

TUBING & CAPILLARY

MATERIAL CHARACTERISTICS

PEEK



- High Accuracy PEEK capillary
- Inner and outer diameters tolerances: ± 0.03 mm
- Environmental temperature: $+260^{\circ}\text{C}$
- Pressure up to 343 bar (depending on wall thickness)

TPE121



Autoclavable · USP Class VI
Biomedical · Pharmaceutical · Bioprocess
Tubing

- Peristaltic pump tubing
- Ultra-low extractables / leachables
- ISO 10993-5, ISO 10993-4, USP 661, BPOG tested
- Low gas and oxygen permeability

316 Stainless Steel



- High-precision stainless steel capillary
- Inner and outer diameters tolerances: ± 0.03 mm
- Special cutting process so that there is no damage or deformation
- Pressure up to 800 bar

TPE135



Autoclavable · USP Class VI
Biomedical · Pharmaceutical · Bioprocess
Tubing

- Peristaltic pump tubing
- Silicone Alternative
- Ultra-low extractables / leachables
- ISO 10993-5, ISO 10993-4, USP 661, BPOG tested
- Low gas and oxygen permeability

PTFE & FEP



- Color: Milky white (PTFE)
Transparent (FEP)
(other colors on request)
- Very smooth internal surfaces
- Reduced gas diffusion
- Excellent chemical resistance
- Tight dimensional tolerances
- Gamma & ETO sterilizable

Platinum-cured Silicone



Autoclavable · USP Class VI (Biosicone)
Biomedical · Pharmaceutical · Bioprocess
Tubing (Biosicone)

- Peristaltic pump tubing
- Ultra-low extractables / leachables
- Ultra-smooth inner surface
- Good flexibility and a wide temperature range
- FDA regulations 21 CFR 177.2600 Certified, NSF 51 Certified (Biosicone)

EJ Prene



Autoclavable · USP Class VI
Biomedical · Pharmaceutical · Bioprocess
Tubing

- Peristaltic pump tubing
- Very good chemical resistance
- Ultra-low extractables / leachables
- ISO 10993-5, ISO 10993-4, USP 661, BPOG tested
- Low gas and oxygen permeability

PEEK CAPILLARY, STAINLESS STEEL PIPES & SAMPLE LOOPS

Chromatography Tubing (PEEK)



The PEEK capillaries are characterized by an extremely smooth inner surface and high accuracy.

- High Accuracy Liquid Chromatography PEEK Tubing.
- Environmental temperature: +260°C.
- Inner and outer diameters tolerances: ± 0.03 mm.
- Outer diameter: 1.6 mm (1/16")

Product No.	Tubing Size I.D.	Tubing Size O.D.	Wall Thickness W.T.	Operating Pressure	Material
B-TPK-01316	0.13 mm	1.6 mm (1/16")	0.73 mm	343 bar (4974 psi)	PEEK
B-TPK-01816	0.18 mm	1.6 mm (1/16")	0.70 mm	343 bar (4974 psi)	PEEK
B-TPK-02516	0.25 mm	1.6 mm (1/16")	0.67 mm	343 bar (4974 psi)	PEEK
B-TPK-05016	0.5 mm	1.6 mm (1/16")	0.55 mm	343 bar (4974 psi)	PEEK
B-TPK-07516	0.75 mm	1.6 mm (1/16")	0.42 mm	274 bar (3974 psi)	PEEK
B-TPK-10016	1.0 mm	1.6 mm (1/16")	0.30 mm	165 bar (2393 psi)	PEEK

Stainless Steel Tubing



The stainless steel capillary pipes are manufactured using a special cutting process so that there is no damage or deformation of the tubes on the cut surfaces. The surface is polished and flat.

- High-precision stainless steel capillary tubes for chromatography.
- Max. Pressure: 800 bar.
- Outer diameter: 1.6 mm (1/16").
- Inner and outer diameters tolerances: ± 0.03 mm.
- Stainless-steel 316

Product No.	Tubing Size I.D.	Tubing Size O.D.	Operating Pressure	Material
B-TSS-02516	0.25 mm	1.6 mm (1/16")	800 bar (11603 psi)	316 Stainless Steel
B-TSS-05016	0.50 mm	1.6 mm (1/16")	800 bar (11603 psi)	316 Stainless Steel
B-TSS-07516	0.75 mm	1.6 mm (1/16")	800 bar (11603 psi)	316 Stainless Steel
B-TSS-10016	1.0 mm	1.6 mm (1/16")	800 bar (11603 psi)	316 Stainless Steel

Stainless Steel Sample loops

- In customer-specific lengths
- max. pressure: 800 bar
- Outer diameter: 1.6 mm (1/16")
- Inner and outer diameter tolerances: ± 0.03 mm
- Inner diameter: 0.25 mm, 0.50 mm, 0.75 mm, 1.0 mm
- Stainless-steel 316



Contact us for customized solutions.

PTFE & FEP TUBING



Product Features:

- Color: Milky white (PTFE) | transparent (FEP) (other colors on request)
- Very smooth internal surfaces
- Reduced gas diffusion
- Excellent chemical resistance
- Tight dimensional tolerances
- Gamma & ETO sterilizable

Product No.	Tubing Size I.D.	Tubing Size O.D.	Wall Thickness W.T.	Material
B-RT-100001-0816	0.8 mm	1.6 mm	0.4 mm	PTFE
B-RT-100003-1020	1.0 mm	2.0 mm	0.5 mm	PTFE
B-RT-100004-1525	1.5 mm	2.5 mm	0.5 mm	PTFE
B-RT-100007-1632	1.6 mm	3.2 mm	0.8 mm	PTFE
B-RT-100006-2030	2.0 mm	3.0 mm	0.5 mm	PTFE
B-RT-100002-2040	2.0 mm	4.0 mm	1.0 mm	PTFE
B-RT-100009-2232	2.175 mm	3.175 mm	0.5 mm	PTFE
B-RT-100008-3040	3.0 mm	4.0 mm	0.5 mm	PTFE
B-RT-100013-3248	3.2 mm	4.8 mm	0.8 mm	PTFE
B-RT-100011-4060	4.0 mm	6.0 mm	1.0 mm	PTFE
B-RT-100010-4363	4.35 mm	6.35 mm	1.0 mm	PTFE
B-RT-100012-5080	5.0 mm	8.0 mm	1.5 mm	PTFE
B-RT-101016-0516	0.5 mm	1.6 mm	0.55 mm	FEP
B-RT-101001-0816	0.8 mm	1.6 mm	0.4 mm	FEP
B-RT-101003-1020	1.0 mm	2.0 mm	0.5 mm	FEP
B-RT-101015-1230	1.2 mm	3.0 mm	0.9 mm	FEP
B-RT-101004-1525	1.5 mm	2.5 mm	0.5 mm	FEP
B-RT-101007-1632	1.6 mm	3.2 mm	0.8 mm	FEP
B-RT-101006-2030	2.0 mm	3.0 mm	0.5 mm	FEP
B-RT-101002-2040	2.0 mm	4.0 mm	1.0 mm	FEP
B-RT-101009-2232	2.175 mm	3.175 mm	0.5 mm	FEP
B-RT-101014-2640	2.65 mm	4.0 mm	0.675 mm	FEP
B-RT-101008-3040	3.0 mm	4.0 mm	0.5 mm	FEP
B-RT-101013-3248	3.2 mm	4.8 mm	0.8 mm	FEP
B-RT-101011-4060	4.0 mm	6.0 mm	1.0 mm	FEP
B-RT-101010-4363	4.35 mm	6.35 mm	1.0 mm	FEP
B-RT-101017-6080	6.0 mm	8.0 mm	1.0 mm	FEP

Customized tube sizes on request.

EJ PRENE-TUBING

EJ Prene is designed for peristaltic pump applications offering durability with excellent pump life - reducing production downtime due to tube failure. Lightweight, EJ Prene tubing is flexible with very good chemical compatibility and can be used in a wide range of applications. This high-performance elastomer exhibits similar properties as rubber.



Product Features:

- Superior Performance in Peristaltic Pumps
- Precise Flow Rate
- Opaque to visible and UV light
- Soft and flexible - 70 Shore A
- High Chemical Resistance: Compatible with most CIP solutions and SIP
- Material Certificate and Lot Traceability
- Low gas and oxygen permeability
- Ultra-low Extractables / Leachables
- Meets USP Class VI
- USP 661 Compliant
- ISO 10993-4 – non-hemolytic
- ISO 10993-5 – non-cytotoxic
- Non-animal derived – BSE/TSE compliant
- Contains no DEHP phthalates or plasticizers

Sterilization:

- E-beam/Gamma 25 to 45 kGy, no deficiencies, may color shift at higher doses.
- Ethylene Oxide (ETO), no issues, can safely be used.
- Autoclave Up to 135°C - Multiple autoclave cycles can be re-sterilized and reused.

Product No.	Tubing Size I.D.	Tubing Size O.D.	Wall Thickness W.T.	Operating Pressure
EJP5-1.5	0.8 mm (1/32")	2.4 mm (3/32")	0.8 mm (1/32")	3.52 bar (51 psi)
EJP1-2	1.6 mm (1/16")	3.2 mm (1/8")	0.8 mm (1/32")	2.41 bar (35 psi)
EJP1.5-2.5	2.4 mm (3/32")	4.0 mm (5/32")	0.8 mm (1/32")	1.79 bar (26 psi)
EJP2-3	3.2 mm (1/8")	4.8 mm (3/16")	0.8 mm (1/32")	1.45 bar (21 psi)
EJP2-4	3.2 mm (1/8")	6.4 mm (1/4")	1.6 mm (1/16")	2.41 bar (35 psi)
EJP3-4	4.8 mm (3/16")	6.4 mm (1/4")	0.8 mm (1/32")	0.97 bar (14 psi)
EJP3-5	4.8 mm (3/16")	8.0 mm (5/16")	1.6 mm (1/16")	1.72 bar (25 psi)
EJP3-6	4.8 mm (3/16")	9.5 mm (3/8")	2.4 mm (3/32")	2.28 bar (33 psi)
EJP4-6	6.4 mm (1/4")	9.5 mm (3/8")	1.6 mm (1/16")	2.07 bar (30 psi)
EJP4-7	6.4 mm (1/4")	11.2 mm (7/16")	2.4 mm (3/32")	1.79 bar (26 psi)
EJP4-8	6.4 mm (1/4")	12.7 mm (1/2")	3.2 mm (1/8")	2.14 bar (31 psi)
EJP5-7	8.0 mm (5/16")	11.2 mm (7/16")	1.6 mm (1/16")	1.24 bar (18 psi)
EJP6-8	9.5 mm (3/8")	12.7 mm (1/2")	1.6 mm (1/16")	0.90 bar (13 psi)
EJP6-10	9.5 mm (3/8")	16 mm (5/8")	3.2 mm (1/8")	1.66 bar (24 psi)
EJP8-12	12.7 mm (1/2")	19 mm (3/4")	3.2 mm (1/8")	1.38 bar (20 psi)

Customized sizes on request

TPE121-TUBING - SHORE-A 54



TPE121-Tubing has been developed to meet the critical demands of bioprocess, medical and laboratory applications. It is flexible, a good alternative to silicone and an excellent choice for the use in peristaltic pumps and pinch valves applications. Sterilized by Ethylene Oxide (EtO), Gamma resistance to 45 kGy, Autoclave to 121°C, temperature range -50°C to 121°C.

Product Features:

- Superior Bio Compatibility
- Extremely Flexible with excellent resilience and bend radius – 54 Shore A
- Ultra-Pure Medical Grade
- Ultra-low Extractables / Leachables
- USP 661 Compliant
- ISO 10993-5 – Non-cytotoxic
- ISO 10993-4 – Non-hemolytic
- PVC-Free – No DEHP Additives
- Low Gas and Oxygen Permeability
- No Halogens or Phthalates
- Low Protein Binding
- Non-pyrogenic Material
- Thermally Weldable
- Non-animal derived – BSE/TSE compliant
- Material Certificate and Lot Traceability

Product No.	Tubing Size I.D.	Tubing Size O.D.	Wall Thickness W.T.	Operating Pressure
TPE121-5-1.5	0.8 mm (1/32")	2.4 mm (3/32")	0.8 mm (1/32")	0.80 bar (30 psi)
TPE121-1mm-2mm	1.0 mm	2.0 mm	0.5 mm	•
TPE121-1-2	1.6 mm (1/16")	3.2 mm (1/8")	0.8 mm (1/32")	1.41 bar (20 psi)
TPE121-2mm-4mm	2.0 mm	4.0 mm	1.0 mm	•
TPE121-1.5-2.5	2.4 mm (3/32")	4.0 mm (5/32")	0.8 mm (1/32")	1.03 bar (15 psi)
TPE121-2-3	3.2 mm (1/8")	4.8 mm (3/16")	0.8 mm (1/32")	0.79 bar (12 psi)
TPE121-2-4	3.2 mm (1/8")	6.4 mm (1/4")	1.6 mm (1/16")	1.31 bar (19 psi)
TPE121-3-4	4.8 mm (3/16")	6.4 mm (1/4")	0.8 mm (1/32")	0.61 bar (9 psi)
TPE121-3-5	4.8 mm (3/16")	8.0 mm (5/16")	1.6 mm (1/16")	0.95 bar (14 psi)
TPE121-3-6	4.8 mm (3/16")	9.5 mm (3/8")	2.4 mm (3/32")	1.31 bar (19 psi)
TPE121-4-6	6.4 mm (1/4")	9.5 mm (3/8")	1.6 mm (1/16")	0.73bar (11 psi)
TPE121-4-7	6.4 mm (1/4")	11.2 mm (7/16")	2.4 mm (3/32")	1.03 bar (15 psi)
TPE121-4-8	6.4 mm (1/4")	12.7 mm (1/2")	3.2 mm (1/8")	1.19 bar (17 psi)
TPE121-5-7	8.0 mm (5/16")	11.2 mm (7/16")	1.6 mm (1/16")	0.62 bar (9 psi)
TPE121-5-8	8.0 mm (5/16")	12.7 mm (1/2")	2.4 mm (3/32")	•
TPE121-6-8	9.5 mm (3/8")	12.7 mm (1/2")	1.6 mm (1/16")	0.58bar (8 psi)
TPE121-6-9	9.5 mm (3/8")	14.3 mm (9/16")	2.4 mm (3/32")	•
TPE121-6-10	9.5 mm (3/8")	16.0 mm (5/8")	3.2 mm (1/8")	0.89 bar (13 psi)
TPE121-8-12	12.7 mm (1/2")	19.0 mm (3/4")	3.2 mm (1/8")	0.72 bar (10 psi)
TPE121-10-14	16.0 mm (5/8")	22.2 mm (7/8")	3.2 mm (1/8")	0.60 bar (9 psi)
TPE121-12-16	19.0 mm (3/4")	25.4 mm (1")	3.2 mm (1/8")	0.55 bar (8 psi)
TPE121-12-20	19.0 mm (3/4")	31.75 mm (1 1/4")	3.2 mm (1/8")	•
TPE121-16-20	25.4 mm (1")	31.75 mm (1 1/4")	3.2 mm (1/8")	0.42 bar (6 psi)

Customized sizes on request

TPE135-TUBING - SHORE-A 68

TPE135-Tubing has been developed to meet the critical demands of bioprocess, medical and laboratory applications. This formulated TPE (thermoplastic elastomer) tubing is an excellent alternative to silicone. It is durable and an excellent choice for the use in peristaltic pumps applications. Sterilized by Ethylene Oxide (EtO), Gamma resistance to 45 kGy, Autoclave to 135°C, temperature range -80°C to 135°C.



Product Features:

- Superior Bio Compatibility
- Extremely Flexible with excellent resilience and bend radius – 68 Shore A
- Ultra-Pure Medical Grade
- Ultra-low Extractables / Leachables
- USP 661 Compliant
- ISO 10993-5 – Non-cytotoxic
- ISO 10993-4 – Non-hemolytic
- PVC-Free – No DEHP Additives
- Low Gas and Oxygen Permeability
- No Halogens or Phthalates
- Low Protein Binding
- Non-pyrogenic Material
- Thermally Weldable
- Non-animal derived – BSE/TSE compliant
- Material Certificate and Lot Traceability

Product No.	Tubing Size I.D.	Tubing Size O.D.	Wall Thickness W.T.	Operating Pressure
TPE135-5-1.5	0.8 mm (1/32")	2.4 mm (3/32")	0.8 mm (1/32")	3.38 bar (49 psi)
TPE135-1mm-2mm	1.0 mm	2.0 mm	0.5 mm	•
TPE135-1-2	1.6 mm (1/16")	3.2 mm (1/8")	0.8 mm (1/32")	2.25 bar (33 psi)
TPE135-2mm-4mm	2.0 mm	4.0 mm	1.0 mm	•
TPE135-1.5-2.5	2.4 mm (3/32")	4.0 mm (5/32")	0.8 mm (1/32")	1.73 bar (25 psi)
TPE135-2-3	3.2 mm (1/8")	4.8 mm (3/16")	0.8 mm (1/32")	1.20 bar (18 psi)
TPE135-2-4	3.2 mm (1/8")	6.4 mm (1/4")	1.6 mm (1/16")	2.35 bar (34 psi)
TPE135-3-4	4.8 mm (3/16")	6.4 mm (1/4")	0.8 mm (1/32")	0.92 bar (13 psi)
TPE135-3-5	4.8 mm (3/16")	8.0 mm (5/16")	1.6 mm (1/16")	1.59 bar (23 psi)
TPE135-3-6	4.8 mm (3/16")	9.5 mm (3/8")	2.4 mm (3/32")	2.30 bar (33 psi)
TPE135-4-6	6.4 mm (1/4")	9.5 mm (3/8")	1.6 mm (1/16")	1.25 bar (18 psi)
TPE135-4-7	6.4 mm (1/4")	11.2 mm (7/16")	2.4 mm (3/32")	1.65 bar (24 psi)
TPE135-4-8	6.4 mm (1/4")	12.7 mm (1/2")	3.2 mm (1/8")	1.99 bar (29 psi)
TPE135-5-7	8.0 mm (5/16")	11.2 mm (7/16")	1.6 mm (1/16")	1.09 bar (16 psi)
TPE135-5-8	8.0 mm (5/16")	12.7 mm (1/2")	2.4 mm (3/32")	•
TPE135-6-8	9.5 mm (3/8")	12.7 mm (1/2")	1.6 mm (1/16")	0.99 bar (14 psi)
TPE135-6-9	9.5 mm (3/8")	14.3 mm (9/16")	2.4 mm (3/32")	•
TPE135-6-10	9.5 mm (3/8")	16.0 mm (5/8")	3.2 mm (1/8")	1.51 bar (22 psi)
TPE135-8-12	12.7 mm (1/2")	19.0 mm (3/4")	3.2 mm (1/8")	1.34 bar (19 psi)
TPE135-10-14	16.0 mm (5/8")	22.2 mm (7/8")	3.2 mm (1/8")	1.06 bar (15 psi)
TPE135-12-16	19.0 mm (3/4")	25.4 mm (1")	3.2 mm (1/8")	0.97 bar (14 psi)
TPE135-12-20	19.0 mm (3/4")	31.75 mm (1 1/4")	3.2 mm (1/8")	1.41 bar (20 psi)
TPE135-16-20	25.4 mm (1")	31.75 mm (1 1/4")	3.2 mm (1/8")	0.57 bar (8 psi)

Customized sizes on request

PLATINUM-CURED SILICONE-TUBING

Biocompatible silicone version available (Biosicon)



The platinum-cured silicone tubing we offer has an ultra-smooth inner surface with extremely low leachables, low protein absorption, good flexibility and a wide temperature range. Due to the strong restitutorial resilience the silicone tubing is not easy to deform after compression and therefore it is an optimal tubing for peristaltic pumps and pinch valves.

- Temperature range: -30°C – 238°C
- Can be sterilized repeatedly by high temperature and ultraviolet

Biocompatible silicone tubing (BS-)

The biocompatible silicone tubing is used in biomedical and pharmaceutical applications and has the following certifications:

- Clean room fabrication
- Double bagged following GMP pharmaceutical Guidelines
- USP Class VI Certified
- FDA regulations 21 CFR 177.2600 Certified
- NSF 51 Certified
- Material Certificate and Lot Traceability

Product No.		No.	Tubing Size I.D.	Tubing Size O.D.	Wall Thickness W.T.	Operating Pressure
Standard	Biosicon					
S-0508	•	•	0.5 mm	2.1 mm	0.8 mm (1/32")	1.0 bar (14 psi)
S-0817-13	•	13	0.8 mm (1/32")	4.2 mm	1.7 mm	1.7 bar (24 psi)
S-1010	•	•	1.0 mm	3.0 mm	1.0 mm	1.0 bar (14 psi)
S-1617-14	BS-1617-14	14	1.6 mm (1/16")	5.0 mm	1.7 mm	1.7 bar (24 psi)
S-2010	•	•	2.0 mm	4.0 mm (5/32")	1.0 mm	1.0 bar (14 psi)
S-2417-19	BS-2417-19	19	2.4 mm (3/32")	5.8 mm	1.7 mm	1.7 bar (24 psi)
S-2408	•	•	2.4 mm (3/32")	4.0 mm (5/32")	0.8 mm (1/32")	1.0 bar (14 psi)
S-3010	•	•	3.0 mm	5.0 mm	1.0 mm	1.0 bar (14 psi)
S-3216-16	BS-3216-16	16	3.2 mm (1/8")	6.4 mm (1/4")	1.6 mm (1/16")	1.7 bar (24 psi)
S-4816-25	BS-4816-25	25	4.8 mm (3/16")	8.0 mm (5/16")	1.6 mm (1/16")	1.4 bar (20 psi)
S-6416-17	BS-6416-17	17	6.4 mm (1/4")	9.6 mm (3/8")	1.6 mm (1/16")	1.0 bar (14 psi)
S-7916-18	BS-7916-18	18	7.9 mm (5/16")	6.4 mm (1/4")	1.6 mm (1/16")	0.7 bar (10 psi)
S-4824-15	BS-4824-15	15	4.8 mm (3/16")	7.9 mm (5/16")	2.4 mm (3/32")	1.7 bar (24 psi)
S-6424-24	BS-6424-24	24	6.4 mm (1/4")	11.2 mm	2.4 mm (3/32")	1.7 bar (24 psi)
•	BS-6432-26	26	6.4 mm (1/4")	12.8 mm	3.2 mm (1/8")	•
S-7924-35	BS-7924-35	35	7.9 mm (5/16")	12.7 mm (1/2")	2.4 mm (3/32")	1.4 bar (20 psi)
•	BS-8040-185	185	8.0 mm	16.0 mm	4.0 mm	•
S-9624-36	BS-9624-36	36	9.6 mm (3/8")	14.4 mm	2.4 mm (3/32")	1.4 bar (20 psi)
•	BS-9533-73	73	9.5 mm	16.1 mm	3.3 mm	•
•	BS-12040-186	186	12.0 mm	20.0 mm	4.0 mm	•
•	BS-12733-82	82	12.7 mm	19.3 mm	3.3 mm	•
•	BS-15933-184	184	15.9 mm	22.5 mm	3.3 mm	•
•	BS-16040-187	187	16.0 mm	24.9 mm	4.0 mm	•
•	BS-17040-188	188	17.0 mm	25.0 mm	4.0 mm	•

CUSTOM ASSEMBLIES



Our custom tubing assemblies have established themselves as essential components for manufacturers, providing customized solutions to meet the unique requirements of complex instruments and systems. These assemblies, comprised of carefully selected materials, connectors and configurations, are designed to ensure the seamless flow of liquids and gases. With a Class 7 clean room for the production of connectors, tubing and packaged assemblies, it is possible to produce high-quality products from USP Class VI polymers.

Take advantage of our broad product and manufacturing options:

- Colored or natural tube options
- Colored Luer connections for line distinction
- Large selection of connectors and quick couplings (no spill)
- LaserWeld™ products available with T-piece, cross and Y-barbed fittings, and mini and 1" flange connectors
- Pre-coiled tubing for space-saving
- Filtration assemblies
- Tubing assemblies for peristaltic pumps
- Laser Clamp® welding technology
- Manufacturing and packaging in a clean room
- Single use and autoclavable
- Individual packaging solutions



Laser Clamp

- Lower joining cost
- No Particulate means less contamination
- Snag-free clamping with smooth weld beads
- Less part stress
- Precision weld joints for small sensitive parts
- Can join 3D complex shapes

LaserWeld Product

- Short run custom fittings
- Faster to market custom fittings with minimal setup costs
- Can join 3D complex shapes
- Precision weld joints for small sensitive parts

Laser Clamp® welding technology is available with TPE135 tubing and polypropylene fittings only. LaserWeld™ products are available with polypropylene fittings only.