>	<a href="#">1472U08 04 13</a>	<a href="#">1472U08 05 13</a>	1230	42	0.280
10	7	R1/4	<a href="#">1472U10 03 13</a>	<a href="#">1472U10 04 13</a>	<a href="#">1472U10 05 13</a>	1140	62	0.295
12	8	R3/8	<a href="#">1472U12 03 17</a>	<a href="#">1472U12 04 17</a>	<a href="#">1472U12 05 17</a>	1190	65	0.310

Length of long straight section, O.D. < 8 mm: 300 mm; Length of long straight section, O.D. ≥ 8 mm: 500 mm; Length of short straight section, for all O.D.: 100 mm

## 1460U


### Polyurethane (PU) Ester Recoil Tubing 2 m

Ø ext. (mm)	Ø int. (mm)		Total Closed Length (mm)	O.D. of Coil (mm)	kg
8	5	<a href="#">1460U08 04</a>	720	42	0.064
10	7	<a href="#">1460U10 04</a>	720	62	0.122
12	8	<a href="#">1460U12 04</a>	720	65	0.172

Length of long straight section, O.D. < 8 mm: 300 mm; Length of long straight section, O.D. ≥ 8 mm: 500 mm; Length of short straight section, for all O.D.: 100 mm

## 1461U


### Polyurethane (PU) Ester Recoil Tubing 4 m

Ø ext. (mm)	Ø int. (mm)		Total Closed Length (mm)	O.D. of Coil (mm)	kg
8	5	<a href="#">1461U08 04</a>	940	42	0.128
10	7	<a href="#">1461U10 04</a>	940	62	0.244
12	8	<a href="#">1461U12 04</a>	940	65	0.344

Length of long straight section, O.D. < 8 mm: 300 mm; Length of long straight section, O.D. ≥ 8 mm: 500 mm; Length of short straight section, for all O.D.: 100 mm

## 1462U


### Polyurethane (PU) Ester Recoil Tubing 6 m

Ø ext. (mm)	Ø int. (mm)		Total Closed Length (mm)	O.D. of Coil (mm)	kg
8	5	<a href="#">1462U08 04</a>	1260	42	0.192
10	7	<a href="#">1462U10 04</a>	1260	62	1.246
12	8	<a href="#">1462U12 04</a>	1260	65	0.280


Length of long straight section, O.D. < 8 mm: 300 mm; Length of long straight section, O.D. ≥ 8 mm: 500 mm; Length of short straight section, for all O.D.: 100 mm

# PU Recoil Tubing


## 1445U..R Recoil Polyurethane (PU) Ether Tubing 3 m, Male BSPP Fitting

Ø ext. (mm)	Ø int. (mm)	BSPP Thread		Total Closed Length (mm)	O.D. of Coil (mm)	kg
8	5	G1/4	<a href="#">1445U08R04 13</a>	819	40	0.170
3/8"	1/4"	G1/4	<a href="#">1445U60R04 13</a>	769	60	0.230
12	8	G3/8	<a href="#">1445U12R04 17</a>	789	80	0.310
19/32"	3/8"	G3/8	<a href="#">1445U14R04 17</a>	759	110	0.460


## 1441U..R Recoil Polyurethane (PU) Ether Tubing 4 m, Male BSPP Fitting

Ø ext. (mm)	Ø int. (mm)	BSPP Thread		Total Closed Length (mm)	O.D. of Coil (mm)	kg
8	5	G1/4	<a href="#">1441U08R04 13</a>	889	40	0.220
3/8"	1/4"	G1/4	<a href="#">1441U60R04 13</a>	819	60	0.260
12	8	G3/8	<a href="#">1441U12R04 17</a>	849	80	0.400
19/32"	3/8"	G3/8	<a href="#">1441U14R04 17</a>	809	110	0.554

## 1442U..R Recoil Polyurethane (PU) Ether Tubing 6 m, Male BSPP Fitting

Ø ext. (mm)	Ø int. (mm)	BSPP Thread		Total Closed Length (mm)	O.D. of Coil (mm)	kg
8	5	G1/4	<a href="#">1442U08R04 13</a>	1029	40	0.340
3/8"	1/4"	G1/4	<a href="#">1442U60R04 13</a>	929	60	0.360
12	8	G3/8	<a href="#">1442U12R04 17</a>	969	80	0.530
19/32"	3/8"	G3/8	<a href="#">1442U14R04 17</a>	909	110	0.920

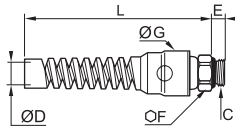
## 1447U..R Recoil Polyurethane (PU) Ether Tubing 7.5 m, Male BSPP Fitting


Ø ext. (mm)	Ø int. (mm)	BSPP Thread		Total Closed Length (mm)	O.D. of Coil (mm)	kg
8	5	G1/4	<a href="#">1447U08R04 13</a>	1134	40	0.420
3/8"	1/4"	G1/4	<a href="#">1447U60R04 13</a>	1009	60	0.460
12	8	G3/8	<a href="#">1447U12R04 17</a>	1059	80	0.600
19/32"	3/8"	G3/8	<a href="#">1447U14R04 17</a>	984	110	1.150

# Accessories

## 0694 Push-In Fitting with Protection Spring, Male BSPP Thread

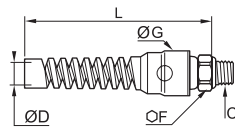
Nickel-plated brass, NBR




ØD	C		E	F	G	L	kg
8	G1/4	<b>0694 08 13</b>	6.5	16	24	104.5	0.067
10	G1/4	<b>0694 10 13</b>	6.5	18	24	106.5	0.062
12	G3/8	<b>0694 12 17</b>	7.5	20	29.5	126	0.080

## 0695 Push-In Fitting with Protection Spring, Male BSPT Thread

Nickel-plated brass, NBR



ØD	C		F	G	L	kg
8	R1/4	<b>0695 08 13</b>	14	24	104.5	0.055
10	R1/4	<b>0695 10 13</b>	18	24	106.5	0.064
12	R3/8	<b>0695 12 17</b>	20	29.5	126	0.090

# Braided PU Recoil Hose

This recoil hose offers all the advantages of polyurethane, combining the **durability** and **kink resistance** of bulkier braided hoses with great **elasticity** and maximum **flexibility**.

## Product Advantages

### Excellent Mechanical Properties

Unsurpassed resistance to abrasion: 10 times better than rubber, polyamide and non-braided polyurethane  
 Excellent flexibility and coil memory: minimizes work fatigue  
 Highly kink and crush-resistant  
 Silicone-free

### Ready-to-Use

Pre-assembled threaded fittings  
 Tube ends protected with a plastic spring  
 Lightweight for easy handling  
 3 lengths available  
 Translucent blue: visibility of the fluid



Machine Tools  
 Industrial Assembly  
 Pneumatics  
 In-Plant Automotive  
 Workshops

Applications

## Technical Characteristics

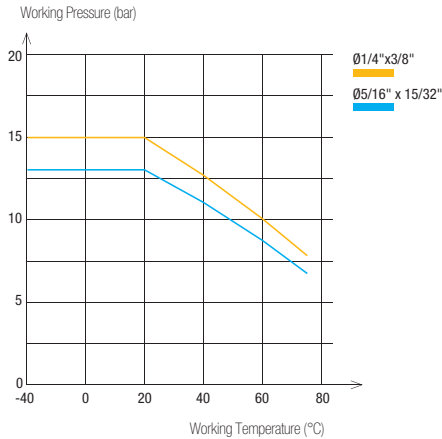
<b>Compatible Fluids</b>	Compressed air Other fluids: please consult us
<b>Working Pressure</b>	0 to 15 bar
<b>Working Temperature</b>	-40°C to +75°C
<b>Component Materials</b>	Polyurethane (85 shore A)

### Regulations

DI: 97/23/EC(PED)  
 RG: 1907/2006 (REACH)  
 DI: 2002/95/EC (RoHS), 2011/65/EC

Reliable performance is dependent upon the type of fluid conveyed and fittings being used.

### Performance of Braided PU Recoil Hose



Hose O.D.	Hose I.D.	Hose I.D. Tolerance
3/8" 15/32"	1/4" 5/16"	+/- 0.005"


### Packaging

Plastic bags: 3 m to 7.5 m


Connected to Parker Legris push-in fittings, the calibration of PU tubing ensures perfect sealing.

To calculate burst pressure, the values in this graph should be multiplied by 4.


## 1445U..E Recoil Braided Polyurethane (PU) tubing 3 m, Male BSPP Fitting

Ø ext. (mm)	Ø int. (mm)	BSPP Thread		Total Closed Length (mm)	O.D. of Coil (mm)	kg
3/8"	1/4"	G1/4	<a href="#">1445U60E04 13</a>	870	42	0.210
12	8	G3/8	<a href="#">1445U12E04 17</a>	880	55	0.300

## 1442U..E Recoil Braided Polyurethane (PU) tubing 6 m, Male BSPP Fitting

Ø ext. (mm)	Ø int. (mm)	BSPP Thread		Total Closed Length (mm)	O.D. of Coil (mm)	kg
3/8"	1/4"	G1/4	<a href="#">1442U60E04 13</a>	1140	42	0.420
12	8	G3/8	<a href="#">1442U12E04 17</a>	1160	55	0.600

## 1447U..E Recoil Braided Polyurethane (PU) tubing 7.5 m, Male BSPP Fitting

Ø ext. (mm)	Ø int. (mm)	BSPP Thread		Total Closed Length (mm)	O.D. of Coil (mm)	kg
3/8"	1/4"	G1/4	<a href="#">1447U60E04 13</a>	1275	42	0.525
12	8	G3/8	<a href="#">1447U12E04 17</a>	1300	55	0.750

### Related Products

Parker Legris recoil tubing is designed for use with Parker Legris blowguns and couplers.

#### Industrial Blowguns

**Polymer** P.7-3



**Metal** P.7-12



#### Couplers

**C 9000** P.8-7



**Metal** P.8-18



# PVC Braided Hose

Parker Legris offers two **grades of PVC** which cover a wide range of industrial applications for the **transportation of various fluids**.

## Product Advantages

**Food-Grade PVC** Monograde tubing reinforced with a braided polyester ply  
 Flexible: space saving during installation  
 Translucent for visual identification:

- of the fluid
- of inner cleanliness
- of fluid flow

Food-grade, without phthalates  
 Silicone-free

**Industrial PVC** Tubing with a braided polyester ply between 2 grades of PVC  
 Resistant to abrasion, impact and crushing  
 Increased durability  
 Lightweight and easy-to-use  
 Silicone-free



**Applications**

- Robotics
- In-Plant Automotive
- Pneumatics
- Semi-Conductors
- Textile
- Packaging
- Vacuum

## Technical Characteristics

Hose	Food-Grade PVC	Industrial PVC
<b>Compatible Fluids</b>	Compressed air, other fluids	Compressed air
<b>Working Pressure</b>	0 to 15 bar	0 to 15 bar
<b>Working Temperature</b>	-20°C to +70°C	-25°C to +60°C
<b>Component Materials</b>	Translucent food-grade PVC, phthalate-free with polyester braid	Industrial blue PVC, multi-layer, with polyester braid

### Regulations

#### Food-Grade PVC

FDA: 21 CFR 177.1550  
 RG: 1907/2006 (REACH)  
 RG: 1935/2004  
 DI: 2002/95/EC (RoHS), 2011/65/EC  
 DI: 2007/10/EC (phthalates)

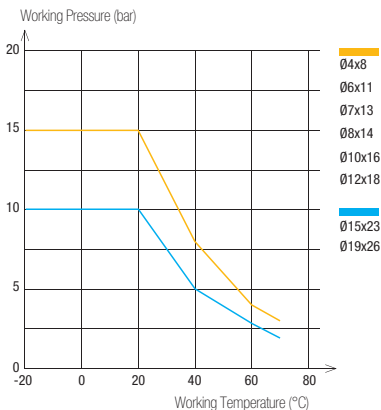
#### Industrial PVC

DI: 97/23/CE (PED)  
 RG: 1907/2006 (REACH)  
 DI: 2002/95/EC (RoHS), 2011/65/EC

Reliable performance is dependent upon the type of fluid conveyed and fittings being used.

### Hose Performance

#### Food-Grade PVC



Hose Type	Hose I.D.	Hose I.D. Tolerance
<b>Food-Grade PVC</b>	4 to 6 mm	+0.5 / -0.5
	7 to 12 mm	+0.6 / -0.6
	15 to 19 mm	+0.8 / -0.8
<b>Industrial PVC</b>	6.3 mm	+0.3 / -0.3
	9 mm	+0.5 / -0.5
	12.7 mm	+0.6 / -0.6

#### Packaging



Reel: 25 m, 50 m  
 (with protective plastic bag)

To calculate burst pressure, the values in these graphs should be multiplied by 3.  
 The performances of the industrial PVC grade are available upon request.

## 1025V

### Food-Grade Braided PVC Hose



Reel 25 m

Ø ext. (mm)	Ø int. (mm)			kg
8	4	10	<a href="#">1025V08 00 04</a>	1.260
11	6	12	<a href="#">1025V11 00 06</a>	2.253
13	7	14	<a href="#">1025V13 00 07</a>	3.182
14	8	16	<a href="#">1025V14 00 08</a>	3.434
16	10	25	<a href="#">1025V16 00 10</a>	3.800
18	12	30	<a href="#">1025V18 00 12</a>	4.423
23	15	40	<a href="#">1025V23 00 15</a>	7.300
26	19	60	<a href="#">1025V26 00 19</a>	7.300

## 1050V

### Food-Grade Braided PVC Hose



Reel 50 m

Ø ext. (mm)	Ø int. (mm)			kg
8	4	10	<a href="#">1050V08 00 04</a>	2.690
11	6	12	<a href="#">1050V11 00 06</a>	4.200
13	7	14	<a href="#">1050V13 00 07</a>	5.966
14	8	16	<a href="#">1050V14 00 08</a>	6.058
16	10	25	<a href="#">1050V16 00 10</a>	6.400
18	12	30	<a href="#">1050V18 00 12</a>	8.250
23	15	40	<a href="#">1050V23 00 15</a>	14.600
26	19	60	<a href="#">1050V26 00 19</a>	14.600

## 1025V..C

### Industrial-Grade Braided PVC Hose



Reel 25 m

Ø ext. (mm)	Ø int. (mm)			kg
11	6.3	45	<a href="#">1025V11C04 06</a>	2.175
14	9	63	<a href="#">1025V14C04 09</a>	3.250
19	12.7	89	<a href="#">1025V19C04 13</a>	4.975

## 1050V..C

### Industrial-Grade Braided PVC Hose

Reel 50 m

Ø ext. (mm)	Ø int. (mm)			kg
11	6.3	45	<a href="#">1050V11C04 06</a>	4.350
14	9	63	<a href="#">1050V14C04 09</a>	6.500
19	12.7	89	<a href="#">1050V19C04 13</a>	9.950

## Related Products

PVC tubing is designed for use with Parker Legris barb connectors and couplers.

### Couplers

**C 9000** P. 8-7



**Metal** P. 8-18



### Barb Connectors

**0191** P. 9-16



**0123** P. 9-10





# Self-Fastening NBR Hose

Parker Legris self-fastening hose is designed according to **CNOMO E07.21.115N\***. This range of hose should be used with Legris barb connectors and provides both the **reliability** of self-fastening technology and **simplicity of installation**.

## Product Advantages

### Exceptional Endurance

Unsurpassed resistance to repetitive flexing  
Protection against spark and flame  
Abrasion and crush-resistant  
UV-resistant

### Ideal for In-Plant Automotive

Excellent ozone resistance  
Perfect for cooling systems  
Maximum flow with no pressure drop  
4 colours for immediate circuit identification  
Silicone-free

### Ready-To-Use

No lubrication, additive (grease, oil, ...etc), or preparation time required  
To connect: push the hose fully home against the fitting shoulder  
To disassemble: cut the hose on the barbed side of the fitting



In-Plant Automotive  
Cooling  
Welding Robots  
Pneumatics  
Industrial Machinery

Applications

## Technical Characteristics

<b>Compatible Fluids</b>	Coolants, compressed air
<b>Working Pressure</b>	0 to 16 bar
<b>Working Temperature</b>	-20°C to +100°C
<b>Component Materials</b>	Nitrile butadiene rubber & textile braid

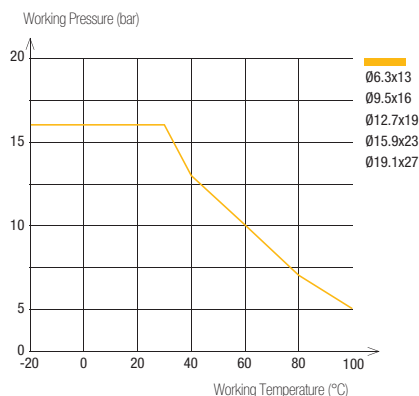
### Regulations

NFT 46-019-1  
NFT 47 252  
RG: 1907/2006 (REACH)  
DI: 2002/95/EC (RoHS), 2011/65/EC  
CNOMO: E07.21.115N

**\*CAUTION: CNOMO certification is valid exclusively for red and green hose, only when connected to Legris' CNOMO-certified barb connectors 0132, 0133 and 0134.**

Reliable performance is dependent upon the type of fluid conveyed and fittings being used.

### Performance of Self-Fastening NBR Hose



To calculate burst pressure, the values in this graph should be multiplied by 3.

DN mm CNOMO	DN (standard)	Hose I.D. (mm)	Hose I.D. Tolerance (mm)
6	1/4"	6.3 mm	+0.4 / -0.4
8	3/8"	9.5 mm	+0.5 / -0.5
12	1/2"	12.7 mm	+0.6 / -0.6
16	5/8"	15.9 mm	
20	3/4"	19.1 mm	

### Packaging






Drum: 40 m, 80 m, 100 m

Use with water: maximum temperature 100°C  
Use with air: maximum temperature 70°C

## 1040H

### Braided Self-Fastening NBR Hose

Drum 40 m






DN	Ø ext. (mm)	Ø int. (mm)						kg
1/4	13	6.3	60	1040H56 01	1040H56 02	1040H56 03	1040H56 04	7.000
3/8	16	9.5	70	1040H60 01	1040H60 02	1040H60 03	1040H60 04	8.600
1/2	19	12.7	120	1040H62 01	1040H62 02	1040H62 03	1040H62 04	9.450
5/8	23	15.9	140	1040H66 01	1040H66 02	1040H66 03	1040H66 04	13.000
3/4	27	19.1	170	1040H69 01	1040H69 02	1040H69 03	1040H69 04	16.500

Also available in 20 m length upon request

## 1080H

### Braided Self-Fastening NBR Hose

Drum 80 m






DN	Ø ext. (mm)	Ø int. (mm)						kg
5/8	23	15.9	140	1080H66 01	1080H66 02	1080H66 03	1080H66 04	26.160
3/4	27	19.1	170	1080H69 01	1080H69 02	1080H69 03	1080H69 04	33.160

Also available in 20 m length upon request

## 1100H

### Braided Self-Fastening NBR Hose

Drum 100 m

DN	Ø ext. (mm)	Ø int. (mm)						kg
1/4	13	6.3	60	1100H56 01	1100H56 02	1100H56 03	1100H56 04	14.660
3/8	16	9.5	70	1100H60 01	1100H60 02	1100H60 03	1100H60 04	20.600
1/2	19	12.7	120	1100H62 01	1100H62 02	1100H62 03	1100H62 04	23.000

Also available in 20 m length upon request

## Related Products

Self-fastening hose is designed for use with Parker Legris brass barb connectors (CNOMO-certified).

### Barb Connectors

**0132** P. 5-25    **0133 .. 39** P. 5-25    **0134** P. 5-25



### Installation Tool

**Tool Part Number:**  
**0650 00 00 05**

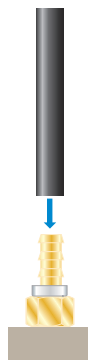
This automatic installation tool reduces the effort required to connect self-fastening hose onto a barb connector.



#### Tube Cutting and Positioning

Cut the tube at a right angle and position the barb connector on the mounting tool.

Barb connector support



#### Press-Fitting the Tube

Activate the press-fit tool; connection is complete when the tube is fully home on the barb connector. This tool has been designed for use with 5 different diameters and is easy to operate.

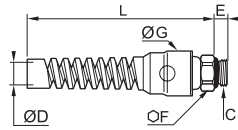
Barb connector support



# Accessories

## 0694 Push-In Fitting with Protection Spring, Male BSPP Thread

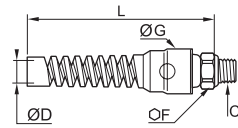
Nickel-plated brass, NBR



ØD	C		E	F	G	L	kg
8	G1/4	<a href="#">0694 08 13</a>	6.5	16	24	104.5	0.067
10	G1/4	<a href="#">0694 10 13</a>	6.5	18	24	106.5	0.062
12	G3/8	<a href="#">0694 12 17</a>	7.5	20	29.5	126	0.080

## 0695 Push-In Fitting with Protection Spring, Male BSPT Thread

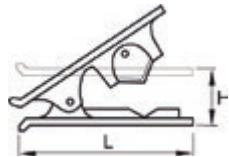
Nickel-plated brass, NBR



ØD	C		F	G	L	kg
8	R1/4	<a href="#">0695 08 13</a>	14	24	104.5	0.055
10	R1/4	<a href="#">0695 10 13</a>	18	24	106.5	0.064
12	R3/8	<a href="#">0695 12 17</a>	20	29.5	126	0.090

## 3000 71 00 Tube Cutter

Technical polymer



	H	L	kg
<a href="#">3000 71 00</a>	25	79	0.029

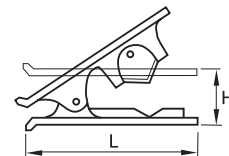
This tool is designed to give a clean cut at right angles to the tube axis for all resilient polymer tubing (polyamide, polyurethane, FEP, polyethylene, etc.) from 4 mm to 12 mm diameter inclusive.

Replacement blades: part number 3000 71 00 05

A spring maintains the cutter in the closed position.

## 3000 71 11 Tube Cutter

Treated steel



	kg
<a href="#">3000 71 11</a>	0.020

Replacement blades: part number 3000 71 11 05

## 6000 71 00 Stripping Tool for Anti-Spark Tubing

Technical polymer, stainless steel



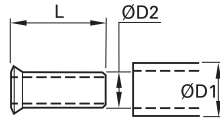
	kg
<a href="#">6000 71 00</a>	0.098

Working principle of the stripping tool page 3-17

# Accessories

## 1827 Stainless Steel Tube Support for Fluoropolymer Tubing

Stainless steel 316L

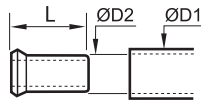


ØD1	ØD2		L	kg
6	4	<a href="#">1827 06 00</a>	11.5	0.001
8	6	<a href="#">1827 08 00</a>	14	0.001
10	8	<a href="#">1827 10 00</a>	18	0.001
12	9	<a href="#">1827 12 09</a>	18	0.001
	10	<a href="#">1827 12 00</a>	18	0.001
16	14	<a href="#">1827 16 00</a>	18	0.002

This tube support is necessary when using fluoropolymer tubing at all temperatures compatible with the fitting/tubing assembly.

## 0127 Brass Tube Support for Polymer Tubing

Brass

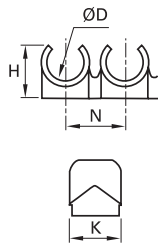


ØD1	ØD2		L	kg
4	2	<a href="#">0127 04 00</a>	11	0.001
	2.7	<a href="#">0127 04 27</a>	11	0.001
5	3	<a href="#">0127 05 03</a>	11	0.001
	3.3	<a href="#">0127 05 00</a>	11.5	0.009
6	4	<a href="#">0127 06 00</a>	11.5	0.001
	5.5	<a href="#">0127 08 55</a>	14	0.001
8	6	<a href="#">0127 08 00</a>	14	0.001
	7	<a href="#">0127 10 07</a>	18	0.001
10	7.5	<a href="#">0127 10 75</a>	18	0.001
	8	<a href="#">0127 10 00</a>	18	0.002
12	8	<a href="#">0127 12 08</a>	18	0.002
	9	<a href="#">0127 12 09</a>	18	0.002
14	10	<a href="#">0127 12 00</a>	18	0.001
	11	<a href="#">0127 14 11</a>	18	0.002
15	12	<a href="#">0127 14 00</a>	18	0.002
	12	<a href="#">0127 15 12</a>	18	0.002
16	13	<a href="#">0127 16 13</a>	18	0.003
	14	<a href="#">0127 18 14</a>	19.5	0.003
20	15	<a href="#">0127 20 15</a>	20.5	0.003
22	16	<a href="#">0127 22 16</a>	21	0.004
25	19	<a href="#">0127 25 19</a>	25	0.007

This tube support guarantees good gripping, at high temperatures and pressures, by preventing collapsing of the tube.

## CLIP Clip Strip for Tubes and Fittings

Technical polymer

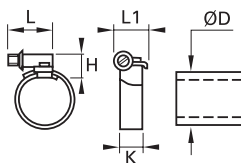


ØD		Number of Outlets	H	K	N	kg
4	<a href="#">CLIP 04 00</a>	8	9	13.5	10.5	0.007
6	<a href="#">CLIP 06 00</a>	8	10.5	13	10.5	0.008
8	<a href="#">CLIP 08 00</a>	7	12.5	10.5	12	0.007
10	<a href="#">CLIP 10 00</a>	6	14	12	15	0.005
12	<a href="#">CLIP 12 00</a>	5	16.5	14	16.5	0.009
14	<a href="#">CLIP 14 00</a>	4	18	16	20.5	0.009

Delivered in boxes of 10 strips of the same diameter (complete with self-tapping screws of 95 mm length) These clips can be used with metric or inch tubing.

## 0697 Clip for Braided Tubing

Treated steel



ØD		H	K	L	L1	kg
6-11	<a href="#">0697 00 01</a>	7	5	12	7	0.004
10-16	<a href="#">0697 00 02</a>	12	9	21	13	0.012
12-22	<a href="#">0697 00 03</a>	12	9	21	13	0.014
16-27	<a href="#">0697 00 04</a>	12	9	24	13	0.015
20-32	<a href="#">0697 00 05</a>	12	9	24	13	0.016

# Chemical Compatibility Chart

Recommended	1	Not Recommended	3
Satisfactory	2	Not Available	-

Substances	PA	PU Ether	PU Ester	Low Density PE	Advanced PE	FEP/PFA
Acetaldehyde	1	-	-	3	-	1
Acetone	1	3	1	3	-	1
Acid, chromic up to 10%	-	3	3	1 (50%)	-	1
Acid, citric	3	-	-	1	1 up to 60°C	1
Acid, formic up to 10%	-	2	3	1	1 at 25% at 20°C	1
Acid, hydrochloric up to 10%	1	1	3	1	1 at 20°C	1
Acid, phosphoric up to 50%	3	2	3	1	2 at 20°C	1
Acid, sulphuric up to 10%	3	1	3	1	1	1
Acid, acetic	2 at 10%	1	3	1 (50%)	1 (50 %)	1
Acid, nitric	3	3	3	1 (40%); 3(>40%)	-	1
Ammonia and gaseous	1	1	3	2	1	1
Ammonium chloride up to 10%	-	1	1	1	1	1
Benzene	1	3	3	3	3	1
Bromine	3	-	-	3	3	1
Butane	1	1	1	1 (20°C)	1	1
Butyl acetate	1	3	2	-	-	1
Butylic and butyl alcohol	-	-	-	1 (20°C)	1	1
Calcium choride	-	1 (10% & 40%)	2 (10% & 40%)	1	1	1
Carbon tetrachloride (sodium hypochlorite)	2	3	2	1 (30%)	3	1
Chloroform	3	3	3	3	-	1
Compressed air	1	1	1	1	1	1
Cyclohexanone	1	3	3	3	-	1
Ethanol	1	2	2	3	-	1
Ethyl acetate	1	2	2	2 (20°C)	2 (23°C); 3 (85°C)	1
Ethyl alcohol	-	-	-	3	1 (23°C); 3 (85°C)	1
Ethylene oxide	1	-	-	-	-	1
Formalin (formaldehyde)	2	-	-	1 (40%)	-	1
Freon 12-22	1	2	2	-	-	1
Glucose	1	-	-	-	1	1
Glycol (without H <sub>2</sub> O)	-	1	1	-	-	1
Hydrogen	1	-	-	1	1	1
Hydrogen peroxide (perydrol)	3	2	2	1 (10%)	1	1
Kerosene	1	1	1	-	3	1
Magnesium chloride (up to 30%)	1	1	2	1	1	1
Methane	1	1	1	-	-	1
Methanol	1	2	3	-	-	1
Methyl acetate	-	2	2	-	-	1
Methyl alcohol (pure)	-	-	-	-	2	1

# Chemical Compatibility Chart

Substances	PA	PU Ether	PU Ester	Low Density PE	Advanced PE	FEP/PFA
Methyl chloride	2	3	2	-	-	1
Methyl ethyl ketone	1	3	3	3	-	1
Oils (paraffin)	-	1	1	-	-	1
Oils, engine (diesel)	1	2	1	-	-	1
Oxygen	1	-	1	1 (20°C)	-	1
Ozone	3	2 or 1	1	3	3	1
Perchlorate ethylene	1	3	3	-	-	1
Petrol, with up to 40% aromatics	1	-	2	-	-	1
Petrol, with more than 40% aromatics	1	-	3	-	-	1
Phenols	3	-	3	3	-	1
Potash	-	-	3	1	-	1
Potassium chloride up to 40%	1	1	2	1	-	1
Potassium hydroxide	1 (50%)	1 (3n)	2	1	1	1
Potassium manganate 5%	-	3	2	-	-	1
Potassium sulphate	1	-	-	1	1	1
Propane	1	1	1	-	-	1
Sodium carbonate	1	-	-	1	1	1
Sodium chloride	1 (50%)	1	2	1	-	1
Sodium hydroxide (caustic soda)	1 (60%)	-	-	1	1	1
Sodium hypochlorite (bleach)	1	2	3	1 (30%)	-	1
Tetrachloroethylene	1	2	2	-	-	1
Toluene	1	2	2	3	3	1
Tributylphosphate	1	-	-	-	-	1
Trichlorethylene	1	3	3	3	-	1
Water (distilled, deionised)	-	1	1	-	-	1
Water (drinking, food)	-	-	-	-	1	1
Water (industrial)	1	-	-	-	1	1
Water (sea)	-	-	-	-	-	1
Xylem	-	2	2	-	-	1
Zinc chloride	1 (10%)	-	-	1	-	1

For other fluids, concentrations or special implementation, please contact us.