

Tubing • Clamps
Antimicrobial Protected
Tubing & Fittings



Tubing & Clamps
Antimicrobial





NEW Thermoplastic Elastomer Products • Luers And TPE tubing are complimentary products manufactured from similar TPE resins. One advantage of using materials from the same resin family is that qualification processes are generally simplified. The products shown at left meet USP Class VI requirements and are compatible with gamma, EtO and autoclave sterilization methods.

Cleanroom Manufactured



NEW Flexelene™ 66E-95E • Flexelene E represents a range of Shore A hardness blends from 66 to 95. This **TPE** tubing is autoclavable, but temperature resistance decreases proportionally with lower Shore hardness. Because extractables and leachables are very low, it is suitable for use in neonatal medical applications. Blend options offered with Flexelene™ E open up a range of custom extrusion possibilities.

Cleanroom Manufactured



Flexelene™ 135 C Bioprocess and Medical Tubing • A tubing engineered to meet the regulatory standards for bioprocess and biologicals manufacturing. It exhibits low extractables • low protein binding • and low gas permeability characteristics. Flexelene™ 135C meets the requirements of USP Class VI, ISO 10993-4 and ISO 10993-5. 135C is also suitable for use in peristaltic pump and medical device applications.

Cleanroom Manufactured



CVU Colored Locking Luers • Made from durable clear CrystalVu™ resin, a safer, Bisphenol-A free alternative to polycarbonate. This product is available in rotating and locking nut configurations. Colored luers offer a means to differentiate input vs. output lines and to color code delivery tubes.

Cleanroom Manufactured




Autoclavable Stainless Steel Clamps • Made by Oetiker, the recognized leader in clamp technology. Eldon James now offers an expanded range of sizes and is one of the largest North American distributors for Oetiker's quality line of products.



NEW Thermoformed Tubing • Formed, cut-to-length, tubing based upon customers' design specifications can reduce assembly costs and connector requirements. Thermoforming enables clean compact designs by allowing tighter bends that reduce space requirements.


Contents

Materials Quick Reference Guide	Page 3-4
Bioscience Luers and Natural Materials	
Port Plates	Page 5-6
Luers	Page 7-13
Oxygen - Swivel Disconnects™	Page 14-15
Adapter Fittings	
Miniature Adapters	Page 17-24
NPT 1/8" to 1" Adapters	Page 17
Bulkhead Adapters - Straight and 90°	Page 18
Panel Mount Adapters - Straight and 90°	Page 19-21
Panel Mount Adapters - Straight and 90°	Page 22-24
Couplers	
Straight	Page 25
Reduction	Page 25-26
Crosses	
Page 26	
Elbows	
Page 26-30	
Equal 90°	Page 26-27
Reduction	Page 27-28
Miniature Threaded	Page 28-29
NPT Threaded 1/8" to 1"	Page 29-30
Pipe Nipples	
Page 31	
Garden Hose Connectors	
Page 31	
Plugs - Insert and Threaded	
Page 32	
Tees	
Page 32-37	
Equal	Page 32-33
Asymmetric	Page 33
Reduction	Page 34-35
Miniature Threaded and Metric Threaded	Page 35-36
NPT Threaded 1/8" to 1"	Page 36-37
Y Connectors - Y Reductions	
Page 37-38	
British Pipe Threads ..  British Standard Pipe Thread	
Page 39-40	
Schedule 80 Fittings	
Page 41	
Tubing • Antimicrobial and Clamps	
Biomedical Tubing	Page 42-52
Polyurethane Tubing	Page 56-57
Antimicrobial Tubing	Page 51-52, 59
Antimicrobial Fittings	Page 60-62
Clamps	Page 63-65
Kits	
Page 66-69	
Automotive, Marine & Transportation Fittings - SS, BN, GFBN,	
Stainless Steel Fittings	Page 70-72

Automotive Marine & Transportation Fittings - SS, BN, GFBN *Continued*

Adapter Fittings	Page 73-77
Miniature Adapters	Page 73
NPT 1/8" to 1" Adapters.....	Page 73-74
Bulkhead Adapters - Straight and 90°.....	Page 74-75
Panel Mount Adapters - Straight and 90°.....	Page 76-77
Couplers - Straight & Reduction	Page 77-78
Crosses	Page 79
Elbows	Page 79-81
Equal 90°.....	Page 79
Reduction	Page 79-80
Threaded	Page 80-81
Garden Hose Connectors	Page 81
Pipe Nipples	Page 82
Plugs - Insert and Threaded	Page 82-83
Tees	Page 83-86
Equal	Page 83
Asymmetric	Page 84
Reduction	Page 84
Threaded	Page 85-86
Y Connectors - Y Reductions	Page 86
British Pipe Threads ..  British Standard Pipe Thread	Page 87-88
Marine Fittings	Page 89

Industrial and Utility Fittings - PVDF, WP, WN, BN

Adapter Fittings	Page 91-96
Adapters	Page 91-92
Bulkhead Adapters - Straight and 90°.....	Page 92-95
Panel Mount Adapters - Straight and 90°.....	Page 96-98
Couplers - Straight & Reduction	Page 99-100
Crosses	Page 100
Elbows	Page 100-103
Equal 90°.....	Page 100-101
Reduction	Page 100-102
Threaded	Page 102-103
Garden Hose Connectors	Page 104
Pipe Nipples - Straight and Reduction	Page 104-105
Plugs - Insert and Threaded	Page 105
Tees	Page 106-110
Equal	Page 106
Asymmetric	Page 106
Reduction	Page 107-108
Threaded	Page 108-110
Y Connectors - Y Reductions	Page 110
British Pipe Threads ..  British Standard Pipe Thread	Page 111-112
Miniature Fitting Quick Reference Guide	Page 113-118
Technical - Chemical Resistance	Page 119-129

Natural Materials Quick Reference



Antimicrobial (Protected) (AG)

Lot Traceable

RoHS Compliant

Antimicrobial protected Ag fittings are available in Nylon, Kynar®, Polypropylene and HDPE. These fittings incorporate natural silver ion protection to guard against microbial colonization and biofilm formation on their surfaces. Kynar® Ag fittings (AGNK) are **autoclavable**.



Animal Derivative Free



Natural Kynar® (NK)

USP CLASS VI

Lot Traceable

RoHS Compliant

Temperature Range -80 °F to 226 °F • Pressure 260 psi @ 70 °F. NK material can be **autoclaved to 285 °F** (140 °C) and meets **USP Class VI** requirements. Generally, chemically resistant to: most acids, salts, weak bases, halogenated solvents, alcohols, nuclear and UV radiation, oxidants, ozone and deionized water.



Animal Derivative Free



CrystalVu™ (CVU)

USP CLASS VI

Lot Traceable

RoHS Compliant

CrystalVu™(polyolefin): A clear transparent alternative to polycarbonate containing no Bisphenol-A (BPA) - will not deform at temperatures to 180 °C (356 °F). **Autoclavable** - enhanced characteristics compared with polycarbonate include: superior chemical resistance; no crazing with multiple autoclave cycles plus gamma and EtO Sterilization compatibility - **USP Class VI**, EU 2002/72/EC.



High Density Polyethylene (HDPE)

Lot Traceable

RoHS Compliant

HDPE complies with FDA 21 CFR 177.1520 when used unmodified for the manufacture of food contact articles. HDPE has various applications for use in medical products and devices. It has excellent resistance to chemicals, but exhibits lower thermal resistance than other materials. It is a softer material than nylon or polypropylene and much softer than Kynar®.



Nylon - Natural (NN) Medical (MN)

Lot Traceable

RoHS Compliant

Temperature Range -50 °F to 275 °F (135 °C) • Pressure 125 psi @ 70 °F
6/6 Nylons exhibit good tensile strength, moderate stiffness and high impact resistance. They're resistant to fuels, lubricants and many chemicals, but vulnerable to attack by phenols, strong acids and oxidizing agents. MN White Medical Nylon is made from the same resin as Natural Nylon, but has an FDA compliant white colorant added.

Animal Derivative Free



ADF Polypropylene (PP)

USP CLASS VI

Lot Traceable

RoHS Compliant

A polypropylene formulated for biomedical and bioprocess applications. Temperature Range -9 °F to 150°F (66 °C) • Pressure 125 psi @ 70 °F. Meets FDA requirements 21 CFR 177.1520(a)(3)(i) and (c)3.1a. PP material has a Drug Master File listing. It is radiation stable and is resistant to solvents, chemicals, water and other inorganic environments. It resists most strong mineral acids and bases; however, it is subject to attack by oxidizing agents.

Lot Traceability Material Certificates are available for products made from resins listed on this page. Please request certificates at the time an order is placed.

Industrial & Automotive Materials Quick Reference

RoHS Compliant Lot Traceable

Automotive Approvals



Black Nylon (BN)

Temperature Range -50 °F to 275 °F (135 °C) • Pressure 150 psi @ 70 °F

Made from 6/6 nylon - exhibits strength, moderate stiffness, high service temperature, high impact resistance and tensile strength. Resistant to fuels, lubricants and many chemicals, but vulnerable to attack by phenols, strong acids and oxidizing agents. Used in fuel line, vacuum systems and general purpose applications: automotive industry approvals.

RoHS Compliant Lot Traceable

Automotive Approvals



Glass-Filled Black Nylon (GFBN)

Temperature Range -50 °F to 275 °F (135 °C) • Pressure 150 psi @ 70 °F
Heat Deflection Temperature - ASTM D64: 475 °F (246 °C) @ 264 psi

GFBN is a standard material used in automotive and marine under-the-hood, heater and coolant applications. GFBN's enhanced impact resistance results from inclusion of uniformly dispersed glass fibers that add strength to the resin: automotive industry approvals.

RoHS Compliant Lot Traceable



Stainless Steel (SS)

Fittings produced with 316L alloy perform well in **high temperature**, harsh physical environments. 316L molybdenum bearing stainless steel has excellent impact and chemical resistance, but is less resistant than other types of stainless steel to highly oxidizing acids, such as nitric acid. The material has wide application in pharmaceutical and dairy processing and is used extensively in brewery, beverage and bioprocess industries.

RoHS Compliant



White Polypropylene (WP)

Temperature Range -9 °F to 150 °F (66 °C) • Pressure 125 psi @ 70 °F

White Polypropylene has the same physical and chemical resistance properties as Natural Polypropylene, but is less expensive. WP fittings contain recycled runner material produced during virgin material, Natural Polypropylene production runs. White Polypropylene fittings are manufactured to the same tolerances and quality standards as our Natural Polypropylene fittings - WP is not a USP Class VI material and is not lot traceable.

RoHS Compliant



White Nylon (WN)

Temperature Range -50 °F to 275 °F (135 °C) • Pressure 125 psi @ 70 °F

White Nylon has the same chemical and physical properties as Natural Nylon. WN fittings contain recycled runner material produced during virgin material, Natural Nylon production runs. White Nylon fittings are manufactured to the same tolerances and quality standards as our Natural Nylon fittings. Lot traceability certificates are not available for White Nylon.

RoHS Compliant



Gray Kynar (PVDF)

Temperature Range -80 °F to 226 °F (108 °C) • Pressure 260 psi @ 70 °F

Gray PVDF fittings exhibit the same physical and chemical resistance properties as Natural Kynar®. PVDF fittings contain recycled runner material produced during virgin material, Natural Kynar® production runs. For applications that do not require lot traceability or a material that meets USP Class VI requirements, PVDF fittings represent an excellent value.

DISCLAIMER

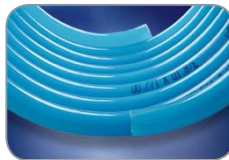
Data presented for properties of materials, pressure, temperature and chemical resistance is for reference only. Customer applications and conditions of use are beyond our control; therefore, it is imperative that customers test Eldon James products in their specific application to determine suitability. All information is provided without implied or expressed warranty or guarantee, and none of the information provided constitutes a recommendation or endorsement of any kind by Eldon James Corporation.

Tubing • Clamps • Fittings Kits



Flexelene™ Peristaltic Pump Tubing • Flexelene™ 135C, 121C and Flexelene™ 66E are designed for use in peristaltic pump applications. These products are manufactured from a thermoplastic elastomer material that is very durable. Initial testing results with 135C tubing confirm that the peristaltic life cycle exceeds 500 hours.

Cleanroom Manufactured



Flexelene™ Antimicrobial Protected Tubing • Flexelene™ FXAG, CFXAG, MFXAG and SFXAG are extruded with an inner liner that releases silver ions to protect against colonization by pathogenic bacteria. Silver ions also inhibit the growth of biofilm forming molds, fungi, and algae.

Cleanroom Manufactured



Handy Clamps • An economical, easy method for securing tubing to fittings. Handy Clamps are made from a tough nylon material that can withstand temperatures to 135 °C. No specialized tools are necessary for securing or removing Handy Clamps.



Heat Forming • Eldon James offers heat formed coils, shaped tubing and fused multi-tube ribbons as secondary process options. Contact Customer Support for more information regarding heat forming capabilities.



Laser Etching & Colors • Cleanroom manufactured tubing is laser etched with size and material code information. Custom laser etching is optional and is subject to lead time and minimum run, quantity requirements. Flexelene™ CFX and FX tubing products are available in a variety of colors and sizes. Size information on colored tubing is printed, not laser etched. Non-printed or non-etched tubing is available as a custom run option.






Non-toxic Emissions
when incinerated

Environmental Stewardship: Eldon James biomedical tubing meets European REACH and RoHS requirements and will not emit toxic chemicals if incinerated. No toxic plasticizers, DEHP or phthalates are used as additives in the manufacture of this tubing. In addition, the tubing is free from PVC, Bisphenol-A and animal derivative components.


Eldon James

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Flexelene™	Shore A	Temp. Range °C	Temp. Range °F	Cleanroom Production	Sterilize	Antimicrobial Protected	Welding	Heat Sealing	Regulatory
 135C	68	135 °C -50 °C	275 °F -58 °F	✓	Autoclave, EtO Gamma: <45 kGy		✓	✓	USP Class VI ISO 10993-4 ISO 10993-5
MFX	58	57 °C -57 °C	135 °F -70 °F	✓	EtO, E-beam Gamma: to 25 kGy		✓	✓	USP Class VI EC 2002/72/EC
MFXAG	58	57 °C -57 °C	135 °F -70 °F	✓	E-beam, EtO	✓	✓	✓	FDA Compliant Materials
SFX	≤73	52 °C -40 °C	125 °F -40 °F	✓	E-beam Gamma: to 25 kGy		✓	✓	USP Class VI
SFXAG	≤73	52 °C -40 °C	125 °F -40 °F	✓	E-beam	✓	✓	✓	
 66E	66	121 °C -50 °C	250 °F -58 °F	✓	Autoclave, EtO Gamma: <45 kGy		✓	✓	USP Class VI ISO 10993-4 ISO 10993-5
 95E	95	135 °C -50 °C	275 °F -58 °F	✓	Autoclave, EtO Gamma: <45 kGy		✓		USP Class VI ISO 10993-4 ISO 10993-5

** Stock cleanroom manufactured tubing is laser etched with tubing number and size. Customer specified etching is available, or tubing may be special ordered with no etching - minimum order quantities may apply for custom etching or no logo tubing.

Peristaltic Pump Tubing

Flexelene™	Shore Range	Autoclave °C	Cleanroom Production	Sterilize	Welding	Heat Sealing	Regulatory
 66E 135C 121C	54-68	121 °C 135 °C 121 °C	✓	Autoclave Gamma, EtO	✓	✓	USP Class VI ISO 10993-4 ISO 10993-5

** The above Flexelene™ tubing products are suitable for peristaltic pump applications and exhibit exceptional durability under those conditions. Please refer to pages 44-48 for additional specifications.

General Purpose • Pneumatics • Robotics • Fluid Handling

Flexelene™	Shore A	Temp. Range °C	Temp. Range °F	Cleanroom Production	Sterilize	Antimicrobial Protected	Welding	Heat Sealing	Regulatory
FX	86	76 °C -40 °C	170 °F -40 °F		E-beam Gamma: to 25 kGy				USP Class VI NSF 51 Certified Raw Materials
FXAG	86	76 °C -40 °C	170 °F -40 °F	✓	E-beam	✓			FDA Compliant Materials
CFX	86	76 °C -40 °C	170 °F -40 °F		E-beam Gamma: to 25 kGy				USP Class VI NSF 51 Certified Raw Materials
CFXAG	86	76 °C -40 °C	170 °F -40 °F	✓	E-beam	✓			FDA Compliant Materials

Flexelene™ tubing contains no phthalates or DEHP.



Polyurethane & Braid Reinforced Tubing- see pages: 56-57

Autoclavable Products

** **Disclaimer:** Operating temperature for tubing is pressure dependent. The ranges stated here are for reference. Please test the tubing based on your specific application before determining its suitability.

Cleanroom Manufactured

Biomedical Tubing

USP Class VI

No DEHP or Phthalate Plasticizers

No PVC



Flexelene™ 135C • A bioprocess and medical grade tubing that meets USP Class VI requirements as well as cytotoxicity, ISO 10993-5 and hemolysis, ISO 10993-4 requirements. The heat-sealable and thermally weldable TPE polymer is autoclavable to 135 °C and has the durability required for use in peristaltic pumps. Low gas permeability • withstands EtO sterilization and gamma sterilization to 45 kGy • Shore A 68. Page 44



Flexelene™ MFX • A medical grade tubing that meets USP Class VI requirements and is suitable for sterilization by E-beam, EtO and Gamma (tested to 25 kGy). MFX tubing is non-cytotoxic, non-allergenic and ultra-low in extractables • Very soft and pliable • Shore A 58. Temp. -66 °C to +57 °C. Page 48



NEW Flexelene™ 66E-95E • Available in a range of Shore A hardness blends from 66 to 95. 66E to 95E thermoplastic elastomer tubing is autoclavable, but temperature resistance decreases proportionally with lower Shore hardness. Because extractables and leachables are very low, it is suitable for use in neonatal medical applications. The blend variables offered with Flexelene™ E open a wide range of custom extrusion options. Pages 47-48



Flexelene™ SFX • An economical, flexible polyolefin, biomedical and pharmaceutical tubing featuring low extractables. Shore A is ≤ 73 . SFX is suitable for applications in thermal environments below +52 °C. (125 °F). It exhibits excellent heat-sealing properties and meets USP Class VI requirements. Page 51



Flexelene™ MFXAG • Standard MFX tubing with a co-extruded inner liner. The liner provides antimicrobial protection via a slow release of silver ions that inhibit the growth of microorganisms and the formation of biofilm. Controlling microbial colonization is considered a preliminary step for reducing risk associated with Hospital Acquired Infections (HAIs). Page 52



Environmental Stewardship: Above listed Eldon James biomedical tubing meets European REACH and RoHS requirements and will not emit toxic chemicals if incinerated. No toxic plasticizers, DEHP or phthalates are used as additives in the manufacture of this tubing. In addition, the tubing is free from PVC, Bisphenol-A and meets animal derivative guidelines.

Biomedical Tubing

Cleanroom Manufactured

Flexelene™ 135C
RoHS Compliant



Flexelene 135C

Autoclavable - USP Class VI



Biomedical • Pharmaceutical • Bioprocess Tubing

- Ultra-low extractables / leachables
- ISO 10993-5 - non-cytotoxic
- ISO 10993-4 - non-hemolytic
- Gamma resistance to 45 kGy
- Withstands multiple autoclave cycles
- Low gas and oxygen permeability
- No DEHP additives

Tube Number	ID		OD Nominal		Wall	Standard Roll
FLXC .5-1.5	1/32"	.0312"	3/32"	.093"	1/32"	50 ft.
FLXC 1-2	1/16"	.0625"	1/8"	.125"	1/32"	50 ft.
FLXC 1.5-2.5	3/32"	.0937"	5/32"	.156"	1/32"	50 ft.
FLXC 2-3	1/8"	.125"	3/16"	.187"	1/32"	50 ft.
FLXC 2-4	1/8"	.125"	1/4"	.250"	1/16"	50 ft.
FLXC 3-4	3/16"	.187"	1/4"	.250"	1/32"	50 ft.
FLXC 3-5	3/16"	.187"	5/16"	.312"	1/16"	50 ft.
FLXC 4-6	1/4"	.265"	3/8"	.390"	1/16"	50 ft.
FLXC 4-8	1/4"	.265"	1/2"	.510"	1/8"	50 ft.
FLXC 5-7	5/16"	.323"	7/16"	.448"	1/16"	50 ft.
FLXC 6-8	3/8"	.385"	1/2"	.510"	1/16"	50 ft.
FLXC 6-10	3/8"	.385"	5/8"	.635"	1/8"	50 ft.
FLXC 8-10	1/2"	.510"	5/8"	.635"	1/16"	50 ft.
FLXC 8-12	1/2"	.510"	3/4"	.760"	1/8"	50 ft.
FLXC 10-14	5/8"	.635"	7/8"	.885"	1/8"	50 ft.
FLXC 12-16	3/4"	.760"	1"	1.010"	1/8"	50 ft.
FLXC 16-20	1"	1.010"	1 1/4"	1.260"	1/8"	50 ft.

Temp. Range: -50 °C to 135 °C (-58 °F to +275 °F) • Shore A 68 hardness

No halogens or phthalates

Brittle temp. -88 °F

Thermally weldable

Animal Derivative Free

Autoclave, gamma and EtO sterilization

Permeability 2260 - Barrier O₂ (CC/MIL/100 | N₂ /ATM/Day)

Low protein binding

Non-pyrogenic material

Cleanroom Manufactured

Peristaltic Pump Durability
Exceeds 500 hours



135 °C

ISO 9001
Quality System

Tubing & Clamps

Biomedical Tubing

Cleanroom Manufactured

NEW

Flexelene 121C

Flexelene™ 121C
RoHS Compliant



Autoclavable - USP Class VI



Soft - Shore A 54 Tubing

121 °C

Biomedical • Pharmaceutical • Bioprocess



- Ultra-low extractables / leachables
- ISO 10993-5 - non-cytotoxic
- ISO 10993-4 - non-hemolytic
- Gamma resistance to 45 kGy
- Autoclavable to 121 °C
- Low gas and oxygen permeability
- No DEHP additives

Tubing & Clamps

Tube Number	ID		OD Nominal		Wall	Standard Roll
SFLXC .5-1.5	1/32"	.0312"	3/32"	.093"	1/32"	50 ft.
SFLXC 1-2	1/16"	.0625"	1/8"	.125"	1/32"	50 ft.
SFLXC 1.5-2.5	3/32"	.0937"	5/32"	.156"	1/32"	50 ft.
SFLXC 2-3	1/8"	.125"	3/16"	.187"	1/32"	50 ft.
SFLXC 2-4	1/8"	.125"	1/4"	.250"	1/16"	50 ft.
SFLXC 3-4	3/16"	.187"	1/4"	.250"	1/32"	50 ft.
SFLXC 3-5	3/16"	.187"	5/16"	.312"	1/16"	50 ft.
SFLXC 4-6	1/4"	.265"	3/8"	.390"	1/16"	50 ft.
SFLXC 4-8	1/4"	.265"	1/2"	.510"	1/8"	50 ft.
SFLXC 5-7	5/16"	.323"	7/16"	.448"	1/16"	50 ft.
SFLXC 6-8	3/8"	.385"	1/2"	.510"	1/16"	50 ft.
SFLXC 6-10	3/8"	.385"	5/8"	.635"	1/8"	50 ft.
SFLXC 8-10	1/2"	.510"	5/8"	.635"	1/16"	50 ft.
SFLXC 8-12	1/2"	.510"	3/4"	.760"	1/8"	50 ft.
SFLXC 10-14	5/8"	.635"	7/8"	.885"	1/8"	50 ft.
SFLXC 12-16	3/4"	.760"	1"	1.010"	1/8"	50 ft.
SFLXC 16-20	1"	1.010"	1 1/4"	1.260"	1/8"	50 ft.

Temp. Range: -50 °C to 121 °C (-58 °F to +250 °F) • Shore A 54 hardness

No halogens or phthalates

Brittle temp. -88 °F

Thermally weldable

Animal Derivative Free

Autoclave, gamma and EtO sterilization

Peristaltic Pump Compatible

Low protein binding

Non-pyrogenic material

Cleanroom Manufactured

Peristaltic Pump Compatible



millimeter sizes available on request

Bioprocess Tubing

Cleanroom Manufactured

KFlex

RoHS Compliant



NEW



Low Extractables Bioprocess Tubing

Pharmaceutical • Bioprocess • Medical

A flexible tubing product, with a Kynar® flowpath

- Low extractables / leachables liner component
- Kynar liner meets USP Class VI requirements
- More flexible than tubing extruded from 100% Kynar
- Animal derivative free Kynar® liner

Tube Number	ID		OD Nominal		Wall	Standard Roll
KFLEX .5-1.5	1/32"	.0312"	3/32"	.093"	1/32"	50 ft.
KFLEX 1-2	1/16"	.0625"	1/8"	.125"	1/32"	50 ft.
KFLEX 1.5-2.5	3/32"	.0937"	5/32"	.156"	1/32"	50 ft.
KFLEX 2-3	1/8"	.125"	3/16"	.187"	1/32"	50 ft.
KFLEX 2-4	1/8"	.125"	1/4"	.250"	1/16"	50 ft.
KFLEX 170-4	11/64"	.170"	1/4"	.250"	13/32"	50 ft.
KFLEX 3-4	3/16"	.187"	1/4"	.250"	1/32"	50 ft.
KFLEX 3-5	3/16"	.187"	5/16"	.312"	1/16"	50 ft.
KFLEX 4-6	1/4"	.265"	3/8"	.390"	1/16"	50 ft.
KFLEX 5-7	5/16"	.323"	7/16"	.448"	1/16"	50 ft.
KFLEX 6-8	3/8"	.385"	1/2"	.510"	1/16"	50 ft.
KFLEX 8-10	1/2"	.510"	5/8"	.635"	1/16"	50 ft.
KFLEX 8-12	1/2"	.510"	3/4"	.760"	1/8"	50 ft.
KFLEX 10-14	5/8"	.635"	7/8"	.885"	1/8"	50 ft.
KFLEX 12-16	3/4"	.760"	1"	1.010"	1/8"	50 ft.
KFLEX 16-20	1"	1.010"	1 1/4"	1.260"	1/8"	50 ft.

- Low gas and oxygen permeability
- No DEHP additives
- Chemical resistant Kynar liner
- Sterilize using E-beam

High Temp. Range: 80 °C (176 °F) • Shore A 85 hardness

Cleanroom Manufactured



millimeter sizes available on request

Biomedical Tubing

Flexelene™ 66E

RoHS Compliant

Cleanroom Manufactured



Animal Derivative Free
Neonatal Applications

- Ultra-low extractables / leachables
- Meets ISO 10993-4 • ISO 10993-5
- Sterilization: E-beam, EtO, gamma to 45 kGy or autoclave (121 °C)
- Thermoplastic Elastomer no PVC or phthalates
- Latex & halogen free
- Low protein binding



Flexelene FLX66E

USP Class VI • Biomedical • Bioprocess



Tube Number	ID		OD Nominal		Wall	Roll Size
FLX66E .5-1.5	1/32"	.0312"	3/32"	.093"	1/32"	50 ft.
FLX66E 1-2	1/16"	.0625"	1/8"	.125"	1/32"	50 ft.
FLX66E 1.5-2.5	3/32"	.0937"	5/32"	.156"	1/32"	50 ft.
FLX66E 2-3	1/8"	.125"	3/16"	.187"	1/32"	50 ft.
FLX66E 2-4	1/8"	.125"	1/4"	.250"	1/16"	50 ft.
FLX66E 3-4	3/16"	.187"	1/4"	.250"	1/32"	50 ft.
FLX66E 3-5	3/16"	.187"	5/16"	.312"	1/16"	50 ft.
FLX66E 4-6	1/4"	.265"	3/8"	.390"	1/16"	50 ft.
FLX66E 5-7	5/16"	.323"	7/16"	.448"	1/16"	50 ft.
FLX66E 6-8	3/8"	.385"	1/2"	.510"	1/16"	50 ft.
FLX66E 8-10	1/2"	.510"	5/8"	.635"	1/16"	50 ft.
FLX66E 8-12	1/2"	.510"	3/4"	.760"	1/8"	50 ft.
FLX66E 10-14	5/8"	.635"	7/8"	.885"	1/8"	50 ft.
FLX66E 12-16	3/4"	.760"	1"	1.010"	1/8"	50 ft.
FLX66E 16-20	1"	1.010"	1 1/4"	1.260"	1/8"	50 ft.

Temp. Range: - 50 °C to +121 °C (-58 °F to + 250 °F) • Shore A 66 hardness

Flexelene™ 75E

RoHS Compliant

Cleanroom Manufactured



Animal Derivative Free
Neonatal Applications

- Ultra-low extractables / leachables
- Meets ISO 10993-4 • ISO 10993-5
- Sterilization: E-beam, EtO, gamma to 45 kGy or autoclave (121 °C)
- Thermoplastic Elastomer no PVC or phthalates
- Latex & halogen free
- Low protein binding



Flexelene FLX75E

USP Class VI • Biomedical • Bioprocess



121 °C

Tube Number	ID		OD Nominal		Wall	Roll Size
FLX75E .5-1.5	1/32"	.0312"	3/32"	.093"	1/32"	50 ft.
FLX75E 1-2	1/16"	.0625"	1/8"	.125"	1/32"	50 ft.
FLX75E 1.5-2.5	3/32"	.0937"	5/32"	.156"	1/32"	50 ft.
FLX75E 2-3	1/8"	.125"	3/16"	.187"	1/32"	50 ft.
FLX75E 2-4	1/8"	.125"	1/4"	.250"	1/16"	50 ft.
FLX75E 3-4	3/16"	.187"	1/4"	.250"	1/32"	50 ft.
FLX75E 3-5	3/16"	.187"	5/16"	.312"	1/16"	50 ft.
FLX75E 4-6	1/4"	.265"	3/8"	.390"	1/16"	50 ft.
FLX75E 5-7	5/16"	.323"	7/16"	.448"	1/16"	50 ft.
FLX75E 6-8	3/8"	.385"	1/2"	.510"	1/16"	50 ft.
FLX75E 8-10	1/2"	.510"	5/8"	.635"	1/16"	50 ft.
FLX75E 8-12	1/2"	.510"	3/4"	.760"	1/8"	50 ft.
FLX75E 10-14	5/8"	.635"	7/8"	.885"	1/8"	50 ft.
FLX75E 12-16	3/4"	.760"	1"	1.010"	1/8"	50 ft.
FLX75E 16-20	1"	1.010"	1 1/4"	1.260"	1/8"	50 ft.

Temp. Range: - 50 °C to +121 °C (-58 °F to + 250 °F) • Shore A 75 hardness

millimeter sizes available on request

Biomedical Tubing

Flexelene™ 84E

RoHS Compliant

Cleanroom Manufactured



Animal Derivative Free
Neonatal Applications

- Ultra-low extractables / leachables
- Meets ISO 10993-4 • ISO 10993-5
- Sterilization: E-beam, EtO, gamma to 45 kGy or autoclave (135 °C)
- Thermoplastic Elastomer no PVC or phthalates
- Latex & halogen free
- Low protein binding



135 °C

Flexelene FLX84E

USP Class VI • Biomedical • Bioprocess



Tube Number	ID	OD Nominal	Wall	Roll Size
FLX84E .5-1.5	1/32" .0312"	3/32" .093"	1/32"	50 ft.
FLX84E 1-2	1/16" .0625"	1/8" .125"	1/32"	50 ft.
FLX84E 1.5-2.5	3/32" .0937"	5/32" .156"	1/32"	50 ft.
FLX84E 2-3	1/8" .125"	3/16" .187"	1/32"	50 ft.
FLX84E 2-4	1/8" .125"	1/4" .250"	1/16"	50 ft.
FLX84E 3-4	3/16" .187"	1/4" .250"	1/32"	50 ft.
FLX84E 3-5	3/16" .187"	5/16" .312"	1/16"	50 ft.
FLX84E 4-6	1/4" .265"	3/8" .390"	1/16"	50 ft.
FLX84E 5-7	5/16" .323"	7/16" .448"	1/16"	50 ft.
FLX84E 6-8	3/8" .385"	1/2" .510"	1/16"	50 ft.
FLX84E 8-10	1/2" .510"	5/8" .635"	1/16"	50 ft.
FLX84E 8-12	1/2" .510"	3/4" .760"	1/8"	50 ft.
FLX84E 10-14	5/8" .635"	7/8" .885"	1/8"	50 ft.
FLX84E 12-16	3/4" .760"	1" 1.010"	1/8"	50 ft.
FLX84E 16-20	1" 1.010"	1 1/4" 1.260"	1/8"	50 ft.

Temp. Range: - 50 °C to +135 °C (-58 °F to + 275 °F) • Shore A 84 hardness

Flexelene™ 95E

RoHS Compliant

Cleanroom Manufactured



Animal Derivative Free
Neonatal Applications

- Ultra-low extractables / leachables
- Meets ISO 10993-4 • ISO 10993-5
- Sterilization: E-beam, EtO, gamma to 45 kGy or autoclave (135 °C)
- Thermoplastic Elastomer no PVC or phthalates
- Latex & halogen free
- Low protein binding



Flexelene FLX95E

USP Class VI • Biomedical • Bioprocess



135 °C

Tube Number	ID	OD Nominal	Wall	Roll Size
FLX95E .5-1.5	1/32" .0312"	3/32" .093"	1/32"	50 ft.
FLX95E 1-2	1/16" .0625"	1/8" .125"	1/32"	50 ft.
FLX95E 1.5-2.5	3/32" .0937"	5/32" .156"	1/32"	50 ft.
FLX95E 2-3	1/8" .125"	3/16" .187"	1/32"	50 ft.
FLX95E 2-4	1/8" .125"	1/4" .250"	1/16"	50 ft.
FLX95E 3-4	3/16" .187"	1/4" .250"	1/32"	50 ft.
FLX95E 3-5	3/16" .187"	5/16" .312"	1/16"	50 ft.
FLX95E 4-6	1/4" .265"	3/8" .390"	1/16"	50 ft.
FLX95E 5-7	5/16" .323"	7/16" .448"	1/16"	50 ft.
FLX95E 6-8	3/8" .385"	1/2" .510"	1/16"	50 ft.
FLX95E 8-10	1/2" .510"	5/8" .635"	1/16"	50 ft.
FLX95E 8-12	1/2" .510"	3/4" .760"	1/8"	50 ft.
FLX95E 10-14	5/8" .635"	7/8" .885"	1/8"	50 ft.
FLX95E 12-16	3/4" .760"	1" 1.010"	1/8"	50 ft.
FLX95E 16-20	1" 1.010"	1 1/4" 1.260"	1/8"	50 ft.

Temp. Range: - 50 °C to +135 °C (-58 °F to + 275 °F) • Shore A 95 hardness

millimeter sizes available on request

Tubing & Clamps

Flexelene™ MFX

RoHS Compliant

Cleanroom Manufactured

*Animal Derivative Free*

- Ultra-low extractables / leachables
- Non-cytotoxic
- Non-allergenic
- Heat-sealable
- No phthalate plasticizers, or DEHP additives
- Meets USP <87> USP <88> • USP <661>
- Latex free

**Flexelene MFX**

USP Class VI • Biomedical Tubing

E-beam, gamma and EtO sterilization

Tube Number	ID		OD Nominal		Wall	Roll Size
MFX .5-2	1/32"	.0312"	1/8"	.125"	3/64"	50 ft.
MFX 1-2	1/16"	.0625"	1/8"	.125"	1/32"	50 ft.
MFX 1.5-2.5	3/32"	.0937"	5/32"	.156"	1/32"	50 ft.
MFX 2-4	1/8"	.125"	1/4"	.250"	1/16"	50 ft.
MFX 3-4	3/16"	.187"	1/4"	.250"	1/32"	50 ft.
MFX 3-5	3/16"	.187"	5/16"	.312"	1/16"	50 ft.
MFX 4-6	1/4"	.265"	3/8"	.390"	1/16"	50 ft.
MFX 5-7	5/16"	.323"	7/16"	.448"	1/16"	50 ft.
MFX 6-8	3/8"	.385"	1/2"	.510"	1/16"	50 ft.
MFX 8-10	1/2"	.510"	5/8"	.635"	1/16"	50 ft.
MFX 8-12	1/2"	.510"	3/4"	.760"	1/8"	50 ft.
MFX 10-14	5/8"	.635"	7/8"	.885"	1/8"	50 ft.
MFX 12-16	3/4"	.760"	1"	1.010"	1/8"	50 ft.
MFX 16-20	1"	1.010"	1 1/4"	1.260"	1/8"	50 ft.

Temp. Range: -57 °C to +57 °C • Shore A 58 hardness

Gamma - tested to 25 kGy

Recyclable

Flexelene™ MFX73M

RoHS Compliant

Cleanroom Manufactured

*Animal Derivative Free*

- Ultra-low extractables / leachables
- Non-cytotoxic
- Non-allergenic
- Heat-sealable
- No phthalate plasticizers, or DEHP additives
- Meets USP <87>, USP <88> • USP <661>
- Latex free

**Flexelene MFX73M**

USP Class VI • Biomedical Tubing

E-beam, gamma and EtO sterilization

Tube Number	ID		OD Nominal		Wall	Roll Size
MFX73M .5-2	1/32"	.0312"	1/8"	.125"	3/64"	50 ft.
MFX73M 1-2	1/16"	.0625"	1/8"	.125"	1/32"	50 ft.
MFX73M 1.5-2.5	3/32"	.0937"	5/32"	.156"	1/32"	50 ft.
MFX73M 2-4	1/8"	.125"	1/4"	.250"	1/16"	50 ft.
MMFX73M 3-4	3/16"	.187"	1/4"	.250"	1/32"	50 ft.
MFX73M 3-5	3/16"	.187"	5/16"	.312"	1/16"	50 ft.
MFX73M 4-6	1/4"	.265"	3/8"	.390"	1/16"	50 ft.
MFX73M 5-7	5/16"	.323"	7/16"	.448"	1/16"	50 ft.
MFX73M 6-8	3/8"	.385"	1/2"	.510"	1/16"	50 ft.
MFX73M 8-10	1/2"	.510"	5/8"	.635"	1/16"	50 ft.
MFX73M 8-12	1/2"	.510"	3/4"	.760"	1/8"	50 ft.
MFX73M 10-14	5/8"	.635"	7/8"	.885"	1/8"	50 ft.
MFX73M 12-16	3/4"	.760"	1"	1.010"	1/8"	50 ft.
MFX73M 16-20	1"	1.010"	1 1/4"	1.260"	1/8"	50 ft.

Temp. Range: -57 °C to +57 °C • Shore A 73 hardness

Gamma - tested to 25 kGy

Recyclable

Additional specifications on page 55

millimeter sizes available on request

Flexelene™ MFX82M
RoHS Compliant

Cleanroom Manufactured



Animal Derivative Free

- Ultra-low extractables / leachables
- Non-cytotoxic
- Non-allergenic
- Heat-sealable
- No phthalate plasticizers, or DEHP additives
- Meets USP <87> USP <88> • USP <661>
- Latex free



Flexelene MFX82M

USP Class VI • Biomedical Tubing

E-beam, gamma and EtO sterilization

Tube Number	ID		OD Nominal		Wall	Roll Size
MFX82M .5-2	1/32"	.0312"	1/8"	.125"	3/64"	50 ft.
MFX82M 1-2	1/16"	.0625"	1/8"	.125"	1/32"	50 ft.
MFX82M 1.5-2.5	3/32"	.0937"	5/32"	.156"	1/32"	50 ft.
MFX82M 2-4	1/8"	.125"	1/4"	.250"	1/16"	50 ft.
MFX82M 3-4	3/16"	.187"	1/4"	.250"	1/32"	50 ft.
MFX82M 3-5	3/16"	.187"	5/16"	.312"	1/16"	50 ft.
MFX82M 4-6	1/4"	.265"	3/8"	.390"	1/16"	50 ft.
MFX82M 5-7	5/16"	.323"	7/16"	.448"	1/16"	50 ft.
MFX82M 6-8	3/8"	.385"	1/2"	.510"	1/16"	50 ft.
MFX82M 8-10	1/2"	.510"	5/8"	.635"	1/16"	50 ft.
MFX82M 8-12	1/2"	.510"	3/4"	.760"	1/8"	50 ft.
MFX82M 10-14	5/8"	.635"	7/8"	.885"	1/8"	50 ft.
MFX82M 12-16	3/4"	.760"	1"	1.010"	1/8"	50 ft.
MFX82M 16-20	1"	1.010"	1 1/4"	1.260"	1/8"	50 ft.

Temp. Range: -57 °C to +62 °C • Shore A 82 hardness

Gamma - tested to 25 kGy

Recyclable

Tubing & Clamps

Flexelene™ MFX92R
RoHS Compliant

Cleanroom Manufactured



Animal Derivative Free

- Ultra-low extractables / leachables
- Non-cytotoxic
- Non-allergenic
- Heat-sealable
- No phthalate plasticizers, or DEHP additives
- Meets USP <87> USP <88> • USP <661>
- Latex free



Flexelene MFX92R

USP Class VI • Biomedical Tubing

E-beam, gamma and EtO sterilization

Tube Number	ID		OD Nominal		Wall	Roll Size
MFX92R .5-2	1/32"	.0312"	1/8"	.125"	3/64"	50 ft.
MFX92R 1-2	1/16"	.0625"	1/8"	.125"	1/32"	50 ft.
MFX92R 1.5-2.5	3/32"	.0937"	5/32"	.156"	1/32"	50 ft.
MFX92R 2-4	1/8"	.125"	1/4"	.250"	1/16"	50 ft.
MFX92R 3-4	3/16"	.187"	1/4"	.250"	1/32"	50 ft.
MFX92R 3-5	3/16"	.187"	5/16"	.312"	1/16"	50 ft.
MFX92R 4-6	1/4"	.265"	3/8"	.390"	1/16"	50 ft.
MFX82M 5-7	5/16"	.323"	7/16"	.448"	1/16"	50 ft.
MFX92R 6-8	3/8"	.385"	1/2"	.510"	1/16"	50 ft.
MFX92R 8-10	1/2"	.510"	5/8"	.635"	1/16"	50 ft.
MFX92R 8-12	1/2"	.510"	3/4"	.760"	1/8"	50 ft.
MFX92R 10-14	5/8"	.635"	7/8"	.885"	1/8"	50 ft.
MFX92R 12-16	3/4"	.760"	1"	1.010"	1/8"	50 ft.
MFX92R 16-20	1"	1.010"	1 1/4"	1.260"	1/8"	50 ft.

Temp. Range: -57 °C to +62 °C • Shore A 92 hardness

Gamma - tested to 25 kGy

Recyclable

Additional specifications on page 55

millimeter sizes available on request

Biomedical Tubing

Cleanroom Manufactured

Flexelene™ SFX
RoHS Compliant



USP Class VI Biomedical Tubing



- *Transparent*
- *Heat-sealable*
- *Ultra-low extractables / leachables*
- *No phthalate plasticizers or DEHP additives*
- *Sterilize with E-beam or gamma to 25 kGy*
- *Latex free*

Tube Number	ID		OD Nominal		Wall	Roll Size
SFX .5-1.5	1/32"	.0312"	3/32"	.093"	1/32"	100 ft.
SFX 1-2	1/16"	.0625"	1/8"	.125"	1/32"	100 ft.
SFX 1.5-2.5	3/32"	.0937"	5/32"	.156"	1/32"	100 ft.
SFX 2-3	1/8"	.125"	3/16"	.187"	1/32"	100 ft.
SFX 2-4	1/8"	.125"	1/4"	.250"	1/16"	100 ft.
SFX 3-4	3/16"	.187"	1/4"	.250"	1/32"	100 ft.
SFX 3-5	3/16"	.187"	5/16"	.312"	1/16"	100 ft.
SFX 4-6	1/4"	.265"	3/8"	.390"	1/16"	100 ft.
SFX 5-7	5/16"	.323"	7/16"	.448"	1/16"	100 ft.
SFX 6-8	3/8"	.385"	1/2"	.510"	1/16"	100 ft.
SFX 8-10	1/2"	.510"	5/8"	.635"	1/16"	100 ft.
SFX 8-12	1/2"	.510"	3/4"	.760"	1/8"	100 ft.
SFX 10-14	5/8"	.635"	7/8"	.885"	1/8"	100 ft.
SFX 12-16	3/4"	.760"	1"	1.010"	1/8"	100 ft.

Temp. Range: -40 °C to 52 °C (-40 °F to + 125 °F) • Shore A ≤ 73 hardness

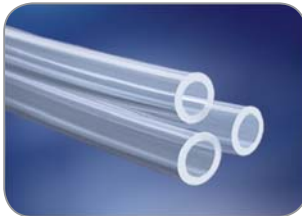
Antimicrobial Protected Tubing

Cleanroom Manufactured

Flexelene™ SFXAG
RoHS Compliant



Antimicrobial Protected Biomedical Tubing



- *Transparent*
- *Heat-sealable*
- *No phthalate plasticizers or DEHP additives*
- *Sterilize with E-beam*
- *Inner wall antimicrobial protected*
- *Latex free*

Tube Number	ID		OD Nominal		Wall	Roll Size
SFXAG .5-1.5	1/32"	.0312"	3/32"	.093"	1/32"	100 ft.
SFXAG 1-2	1/16"	.0625"	1/8"	.125"	1/32"	100 ft.
SFXAG 1.5-2.5	3/32"	.0937"	5/32"	.156"	1/32"	100 ft.
SFXAG 2-4	1/8"	.125"	1/4"	.250"	1/16"	100 ft.
SFXAG 170-4	11/64"	.170"	1/4"	.250"	3/75"	100 ft.
SFXAG 3-4	3/16"	.187"	1/4"	.250"	1/32"	100 ft.
SFXAG 3-5	3/16"	.187"	5/16"	.312"	1/16"	100 ft.
SFXAG 4-6	1/4"	.265"	3/8"	.390"	1/16"	100 ft.
SFXAG 5-7	5/16"	.323"	7/16"	.448"	1/16"	100 ft.
SFXAG 6-8	3/8"	.385"	1/2"	.510"	1/16"	100 ft.
SFXAG 8-10	1/2"	.510"	5/8"	.635"	1/16"	100 ft.
SFXAG 8-12	1/2"	.510"	3/4"	.760"	1/8"	100 ft.
SFXAG 10-14	5/8"	.635"	7/8"	.885"	1/8"	100 ft.
SFXAG 12-16	3/4"	.760"	1"	1.010"	1/8"	100 ft.

Temp. Range: -40 °C to 52 °C (-40 °F to 125 °F) • Shore A ≤ 73 hardness

Antimicrobial Protected Tubing

Cleanroom Manufactured



Flexelene™ MFXAG
RoHS Compliant

Antimicrobial Protected Biomedical Tubing



Animal Derivative Free

- Non-allergenic
- No phthalate plasticizers, or DEHP additives
- Inner wall antimicrobial protected
- Sterilize with E-Beam or EtO
- Latex free

Tube Number	ID		OD Nominal		Wall	Roll Size
MFXAG .5-2	1/32"	.0312"	1/8"	.125"	3/64"	50 ft.
MFXAG 1-2	1/16"	.0625"	1/8"	.125"	1/32"	50 ft.
MFXAG 1.5-2.5	3/32"	.0937"	5/32"	.156"	1/32"	50 ft.
MFXAG 2-4	1/8"	.125"	1/4"	.250"	1/16"	50 ft.
MFXAG 3-4	3/16"	.187"	1/4"	.250"	1/32"	50 ft.
MFXAG 3-5	3/16"	.187"	5/16"	.312"	1/16"	50 ft.
MFXAG 4-6	1/4"	.265"	3/8"	.390"	1/16"	50 ft.
MFXAG 5-7	5/16"	.323"	7/16"	.448"	1/16"	50 ft.
MFXAG 6-8	3/8"	.385"	1/2"	.510"	1/16"	50 ft.
MFXAG 8-10	1/2"	.510"	5/8"	.635"	1/16"	50 ft.
MFXAG 8-12	1/2"	.510"	3/4"	.760"	1/8"	50 ft.
MFXAG 10-14	5/8"	.635"	7/8"	.885"	1/8"	50 ft.
MFXAG 12-16	3/4"	.760"	1"	1.010"	1/8"	50 ft.

Temp. Range: -57 °C to 57 °C (-70 °F to +135 °F) • Shore A 58 hardness

Polyolefin Elastomer Tubing



USP Class VI
ISO 10993-4
ISO 10993-5

Flexelene™ FX
RoHS Compliant

ISO 9001
Quality System

USP Class VI Tubing



- UV stable
- Suitable for use with deionized water
- No phthalate plasticizers or DEHP additives
- Ultra-low extractables / leachables
- Sterilize with E-beam or gamma 25 kGy
- Non-cytotoxic - Non-hemolytic

For Antimicrobial Protected FX Tubing See FXAG Listing on Page 59

Tube Number	ID	OD Nominal	Wall	Roll Size
FX .5-1.5 N	1/32"	3/32"	1/32"	100 ft.
FX 1-2 N	1/16"	1/8"	1/32"	100 ft.
FX 1.5-2.5 N	3/32"	5/32"	1/32"	100 ft.
FX 2-3 N	1/8"	3/16"	1/32"	100 ft.
FX 2-4 N	1/8"	1/4"	1/16"	100 ft.
FX 170-4 N	.170"	1/4"	1/25"	100 ft.
FX 3-4 N	3/16"	1/4"	1/32"	100 ft.
FX 3-5 N	3/16"	5/16"	1/16"	100 ft.
FX 4-6 N	1/4"	3/8"	1/16"	100 ft.
FX 5-7 N	5/16"	7/16"	1/16"	100 ft.
FX 6-8 N	3/8"	1/2"	1/16"	100 ft.
FX 8-10 N	1/2"	5/8"	1/16"	100 ft.
FX 8-12 N	1/2"	3/4"	1/8"	100 ft.
FX 10-12 N	5/8"	3/4"	1/16"	100 ft.
FX 10-14 N	5/8"	7/8"	1/8"	100 ft.
FX 12-14 N	3/4"	7/8"	1/16"	100 ft.
FX 12-16 N	3/4"	1"	1/8"	100 ft.
FX 16-20 N	1"	1 1/4"	1/8"	100 ft.

Temp. Range: -40 °C to 76 °C (-40 °F to 170 °F) • Shore A 86 hardness

Tubing & Clamps

NEW

Thermoforming

Formed, cut-to-length, tubing based upon customers' design specifications can reduce assembly time and fittings requirements. Thermoforming enables clean compact designs by allowing tighter bends that reduce space requirements.



Medical Device • Automation • Robotics

- Custom shapes based on your requirements
- Thermoforming process leaves no residues
- Ideal for circuit board mounted components
- Design easy-to-trace color-coded flowpaths
- Cut assembly time and cost

Flexelene™ FX, Flexelene™ CFX and TPU tubing formulations exhibit physical characteristics that are ideal for thermoforming. Thermoforming generally requires tubing in a higher durometer range to maintain fixed bend geometries. Other Flexelene™ formulations can also be used for thermoform designs - Please contact Customer Support for more information and design options.

Flexelene™ CFX
RoHS Compliant

OD Sizes - For Push-on Fittings

Flexelene CFX

USP Class VI
ISO 10993-4
ISO 10993-5

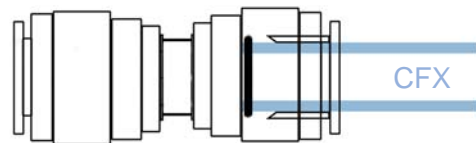


- UV stable
- Suitable for use with deionized water
- No phthalate plasticizers or DEHP additives
- Ultra-low extractables / leachables
- Sterilize with E-beam or gamma to 25 kGy

Tube Number	* OD *	ID Nominal	Wall	Roll Size
CFX 2.5MM-4MM	4 mm	2.5 mm	1/34"	100 ft.
CFX 4MM-6MM	6 mm	4 mm	1/25"	100 ft.
CFX 2-4 N	1/4"	.125"	1/16"	100 ft.
CFX 170-4 N	1/4"	.170"	1/25"	100 ft.
CFX 3-4 N	1/4"	.187"	1/32"	100 ft.
CFX 3-5 N	5/16"	.187"	1/16"	100 ft.
CFX 4-6 N	3/8"	.265"	1/16"	100 ft.
CFX 5-7 N	7/16"	.323"	1/16"	100 ft.
CFX 6-8 N	1/2"	.385"	1/16"	100 ft.
CFX 8-10 N	5/8"	.510"	1/16"	100 ft.

Temp. Range: -40 °C to 76 °C (-40 °F to 170 °F) • Shore A 86 hardness

- Non-cytotoxic
- Non-hemolytic



Push-on Style Fitting With CFX Tubing

Additional FX and CFX tubing specifications on page 55

Polyolefin Elastomer

Colored Tubing

Standard colored tubing sizes

Sizes not shown in the grid are available as special order items - Please call for minimum order requirements.

Flexelene™ FX - Colors

RoHS Compliant



- UV stable
- Suitable for use with deionized water
- No phthalate plasticizers or DEHP additives
- Low extractables / leachables

Additional Specifications - page 55

FX	CFX	red	blue	black	white	orange	violet	green	yellow
FX1-2		R	B	X	W	O	V	G	Y
FX2-3		R	B	X					Y
FX2-4	CFX2-4	R	B	X	W	O	V	G	Y
FX3-5	CFX3-5	R	B	X					
FX4-6	CFX 4-6	R	B	X	W	O	V	G	Y
FX6-8	CFX 6-8	R	B	X					

___* add appropriate color code suffix when ordering R, X, W etc.

Tube Number	ID	OD Nominal	Wall	Standard Roll
FX .5-1.5 ___*	1/32"	3/32"	1/32"	100 ft.
FX 1-2 ___*	1/16"	1/8"	1/32"	100 ft.
FX 1.5-2.5 ___*	3/32"	5/32"	1/32"	100 ft.
FX 2-3 ___*	1/8"	3/16"	1/32"	100 ft.
FX 2-4 ___*	1/8"	1/4"	1/16"	100 ft.
FX 3-4 ___*	3/16"	1/4"	1/32"	100 ft.
FX 3-5 ___*	3/16"	5/16"	1/16"	100 ft.
FX 4-6 ___*	1/4"	3/8"	1/16"	100 ft.
FX 5-7 ___*	5/16"	7/16"	1/16"	100 ft.
FX 6-8 ___*	3/8"	1/2"	1/16"	100 ft.
FX 8-10 ___*	1/2"	5/8"	1/16"	100 ft.
FX 8-12 ___*	1/2"	3/4"	1/8"	100 ft.
FX 10-12 ___*	5/8"	3/4"	1/16"	100 ft.
FX 10-14 ___*	5/8"	7/8"	1/8"	100 ft.
FX 12-14 ___*	3/4"	7/8"	1/16"	100 ft.
FX 12-16 ___*	3/4"	1"	1/8"	100 ft.
FX 16-20 ___*	1"	1 1/4"	1/8"	100 ft.

Temp. Range: -40 °C to 76 °C (-40 °F to 170 °F) • Shore A 86 hardness

Flexelene™ CFX - Colors

RoHS Compliant



- UV stable
- Suitable for use with deionized water
- No phthalate plasticizers or DEHP additives
- Low extractables / leachables

OD Sizes - For Push-on Fittings

Tube Number	* OD *	ID Nominal	Wall	Roll Size
CFX 2.5MM-4MM ___*	4 mm	2.5 mm	1/34"	100 ft.
CFX 4MM-6MM ___*	6 mm	4 mm	1/25"	100 ft.
CFX 2-4 ___*	1/4"	.125"	1/16"	100 ft.
CFX 170-4 ___*	1/4"	.170"	1/25"	100 ft.
CFX 3-4 ___*	1/4"	.187"	1/32"	100 ft.
CFX 3-5 ___*	5/16"	.187"	1/16"	100 ft.
CFX 4-6 ___*	3/8"	.265"	1/16"	100 ft.
CFX 5-7 ___*	7/16"	.323"	1/16"	100 ft.
CFX 6-8 ___*	1/2"	.385"	1/16"	100 ft.
CFX 8-10 ___*	5/8"	.510"	1/16"	100 ft.

Temp. Range: -40 °C to 76 °C (-40 °F to 170 °F) • Shore A 86 hardness

Additional FX and CFX tubing specifications on page 55

Tubing Specifications - FX, CFX, FXAG, CFXAG

Part Numbers		ID		OD		Wall	Working PSI @70 °F	Burst PSI @ 70 °F	Bend Radius in.	
FX		.5-1.5	1/32"	.0312"	.093"	3/32"	1/32"	160	500	1/16"
FX, FXAG		1-2	1/16"	.0625"	.125"	1/8"	1/32"	110	420	5/32"
FX, FXAG		1.5-2.5	3/32"	.0937"	.156"	5/32"	1/32"	86	260	3/16"
FX, FXAG		2-3	1/8"	.125"	.187"	3/16"	1/32"	73	220	1/4"
FX, FXAG	CFX, CFXAG	2-4	1/8"	.125"	<u>.250"</u>	<u>1/4"</u>	1/16"	150	450	1/4"
	CFX, CFXAG	170-4	11/65"	.170"	<u>.250"</u>	<u>1/4"</u>	1/25"	n/a	n/a	n/a
FX, FXAG	CFX, CFXAG	3-4	3/16"	.187"	<u>.250"</u>	<u>1/4"</u>	1/32"	n/a	n/a	n/a
FX, FXAG	CFX, CFXAG	3-5	3/16"	.187"	<u>.312"</u>	<u>5/16"</u>	1/16"	96	320	1/2"
FX, FXAG		4-6	1/4"	.265"	.390"	3/8"	1/16"	73	220	1"
	CFX, CFXAG	4-6	1/4"	.265"	<u>.375"</u>	<u>3/8"</u>	1/16"	73	220	1"
FX, FXAG		5-7	5/16"	.323"	.448"	7/16"	1/16"	66	200	1 1/2"
	CFX, CFXAG	5-7	5/16"	.323"	<u>.438"</u>	<u>7/16"</u>	1/16"	66	200	1 1/2"
FX, FXAG		6-8	3/8"	.385"	.510"	1/2"	1/16"	53	160	1 3/4"
	CFX, CFXAG	6-8	3/8"	.385"	<u>.500"</u>	<u>1/2"</u>	1/16"	53	160	1 3/4"
FX, FXAG		8-10	1/2"	.510"	.635"	5/8"	1/16"	48	145	2 1/2"
	CFX, CFXAG	8-10	1/2"	.510"	<u>.625"</u>	<u>5/8"</u>	1/16"	48	145	2 1/2"
FX, FXAG		8-12	1/2"	.510"	.760"	3/4"	1/8"	80	240	1 1/2"
FX, FXAG		10-12	5/8"	.635"	.760"	3/4"	1/16"	40	120	4"
FX, FXAG		10-14	5/8"	.635"	.885"	7/8"	1/8"	n/a	n/a	n/a
FX, FXAG		12-14	3/4"	.760"	.885"	7/8"	1/16"	30	90	8"
FX, FXAG		12-16	3/4"	.760"	1.010"	1"	1/8"	33	100	8"
FX, FXAG		16-20	1"	1.010"	1.260"	1 1/4"	1/8"	45	135	8"

Burst pressures are approximately 3 times the maximum working pressure. Higher temperatures will reduce the available working pressure. Results are based on tests at our facility under controlled conditions; therefore, Eldon James Corp. makes no warranty or claim as to the performance of its Flexelene™ products in a specific application. It is strongly recommended that application-specific testing be done, particularly in situations where pressures approach the listed working PSI.

Tubing Specifications - MFX, MFXAG

Part Numbers		ID		OD		Wall Thickness	Working PSI @70 °F	Bend Radius in.	
MFX	MFXAG	.5-2	1/32"	.0312"	.125"	1/8"	3/64"	≤30 psi	1/8"
MFX	MFXAG	1-2	1/16"	.0625"	.125"	1/8"	1/32"	≤30 psi	1/8"
MFX	MFXAG	1.5-2.5	3/32"	.0937"	.156"	5/32"	1/32"	≤30 psi	5/32"
MFX	MFXAG	2-4	1/8"	.125"	.250"	1/4"	1/16"	≤30 psi	3/16"
MFX	MFXAG	3-4	3/16"	.187"	.250"	1/4"	1/32"	≤30 psi	3/8"
MFX	MFXAG	3-5	3/16"	.187"	.312"	5/16"	1/16"	≤30 psi	1/2"
MFX	MFXAG	4-6	1/4"	.265"	.390"	3/8"	1/16"	≤30 psi	5/8"
MFX	MFXAG	5-7	5/16"	.323"	.448"	7/16"	1/16"	≤30 psi	1"
MFX	MFXAG	6-8	3/8"	.385"	.510"	1/2"	1/16"	≤30 psi	1 1/4"
MFX	MFXAG	8-10	1/2"	.510"	.635"	5/8"	1/16"	≤30 psi	n/a
MFX	MFXAG	8-12	1/2"	.510"	.760"	3/4"	1/8"	≤30 psi	n/a
MFX	MFXAG	10-14	5/8"	.635"	.885"	7/8"	1/8"	≤30 psi	n/a
MFX	MFXAG	12-16	3/4"	.760"	1.010"	1"	1/8"	≤30 psi	n/a
MFX	-	16-20	1"	1.010"	1.260"	1 1/4"	1/8"	≤30 psi	n/a

Reinforced Tubing

Polyurethane Tubing

RoHS Compliant

Polyester Braid-Reinforced - High Pressure

Tube Number	ID	OD	Wall Thickness	Working PSI @70 °F	Burst PSI @70 °F	Standard Roll
PUB-Y072 N	1/4"	0.470"	.1100"	250	1000	100 ft.
PUB-Y149 N	3/8"	0.630"	.1275"	190	760	100 ft.
PUB-Y226 N	1/2"	0.750"	.1250"	150	600	100 ft.
PUB-Y303 N	5/8"	0.905"	.1400"	130	520	100 ft.
PUB-Y380 N	3/4"	1.025"	.1375"	100	400	100 ft.
PUB-Y457 N	1"	1.300"	.1500"	80	320	100 ft.



- Hardness, Shore A 85 ± 5
- Polyester braid reinforcement
- Brittle temperature – 90 °F • Max operating temperature 175 °F
- Resistant to most oils, fuels and greases (*testing is recommended)
- Ether formulation resists attack from moisture, fungus and radiation
- UV stable - good for outdoor use • Excellent resistance to weathering, impact, abrasion and repeated flexing
- Ether-based material • listed by National Sanitation Foundation NSF 61

Reinforced Tubing

PVC Tubing

RoHS Compliant

PVC Braid-Reinforced - High Pressure

Tube Number	ID	OD	Wall Thickness	Working PSI @70 °F	Burst PSI @70 °F	Standard Roll
PVCB-Z076 N	1/8"	0.315"	.095"	465	1395	100 ft.
PVCB-Z230 N	3/16"	0.394"	.103"	315	945	100 ft.
PVCB-Z307 N	1/4"	0.435"	.102"	300	900	100 ft.
PVCB-Z061 N	1/4"	0.500"	.125"	400	1200	100 ft.
PVCB-Z461 N	5/16"	0.531"	.109"	280	840	100 ft.
PVCB-Z538 N	3/8"	0.600"	.113"	230	690	100 ft.
PVCB-Z075 N	3/8"	0.625"	.125"	265	795	100 ft.
PVCB-Z692 N	1/2"	0.728"	.114"	215	645	100 ft.
PVCB-Z096 N	1/2"	0.850"	.175"	258	774	100 ft.
PVCB-Z846 N	5/8"	0.906"	.141"	200	600	100 ft.
PVCB-Z923 N	3/4"	1.024"	.137"	150	450	100 ft.
PVCB-Z117 N	3/4"	1.125"	.188"	233	699	100 ft.
PVCB-Z154 N	1"	1.299"	.150"	130	390	100 ft.



- Hardness, Shore A 80 ± 5
- Materials conform to USP Class VI
- Brittle temperature – 50 °F • Max operating temperature 175 °F
- Generally unaffected by most oxidizing and reducing agents, if diluted
- Oils and gasoline will harden PVC over periods of intermittent use
- Corrosion and abrasion resistant - mirror smooth interior surface
- Polyester braid reinforcement - flexibility similar to rubber

TPU
Thermoplastic Polyurethane
 RoHS Compliant

Polyurethane Tubing

Transparent Ether Formula



- Hardness, Shore A 85
- UV stable - good for outdoor use
- Excellent resistance to weathering and fungus
- Resin material certified to NSF 61
- Max operating temperature 175 °F
- Resistance to, impact, abrasion and repeated flexing
- Exhibits excellent hydrolytic stability and low temperature properties

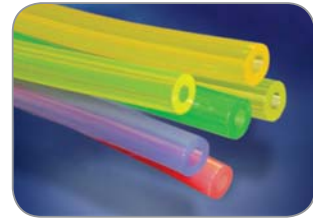
Tube Number	ID	OD	Wall Thickness	Standard Roll
TPU 1-2 N	1/16"	1/8"	1/32"	100 ft.
TPU 2-3 N	1/8"	3/16"	1/32"	100 ft.
TPU 2-4 N	1/8"	1/4"	1/16"	100 ft.
TPU 3-5 N	3/16"	5/16"	1/16"	100 ft.
TPU 4-6 N	1/4"	3/8"	1/16"	100 ft.
TPU 5-7 N	5/16"	7/16"	1/16"	100 ft.
TPU 6-8 N	3/8"	1/2"	1/16"	100 ft.
TPU 8-10 N	1/2"	5/8"	1/16"	100 ft.
TPU 8-12 N	1/2"	3/4"	1/8"	100 ft.
TPU 10-14 N	5/8"	7/8"	1/8"	100 ft.
TPU 12-16 N	3/4"	1"	1/8"	100 ft.
TPU 16-20 N	1"	1 1/4"	1/8"	100 ft.

Operating Temp: to 80 °C (175 °F) • Shore A 85 hardness FDA 21 CFR 177.2600 - food contact

TPU Colors

RoHS Compliant

NEW



- Excellent material for thermoformed tubes
- Available in sizes listed above - 2000' minimum order
- Same material as transparent ether formula above

See Rotating Lock Luers - page 10 and CryatalVu™ Swivel Disconnects - page 14 for color-matched connectors.

- Rose
- Yellow
- Orange
- Lime
- Berry
- Violet



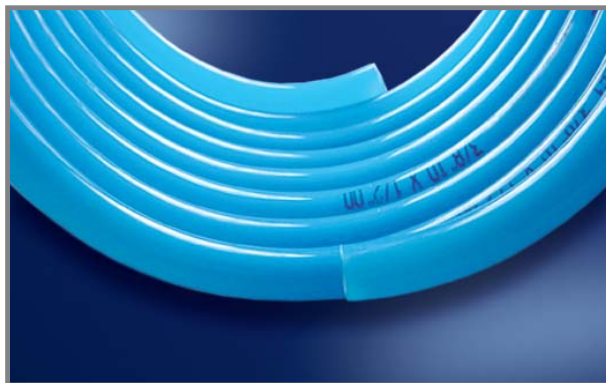
- Hardness, Shore A 85
- UV stable - good for outdoor use
- Max operating temperature 175 °F
- Max operating temperature 80 °C



Ph. 970.667.2728 • eldonjames.com • fax 970.667.3204

*Eldon James
Antimicrobial Protected Products*

Silver Ion Protection



Inhibits Biofilm

Flexelene™ FXAG Tubing

Applications:

- *Antimicrobial protected products inhibit colonization by pathogenic bacteria and the formation of biofilms. They can be useful in limiting risks associated with Hospital Acquired Infection (HAIs)*
- *Cooling systems for lasers that use miniature components and heat exchangers benefit from the use of antimicrobial protected products since biofilm accumulation in these sensitive devices reduces efficiency and can lead to clogging.*
- *Antimicrobial protected products are frequently used in water, food and beverage delivery systems. Retention of residual nutrients and back flush potential in these appliances make them particularly susceptible to bacterial colonization.*
- *Spray and mist systems that use small orifice nozzles risk clogging when biological films form within the system. Antimicrobial protected components offer an effective solution for inhibiting formation of these films.*

Silver ions, in the quantities released by Eldon James antimicrobial products, have an extremely low toxicity. They are considered safe for the environment and there is no evidence that their use leads to production of resistant organisms.



Fittings are antimicrobial protected on all surfaces - tubing is protected by an inner co-extruded liner.

Antimicrobial protected tubing - pages 51-52 and 59

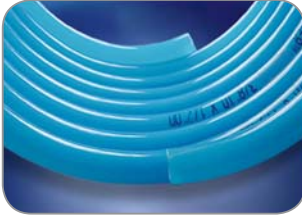


MFXAG Medical Tubing

Antimicrobial Protected Polyolefin Elastomer

Flexelene™ FXAG

RoHS Compliant



- Abrasion resistant
- No phthalate plasticizers or DEHP additives
- Inner wall antimicrobial protected
- Polyolefin elastomer

Additional Specifications - page 55

Flexelene FXAG

Tube Number	ID	OD Nominal	Wall	Roll Size
FXAG .5-1.5	1/32"	3/32"	1/32"	100 ft.
FX AG 1-2	1/16"	1/8"	1/32"	100 ft.
FXAG 1.5-2.5	3/32"	5/32"	1/32"	100 ft.
FXAG 2-3	1/8"	3/16"	1/32"	100 ft.
FXAG/CFXAG 2-4	1/8"	1/4"	1/16"	100 ft.
FXAG/CFXAG 3-4	3/16"	1/4"	1/32"	100 ft.
FXAG/CFXAG 3-5	3/16"	5/16"	1/16"	100 ft.
FXAG 4-6	1/4"	3/8"	1/16"	100 ft.
FXAG 5-7	5/16"	7/16"	1/16"	100 ft.
FXAG 6-8	3/8"	1/2"	1/16"	100 ft.
FXAG 8-10	1/2"	5/8"	1/16"	100 ft.
FXAG 8-12	1/2"	3/4"	1/8"	100 ft.
FXAG 10-12	5/8"	3/4"	1/16"	100 ft.
FXAG 10-14	5/8"	7/8"	1/8"	100 ft.
FXAG 12-14	3/4"	7/8"	1/16"	100 ft.
FXAG 12-16	3/4"	1"	1/8"	100 ft.

Temp. Range: -40 °C to 76 °C (-40 °F to +170 °F) • Shore A 86 hardness

Eldon James developed its **AG tubing products** to offer protection against microbial colonization. Algae, molds, bacteria and fungi often form a biofilm layer on inner tubing walls, presenting health risks and causing undesirable tastes and odors. Portions of this biofilm may eventually break away, clogging filters or lodging in sensitive systems. Eldon James Flexelene AG Silver tubing releases natural silver ions, which are effective in preventing biofilm formation. Silver disrupts respiration and other metabolic functions of microbes and inhibits their growth.

Flexelene™ CFXAG

RoHS Compliant

OD Sizes - For Push-on Fittings



- Abrasion resistant
- Inner wall antimicrobial protected
- Polyolefin elastomer

Additional Specifications - page 55

Flexelene CFXAG

Tube Number	* OD *	ID Nominal	Wall	Roll Size
CFXAG 2.5MM-4MM	4 mm	2.5 mm	1/34"	100 ft.
CFXAG 4MM-6MM	6 mm	4 mm	1/25"	100 ft.
CFXAG 2-4	1/4"	.125"	1/16"	100 ft.
CFXAG 170-4	1/4"	.170"	1/25"	100 ft.
CFXAG 3-4	1/4"	.187"	1/32"	100 ft.
CFXAG 3-5	5/16"	.187"	1/16"	100 ft.
CFXAG 4-6	3/8"	.265"	1/16"	100 ft.
CFXAG 5-7	7/16"	.323"	1/16"	100 ft.
CFXAG 6-8	1/2"	.385"	1/16"	100 ft.
CFXAG 8-10	5/8"	.510"	1/16"	100 ft.

Temp. Range: -40 °C to 76 °C (-40 °F to +170 °F) • Shore A 86 hardness

Antimicrobial Protected



Eldon James AG Fittings are silver ion protected to inhibit colonization by microbial pathogens. Silver's multiple modes of action minimize risk for development of resistant strains and make it an effective antimicrobial agent for a broad spectrum of bacteria.

Adapters

Antimicrobial Protected
RoHS Compliant



Animal Derivative Free

Thread - Barb	Part Number	AGNK	AGPP	AGNN	AGHDPE
1/8" NPT • 1/8"	A2-2	AGNK	AGPP	AGNN	AGHDPE
1/4" NPT • 1/4"	A4-4	AGNK	AGPP	AGNN	AGHDPE
3/8" NPT • 3/8"	A6-6	AGNK	AGPP	AGNN	AGHDPE
1/2" NPT • 1/2"	A8-8	AGNK	AGPP	AGNN	AGHDPE
3/4" NPT • 3/4"	A12-12	AGNK	AGPP	AGNN	AGHDPE
1" NPT • 1"	A16-16	AGNK	AGPP	AGNN	AGHDPE

Couplers

Antimicrobial Protected
RoHS Compliant



Animal Derivative Free

Size	Part Number	AGNK	AGPP	AGNN	AGHDPE
1/16"	C0-1	AGNK	AGPP	AGNN	AGHDPE
1/8"	C0-2	AGNK	AGPP	AGNN	AGHDPE
3/16"	C0-3	AGNK	AGPP	AGNN	AGHDPE
1/4"	C0-4	AGNK	AGPP	AGNN	AGHDPE
5/16"	C0-5	AGNK	AGPP	AGNN	AGHDPE
3/8"	C0-6	AGNK	AGPP	AGNN	AGHDPE
1/2"	C0-8	AGNK	AGPP	AGNN	AGHDPE
5/8"	C0-10	AGNK	AGPP	AGNN	AGHDPE
3/4"	C0-12	AGNK	AGPP	AGNN	AGHDPE
1"	C0-16	AGNK	AGPP	AGNN	AGHDPE

Additional antimicrobial (protected) AG fitting sizes are available - quantity order minimums may apply

Ag Kynar® AGNK	Ag Nylon AGNN
Ag Animal Derivative Free Polypropylene AGPP	Ag High Density Polyethylene AGHDPE

Couplers-Reduction
Antimicrobial Protected
RoHS Compliant

Antimicrobial Protected



Antimicrobial Protected

Size	Part Number	AGNK	AGPP	AGNN	AGHDPE
1/8" • 1/16"	C2-1	AGNK	AGPP	AGNN	AGHDPE
1/4" • 1/8"	C4-2	AGNK	AGPP	AGNN	AGHDPE
3/8" • 1/4"	C6-4	AGNK	AGPP	AGNN	AGHDPE
1/2" • 1/4"	C8-4	AGNK	AGPP	AGNN	AGHDPE
5/8" • 1/2"	C10-8	AGNK	AGPP	AGNN	AGHDPE
3/4" • 1/2"	C12-8	AGNK	AGPP	AGNN	AGHDPE
1" • 1/2"	C16-8	AGNK	AGPP	AGNN	AGHDPE

Additional antimicrobial (protected) AG fitting sizes are available - quantity order minimums may apply

Elbows

Antimicrobial Protected
RoHS Compliant



Size	Part Number	AGNK	AGPP	AGNN	AGHDPE
1/8"	L0-2	AGNK	AGPP	AGNN	AGHDPE
3/16"	L0-3	AGNK	AGPP	AGNN	AGHDPE
1/4"	L0-4	AGNK	AGPP	AGNN	AGHDPE
5/16"	L0-5	AGNK	AGPP	AGNN	AGHDPE
3/8"	L0-6	AGNK	AGPP	AGNN	AGHDPE
1/2"	L0-8	AGNK	AGPP	AGNN	AGHDPE
5/8"	L0-10	AGNK	AGPP	AGNN	AGHDPE
3/4"	L0-12	AGNK	AGPP	AGNN	AGHDPE
1"	L0-16	AGNK	AGPP	AGNN	AGHDPE

Elbows-Threaded - 1/8"-1" NPT

Antimicrobial Protected
RoHS Compliant



Thread - Barb	Part Number	AGNK	AGPP	AGNN	AGHDPE
1/8" NPT • 1/8"	L2-2	AGNK	AGPP	AGNN	AGHDPE
1/4" NPT • 1/4"	L4-4	AGNK	AGPP	AGNN	AGHDPE
3/8" NPT • 3/8"	L6-6	AGNK	AGPP	AGNN	AGHDPE
1/2" NPT • 1/2"	L8-8	AGNK	AGPP	AGNN	AGHDPE
3/4" NPT • 3/4"	L12-12	AGNK	AGPP	AGNN	AGHDPE
1" NPT • 1"	L16-16	AGNK	AGPP	AGNN	AGHDPE

Tees

Antimicrobial Protected
RoHS Compliant

Antimicrobial Protected



Animal Derivative Free

Animal Derivative Free

Size	Part Number	AGNK	AGPP	AGNN	AGHDPE
1/8"	T0-2	AGNK	AGPP	AGNN	AGHDPE
3/16"	T0-3	AGNK	AGPP	AGNN	AGHDPE
1/4"	T0-4	AGNK	AGPP	AGNN	AGHDPE
5/16"	T0-5	AGNK	AGPP	AGNN	AGHDPE
3/8"	T0-6	AGNK	AGPP	AGNN	AGHDPE
1/2"	T0-8	AGNK	AGPP	AGNN	AGHDPE
5/8"	T0-10	AGNK	AGPP	AGNN	AGHDPE
3/4"	T0-12	AGNK	AGPP	AGNN	AGHDPE
1"	T0-16	AGNK	AGPP	AGNN	AGHDPE

Antimicrobial Protected

Tees-Threaded

Antimicrobial Protected
1/8"-1" NPT RoHS Compliant



Animal Derivative Free

Animal Derivative Free

Thread - Barb	Part Number	AGNK	AGPP	AGNN	AGHDPE
1/8" NPT • 1/8"	T2-2	AGNK	AGPP	AGNN	AGHDPE
1/4" NPT • 1/4"	T4-4	AGNK	AGPP	AGNN	AGHDPE
3/8" NPT • 3/8"	T6-6	AGNK	AGPP	AGNN	AGHDPE
1/2" NPT • 1/2"	T8-8	AGNK	AGPP	AGNN	AGHDPE
3/4" NPT • 3/4"	T12-12	AGNK	AGPP	AGNN	AGHDPE
1" NPT • 1"	T16-16	AGNK	AGPP	AGNN	AGHDPE

Y-Connectors

Antimicrobial Protected
RoHS Compliant



Animal Derivative Free

Animal Derivative Free

Size	Part Number	AGNK	AGPP	AGNN	AGHDPE
1/8"	Y0-2	AGNK	AGPP	AGNN	AGHDPE
3/16"	Y0-3	AGNK	AGPP	AGNN	AGHDPE
1/4"	Y0-4	AGNK	AGPP	AGNN	AGHDPE
3/8"	Y0-6	AGNK	AGPP	AGNN	AGHDPE
1/2"	Y0-8	AGNK	AGPP	AGNN	AGHDPE

Ag Kynar® AGNK	Ag Nylon AGNN
Ag Animal Derivative Free Polypropylene AGPP	Ag High Density Polyethylene AGHDPE

Notes:

Handy Clamps



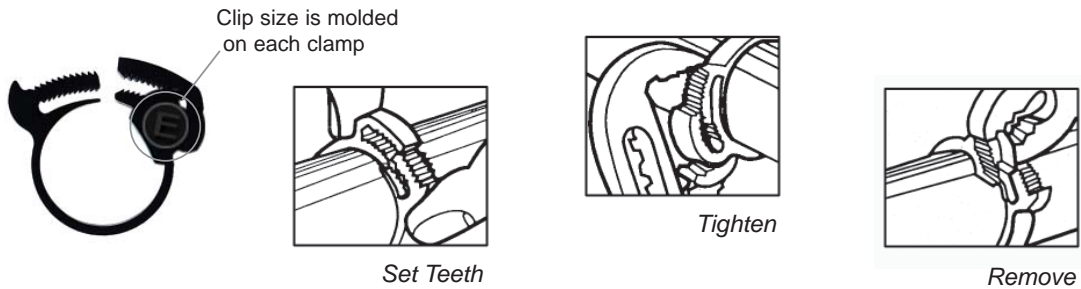
Tough 6/6 Nylon
Temperature Resistant to
150 °C



Clamps

Part Number	Min. Diameter		Max. Diameter		3 Teeth Engaged	Sets of Teeth	Fits Flexelene™ FX and FXAG Tubing
	inches	mm	inches	mm			
HC-A	.220"	5.6	.268"	6.8	0.256"	8	FX 2-4*
HC-AA	.256"	6.5	.319"	8.1	0.311"	8	FX 3-5*
HC-B	.311"	7.9	.378"	9.6	0.362"	8	–
HC-BB	.362"	9.2	.425"	10.8	0.406"	9	FX 4-6*
HC-C	.402"	10.2	.484"	12.3	0.465"	9	FX 4-6*
HC-D	.472"	12.0	.528"	14.5	0.543"	9	FX 6-8*
HC-F	.591"	15.0	.701"	17.8	0.673"	11	FX 8-10*
HC-G	.665"	16.9	.783"	19.9	0.752"	11	FX 8-12*
HC-H	.713"	18.1	.843"	21.4	0.811"	11	FX 10-12*
HC-J	.799"	20.3	.933"	23.7	0.906"	11	FX 12-14*
HC-K	.874"	22.2	1.016"	25.8	0.980"	11	FX 12-16*
HC-N	1.134"	28.8	1.299"	33.0	1.268"	11	FX 16-20*
HC-P	1.260"	32.0	1.402"	35.6	1.370"	11	–
HC-Q	1.350"	34.3	1.524"	38.7	1.492"	12	–
HC-R	1.496"	38.0	1.654"	42.0	1.614"	12	–
HC-S	1.579"	40.1	1.776"	45.1	1.740"	12	–

* Size tests were made using Eldon James "single barb fittings". The space behind a single barb allows for more compression of the tubing than is allowed by a multiple barb. With a multiple barb fitting, the clamp sits on top of the barb flanges and a larger clamp may be required - If in doubt about size, please ask for samples.



Size Selection Guideline:

With the hose in place on the fitting, select a Handy Clamp that provides a snug fit with one to three teeth engaged. When fully tightened this will produce a strong and reliable closure.

Sizes to 6" diameter - call for availability

Reusable - no special tools required to install

Stainless Steel Tubing Clamps



Oetiker Stepless Ear Clamps



- Radial Compression 360° - no steps or gaps on inner circumference
 - Ear design provides spring action during vibration and thermocycling conditions
 - Chromium-nickel stainless steel has a high strength-to-weight ratio
 - Excellent corrosion resistance in both aqueous and atmospheric environments
- Oetiker Stepless Ear Clamps are made of UNS S30400 or DIN 1.4301 stainless steel.

Clamps

Part Number	Clamping Range			Eldon James Flexelene™ Tubing Range - Size Test **			10 Bags (1000)	1 Bag (100)
	Band mm	mm closed • open	inches closed • open	Eldon James Tubing Number		Nominal Tubing OD		
16702487	5	5.3 - 6.5 mm	.209 - .256	-	-	-	•	•
16700985	5	7.0 - 8.7 mm	.276 - .343	-	-	-	•	•
16700988	5	8.8 - 10.5 mm	.347 - .413	MFX	4-6	3/8"	•	•
16700989	5	9.6 - 11.3 mm	.378 - .445	FX, FXAG	4-6	3/8"	•	•
16700992	7	9.8 - 12.3 mm	.386 - .484	FX, FXAG	5-7	7/16"	•	•
16700993	7	10.8 - 13.3 mm	.425 - .524	-	-	-	•	•
16700997	7	11.5 - 14.0 mm	.453 - .551	FX, FXAG, MFX	6-8	1/2"	•	•
16700999	7	12.0 - 14.5 mm	.472 - .571	-	-	-	•	•
16701005	7	13.2 - 15.7 mm	.520 - .618	-	-	-	•	•
16701009	7	14.5 - 17.0 mm	.571 - .669	-	-	-	•	•
16701015	7	15.3 - 18.5 mm	.602 - .728	FX, FXAG	8-10	5/8"	•	•
16701021	7	16.6 - 19.8 mm	.654 - .780	FX, FXAG	8-12	3/4"	•	•
16701029	7	17.8 - 21.0 mm	.701 - .827	FX	10-12	3/4"	•	•
16701058	7	20.9 - 24.1 mm	.823 - .949	-	-	-	•	•
16701072	7	22.4 - 25.6 mm	.882 - 1.008	FX	12-14	7/8"	•	•
16701087	7	23.9 - 27.1 mm	.941 - 1.067	-	-	-	•	•
16701103	7	25.4 - 28.6 mm	1.000 - 1.126	-	-	-	•	•
16701136	7	26.9 - 30.1 mm	1.059 - 1.185	-	-	-	•	•
16701203	7	29.9 - 33.1 mm	1.117 - 1.303	-	-	-	•	•
16701225	7	31.4 - 34.6 mm	1.236 - 1.362	FX	16-20	1 1/4"	•	•
16701245	7	32.9 - 36.1 mm	1.295 - 1.421	-	-	-	•	•
16701314	7	37.8 - 41.0 mm	1.488 - 1.614	-	-	-	•	•

SELECTING THE CORRECT SIZE : Select the nominal size nearest to, but always larger than the outside diameter of the material to be clamped. The outside diameter should be determined with connection fully assembled. Note: multiple barb fittings may require the use of a larger clamp size than single barb fittings - to consider the clamp closed - the ear width should be reduced by at least 40% when pinched.

Part Number
14100082



Standard Jaw Pliers

For closing all regular Oetiker Stepless Clamps

Part Number
14100083



Dual Purpose Side Jaw Pliers

Designed for working in tight areas with pliers held parallel to the hose - can also be used from the front like regular pliers

Stainless Steel Tubing Clamps

Tubing & Clamps

Worm Drive Clamps

Oetiker



Part Number	Clamping Range		5 Bags (250 pieces)	1 Bag (50 pieces)	< Bag (1-50 pieces)
	mm	inches			
17700167	10 - 16 mm	.39 - .623	•	•	•
17700050	12 - 20 mm	.472 - .787	Please call - quantities limited		
17700169	12 - 22 mm	.472 - .866	•	•	•
17700171	16 - 27 mm	.630 - 1.063	•	•	•
17700172	20 - 32 mm	.787 - 1.260	•	•	•
17700174	25 - 40 mm	.984 - 1.575	•	•	•
17700176	32 - 50 mm	1.260 - 1.969	•	•	•

Band size 9.0 mm x.60 mm - Please call for quotes on larger band sizes and clamp diameters.

1/4" Hex-Head Screw Clamps

Ideal



Part Number	Clamping Range		100 units	Each
	mm	inches		
62606	7.97 - 22.2 mm	5/16 - 7/8	•	•
62M08	12.7 - 25.4 mm	1/2 - 1	•	•
62M12	15.8 - 31.7 mm	5/8 - 1 1/4	•	•
62M16	15.8 - 38.1 mm	5/8 - 1 1/2	•	•

300 Series stainless steel band and housing. Zinc-plated, yellow chromate, carbon steel screw.

Tiny, tough, precision engineered • Seal with only 10 inch-pounds of screw torque • One-piece housing • No spot welds • Easy to install in confined areas

154 Medical Clamps - 2.5 mm - 10 mm

Oetiker
More Options

153 Mini Clamps - 2.9 mm - 11 mm



14100120 Autoclavable Mini Clamp
Pincer - for clamps up to 11.8 mm



1-Ear Clamps



2-Ear Clamps



Self-Tensioning Clamps
for vibrating equipment



14100078 Professional Tubing Cutter
w / replaceable Swiss steel blades