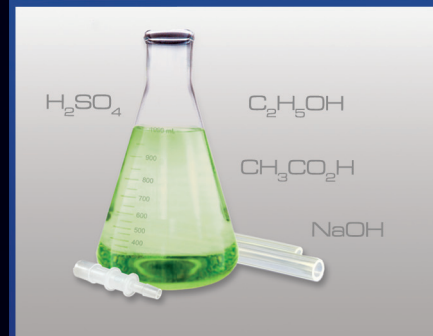


Eldon James

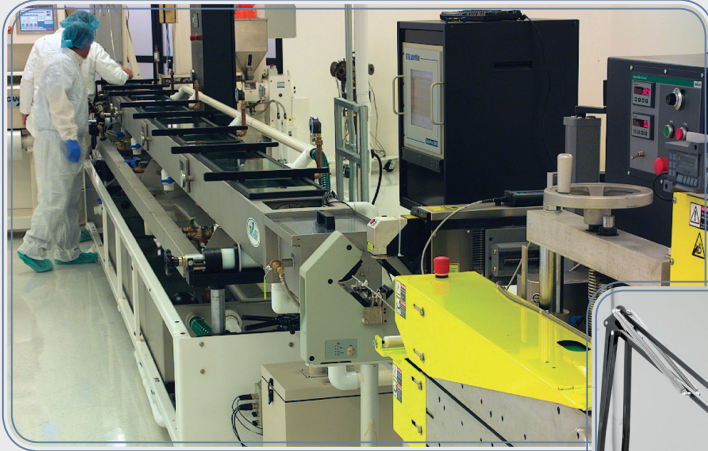
# Eldon James Catalog



**EJ BioMed**  
An Eldon James Company



### Cleanroom Extrusion



Quality

### Molding Production EJ BioMed



In-process Monitoring



Materials Control

EJ BioMed Cleanrooms Are  
3rd Party Certified to  
ISO 14644-1 Class 7

ISO 9001:2008  
ISO 13485:2003





**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.

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## 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

**CrystaVu™**(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.



*Notes:*

Eldon James

Natural Materials  
Bioprocess & Medical



Biomedical  
Natural Materials



**Controlled Environment Production**  
**EJ BioMed**

3rd Party Certified  
ISO Class 8 Cleanrooms

Portable Modular Over-enclosures  
Are Class 5 Certified



ISO 9001  
Quality System

Validation Monitoring  
ISO 14644-1 Class 8



**EJ BioMed**

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**PP - Port Plates - Ribbed Base**  
RoHS Compliant



Ribbed base prevents suction blockage and increases rigidity



▷ USP Class VI

Hose Barb	Base Plate	Part Number	▷ E8402	▷ 50/50	▷ NKF
1/8"	1 3/4" Ribbed	PP 2	▷ E8402	▷ 50/50	▷ NKF
5/32"	1 3/4" Ribbed	PP 2.5	▷ E8402	▷ 50/50	▷ NKF
3/16"	1 3/4" Ribbed	PP 3	▷ E8402	▷ 50/50	▷ NKF
1/4"	1 3/4" Ribbed	PP 4	▷ E8402	▷ 50/50	▷ NKF
5/16"	1 3/4" Ribbed	PP 5	▷ E8402	▷ 50/50	▷ NKF
3/8"	1 3/4" Ribbed	PP 6	▷ E8402	▷ 50/50	▷ NKF

Hose Barb	Base Plate	Part Number	▷ E8402	▷ 50/50	▷ NKF
1/2"	2 1/4" Ribbed	PP 8	▷ E8402	▷ 50/50	▷ NKF
5/8"	2 1/4" Ribbed	PP 10	▷ E8402	▷ 50/50	▷ NKF
3/4"	2 1/4" Ribbed	PP 12	▷ E8402	▷ 50/50	▷ NKF
1"	2 1/4" Ribbed	PP 16	▷ E8402	▷ 50/50	▷ NKF

**Flow Restricted**

Hose Barb	Base Plate	Part Number	▷ E8402	▷ 50/50	▷ NKF
1/2"	1 3/4" Ribbed	PP 8-4	▷ E8402	▷ 50/50	▷ NKF
5/8"	1 3/4" Ribbed	PP 10-4	▷ E8402	▷ 50/50	▷ NKF
3/4"	1 3/4" Ribbed	PP 12-4	▷ E8402	▷ 50/50	▷ NKF

E8402

50/50: E8402 / 955i LDPE Blend

NKF Kynar-Flex®

< Flow restricted Port Plates left, have 1/4" flow restriction at the base

Port Plates and Port Discs are designed for ultrasonic welding to bags of like material - Use NKF (Natural Kynar-Flex) with Kynar® bags and 50/50 or E8402 with polyethylene bag materials.

Mini-Dome protrusions inhibit suction blockage >  
• Flexible 2 1/4" disc base

**PD - Port Discs- Flat Plate / Mini-Domes**  
RoHS Compliant

▷ USP Class VI



Hose Barb	Base Mini Dome	Part Number	▷ E8402	▷ 50/50	▷ NKF
1/8"	2 1/4" Disc	PD 2	▷ E8402	▷ 50/50	▷ NKF
5/32"	2 1/4" Disc	PD 2.5	▷ E8402	▷ 50/50	▷ NKF
3/16"	2 1/4" Disc	PD 3	▷ E8402	▷ 50/50	▷ NKF
1/4"	2 1/4" Disc	PD 4	▷ E8402	▷ 50/50	▷ NKF
5/16"	2 1/4" Disc	PD 5	▷ E8402	▷ 50/50	▷ NKF
3/8"	2 1/4" Disc	PD 6	▷ E8402	▷ 50/50	▷ NKF
1/2"	2 1/4" Disc	PD 8	▷ E8402	▷ 50/50	▷ NKF
5/8"	2 1/4" Disc	PD 10	▷ E8402	▷ 50/50	▷ NKF
3/4"	2 1/4" Disc	PD 12	▷ E8402	▷ 50/50	▷ NKF
1"	2 1/4" Disc	PD 16	▷ E8402	▷ 50/50	▷ NKF

## Bioreactor Bag Ports

### PND - Port Discs - Flat Plate

RoHS Compliant

Flexible, smooth 2 1/4" >  
flat disc base



▷ USP Class VI

Hose Barb	Base - Flat	Part Number	▷ E8402	▷ 50/50	▷ NKF
1/8"	2 1/4" Disc	PND 2	▷ E8402	▷ 50/50	▷ NKF
5/32"	2 1/4" Disc	PND 2.5	▷ E8402	▷ 50/50	▷ NKF
3/16"	2 1/4" Disc	PND 3	▷ E8402	▷ 50/50	▷ NKF
1/4"	2 1/4" Disc	PND 4	▷ E8402	▷ 50/50	▷ NKF
5/16"	2 1/4" Disc	PND 5	▷ E8402	▷ 50/50	▷ NKF
3/8"	2 1/4" Disc	PND 6	▷ E8402	▷ 50/50	▷ NKF
1/2"	2 1/4" Disc	PND 8	▷ E8402	▷ 50/50	▷ NKF
5/8"	2 1/4" Disc	PND 10	▷ E8402	▷ 50/50	▷ NKF
3/4"	2 1/4" Disc	PND 12	▷ E8402	▷ 50/50	▷ NKF
1"	2 1/4" Disc	PND 16	▷ E8402	▷ 50/50	▷ NKF

E8402

50/50: E8402 / 955i LDPE Blend

NKF Kynar-Flex®



### 38-400 1" Bottle Cap Thread

Wide 1" opening suitable for high  
viscosity liquids and powders

### PD 38-400 - 1" Threaded Ports

RoHS Compliant

▷ USP Class VI

Thread	Base - Flat	Part Number	▷ E8402	▷ 50/50	NKF
38-400	2 1/4" Disc	PD 38-400	▷ E8402	▷ 50/50	▷ NKF



Designed for Sample Port and  
Dip Tube Applications



### PDO - Opposing Barb Ports

RoHS Compliant

ISO 9001

Quality System

▷ USP Class VI

Hose Barbs	Base - Flat	Part Number	▷ E8402	▷ 50/50	NKF
1/4"	2 1/4" Disc	PDO 4	▷ E8402	▷ 50/50	▷ NKF
3/8"	2 1/4" Disc	PDO 6	▷ E8402	▷ 50/50	▷ NKF
1/2"	2 1/4" Disc	PDO 8	▷ E8402	▷ 50/50	▷ NKF

E8402

50/50: E8402 / 955i LDPE Blend

NKF Kynar-Flex®

Port Plates and Discs are designed for ultrasonic welding to bags of like material - Use NKF (Natural Kynar-Flex) with Kynar® bags and 50/50 or E8402 with polyethylene bag materials.

## TPE Materials



### Thermoplastic Elastomers For Bioprocess and Medical Applications



Animal Derivative Free



- Ultra-low extractables / leachables
- No phthalate plasticizers or DEHP additives
- Sterilize with E-beam, EtO or gamma to 45 kGy
- Thermoplastic Elastomer no PVC
- Latex free
- Brittle temp. -88 °F

Cleanroom Manufactured

**NEW Thermoplastic Elastomer Products** - Luers And TPE tubing are complimentary products manufactured from advanced TPE resins. Using materials from the same resin family generally facilitates the qualification process.

Products manufactured from TPE resins meet USP Class VI requirements and are compatible with gamma, EtO and autoclave sterilization methods.



**Peristaltic Pump Compatible** - TPE tubing is a silicone-free, durable, economical choice for peristaltic pump applications.

TPE Luers are autoclavable and suitable for use in neonatal applications due to ultra-low extractables characteristics.



TPE tubing durometers range from (soft) Shore A 54 to Shore A 95. Higher durometer tubing resists collapse in high vacuum applications.

Autoclavable to 121 °C or 135 °C depending on tubing type and Shore hardness.

**Large Bore Luers** (pictured), eliminate the flow restriction inherent in the male side luer design. Standard male luers restrict the flow to barbs larger than 5/32" - Large Bore Luers do not.



## CrystalVu™ Material



### USP Class VI Polycarbonate Alternative With No Bisphenol-A Additives



- Transparent hard plastic
- Superior chemical resistance
- Sterilize with E-beam, EtO, gamma or autoclave
- Polyolefin material
- BPA free
- Autoclavable to 135 °C
- FDA 21 CFR 177.1520 (a) (3) (11)

CrystalVu™

Cleanroom Manufactured

LMSLN • Stationary Lock

LMRLN • Rotating Lock

see pages 10-11



Animal Derivative Free



### USP Class VI, Autoclavable Luers

Soft-Touch ergonomic design enables easy connections with gloved hands

The colored luers shown above are available with either a stationary nut, which rotates with the luer barb body, or a rotating nut which rotates independently from the barb body. In the LMRLN (independently rotating version), the nut is free to rotate until the luer seals. This prevents twisting of tube lines and facilitates making a secure connection.

Colored luers offer a means to differentiate input vs. output lines or color code delivery tubes. LMSLN and LMRLN luers are also available in nylon and animal-derivative-free polypropylene.

## Certified Laboratory Testing



Eldon James luers are Certified Laboratory Tested. Our luers are tested for dimensional and performance requirements according to ISO 594-1 and 594-2 standards. This testing includes dimensional checks, as well as tests on the security of the assembled fittings for leakage under pressure and vacuum conditions. Test results are available upon request.

Precision engineered for smooth positive sealing

Male Luer



Female Luer



**Soft-Touch Luers**

Standard Sizes 1/16" - 1/4" Barb

▷ USP Class VI

Hose Barb	Style	Part Number	▷ PP	MN	NN	▷ TPE	▷ NK	▷ CVU
1/16"	Male	LM-1	▷ PP	MN	NN	▷ TPE	▷ NK	▷ CVU
1/16"	Female	LF-1	▷ PP	MN	NN	▷ TPE	▷ NK	▷ CVU
3/32"	Male	LM-1.5	▷ PP	MN	NN	▷ TPE	▷ NK	▷ CVU
3/32"	Female	LF-1.5	▷ PP	MN	NN	▷ TPE	▷ NK	▷ CVU
1/8"	Male	LM-2	▷ PP	MN	NN	▷ TPE	▷ NK	▷ CVU
1/8"	Female	LF-2	▷ PP	MN	NN	▷ TPE	▷ NK	▷ CVU
5/32"	Male	LM-2.5	▷ PP	MN	NN	▷ TPE	▷ NK	▷ CVU
5/32"	Female	LF-2.5	▷ PP	MN	NN	▷ TPE	▷ NK	▷ CVU
3/16"	Male	LM-3	▷ PP	MN	NN	▷ TPE	▷ NK	▷ CVU
3/16"	Female	LF-3	▷ PP	MN	NN	▷ TPE	▷ NK	▷ CVU
1/4"	Male	LM-4	▷ PP	MN	NN	▷ TPE	▷ NK	▷ CVU
1/4"	Female	LF-4	▷ PP	MN	NN	▷ TPE	▷ NK	▷ CVU

### Luer Materials

**TPE - Thermoplastic Elastomer** • A semi-transparent, autoclavable material that is stable to 135 °C. TPE luers are made from the same class of material as our TPE tubing and exhibit ultra-low extractables and low oxygen permeability. USP Class VI, ISO 1993-5 (non cytotoxic), ISO 1993-4 (non hemolytic) and BPA free.

**CVU - CrystalVu™**(polyolefin) • A clear transparent polycarbonate alternative containing no Bisphenol-A (BPA). Enhanced characteristics compared with polycarbonate include: superior chemical resistance; no crazing with multiple autoclave cycles; gamma and EtO compatibility. USP Class VI, EU 2002/72/EC.

**PP - Polypropylene** • A random copolymer that can be gamma sterilized. PP is a USP Class VI material that contains no animal derivatives and features a robust regulatory package - temp. range -9 °F to 150 °F.

**NK - Natural Kynar®** • Medical grade (polyvinylidene fluoride PVDF) USP class VI • autoclavable to 140 °C. Kynar's physical characteristics actually improve under gamma sterilization, but a slight color shift is possible. Color: off-white translucent - working temp. range -80 °F to 226 °F.

**MN - Medical Nylon** • Our 6/6 Natural Nylon with an FDA approved white colorant can be gamma sterilized, but may show a moderate color shift with higher doses: rated as very good with autoclave sterilization; however, material may swell slightly due to moisture absorption - temp. range -50 °F to 275 °F.

**NN - Natural Nylon** • This material has the same characteristics as Medical Nylon, but is a semi-translucent very pale yellow to white - temp. range -50 °F to 275 °F.

Animal Derivative Free Materials - TPE CVU PP NK

**Soft-Touch Luers**



Male Ag Luer



Female Ag Luer



*Ag Luers  
Antimicrobial (protected)*



*Precision engineered standard luer threads*

Hose Barb	Style	Part Number	PPAG	MNAG	CVUAG
1/16"	Male	LM-1	PPAG	MNAG	special order
1/16"	Female	LF-1	PPAG	MNAG	special order
3/32"	Male	LM-1.5	PPAG	MNAG	special order
3/32"	Female	LF-1.5	PPAG	MNAG	special order
1/8"	Male	LM-2	PPAG	MNAG	special order
1/8"	Female	LF-2	PPAG	MNAG	special order
5/32"	Male	LM-2.5	PPAG	MNAG	special order
5/32"	Female	LF-2.5	PPAG	MNAG	special order
3/16"	Male	LM-3	PPAG	MNAG	special order
3/16"	Female	LF-3	PPAG	MNAG	special order
1/4"	Male	LM-4	PPAG	MNAG	special order
1/4"	Female	LF-4	PPAG	MNAG	special order

Animal Derivative Free PP, NK, CVU

Large Bore Luer M



Large Bore Luer F



**Large Bore Luers**

*Large Bore Luers - higher flow rates than  
standard luers*

▷ USP Class VI

Hose Barb	Style	Part Number	▷ PP	MN	NN	▷ TPE	▷ NK	▷ CVU
3/16"	Male	LBM-3	▷ PP	MN	NN	▷ TPE	▷ NK	▷ CVU
3/16"	Female	LBF-3	▷ PP	MN	NN	▷ TPE	▷ NK	▷ CVU
1/4"	Male	LBM-4	▷ PP	MN	NN	▷ TPE	▷ NK	▷ CVU
1/4"	Female	LBF-4	▷ PP	MN	NN	▷ TPE	▷ NK	▷ CVU
5/16"	Male	LBM-5	▷ PP	MN	NN	▷ TPE	▷ NK	▷ CVU
5/16"	Female	LBF-5	▷ PP	MN	NN	▷ TPE	▷ NK	▷ CVU

*Large Bore Caps - See  
Page 13*



Kynar® NK	Medical White Nylon MN	CrystalVu™ CVU
Animal Derivative Free Polypropylene PP	Natural Nylon NN	Thermoplastic Elastomer TPE



**Large Bore Luers**

Large Bore Ag Luer M



Large Bore Ag Luer F



*Large Bore Ag Luers  
Antimicrobial (protected)*

*Higher flow rates than standard luers*

Hose Barb	Style	Part Number	PPAG	MNAG	CVUAG
3/16"	Male	LBM-3	PPAG	MNAG	special order
3/16"	Female	LBF-3	PPAG	MNAG	special order
1/4"	Male	LBM-4	PPAG	MNAG	special order
1/4"	Female	LBF-4	PPAG	MNAG	special order
5/16"	Male	LBM-5	PPAG	MNAG	special order
5/16"	Female	LBF-5	PPAG	MNAG	special order



**Slip Luers**

**Luers - Male Slip**  
RoHS Compliant

▷ USP Class VI

Slip Luer



Hose Barb	Style	Part Number	▷ PP	MN	NN	▷ TPE	▷ NK	▷ CVU
1/16"	Male Slip	LMS-1	▷ PP	MN	NN	▷ TPE	▷ NK	▷ CVU
3/32"	Male Slip	LMS-1.5	▷ PP	MN	NN	▷ TPE	▷ NK	▷ CVU
1/8"	Male Slip	LMS-2	▷ PP	MN	NN	▷ TPE	▷ NK	▷ CVU
5/32"	Male Slip	LMS-2.5	▷ PP	MN	NN	▷ TPE	▷ NK	▷ CVU
3/16"	Male Slip	LMS-3	▷ PP	MN	NN	▷ TPE	▷ NK	▷ CVU
1/4"	Male Slip	LMS-4	▷ PP	MN	NN	▷ TPE	▷ NK	▷ CVU



**Luers - Male Slip**  
RoHS Compliant

*Antimicrobial (protected)*



Hose Barb	Style	Part Number	PPAG	MNAG	CVUAG
1/16"	Male Slip	LMS-1	PPAG	MNAG	special order
3/32"	Male Slip	LMS-1.5	PPAG	MNAG	special order
1/8"	Male Slip	LMS-2	PPAG	MNAG	special order
5/32"	Male Slip	LMS-2.5	PPAG	MNAG	special order
3/16"	Male Slip	LMS-3	PPAG	MNAG	special order
1/4"	Male Slip	LMS-4	PPAG	MNAG	special order

*Pictured In CrystalVu™ Material*

### Luers - Stationary Lock LMSLN RoHS Compliant

▷ USP Class VI

Hose Barb	Style	Part Number	▷ PP	MN	▷ CVU
1/16"	Male	LMSLN-1 (PP, MN, CVU) - * Nut Color	▷ PP	MN	▷ CVU
3/32"	Male	LMSLN-1.5 (PP, MN, CVU) - * Nut Color	▷ PP	MN	▷ CVU
1/8"	Male	LMSLN-2 (PP, MN, CVU) - * Nut Color	▷ PP	MN	▷ CVU
5/32"	Male	LMSLN-2.5 (PP, MN, CVU) - * Nut Color	▷ PP	MN	▷ CVU
3/16"	Male	LMSLN-3 (PP, MN, CVU) - * Nut Color	▷ PP	MN	▷ CVU
1/4"	Male	LMSLN-4 (PP, MN, CVU) - * Nut Color	▷ PP	MN	▷ CVU

\* \_\_ Please specify the nut's color code letter at the end of the part number - Nut options on following page.

### Lock Luers

Non-rotating Nut Assembly

Nut and body are locked and rotate as a single unit



Violet (V)

Orange (O)

*Pictured In CrystalVu™ Material*

### Luers - Rotating Lock LMRLN RoHS Compliant

▷ USP Class VI

Hose Barb	Style	Part Number	▷ PP	MN	▷ CVU
1/16"	Male	LMRLN-1 (PP, MN, CVU) - * Nut Color	▷ PP	MN	▷ CVU
3/32"	Male	LMRLN-1.5 (PP, MN, CVU) - * Nut Color	▷ PP	MN	▷ CVU
1/8"	Male	LMRLN-2 (PP, MN, CVU) - * Nut Color	▷ PP	MN	▷ CVU
5/32"	Male	LMRLN-2.5 (PP, MN, CVU) - * Nut Color	▷ PP	MN	▷ CVU
3/16"	Male	LMRLN-3 (PP, MN, CVU) - * Nut Color	▷ PP	MN	▷ CVU
1/4"	Male	LMRLN-4 (PP, MN, CVU) - * Nut Color	▷ PP	MN	▷ CVU

\* \_\_ Please specify the nut's color code letter at the end of the part number - Nut options on following page.

### Rotating Lock Luers

Rotating Nut Assembly - Prevents Tube Twisting

Nut and body rotate independently while connection is being made



Yellow (Y)

Rose (R)

Berry (B)

Lime (L)

### Luers - Rotating Lock LMRL RoHS Compliant

### Rotating Lock Luers

Luer Body Component Only



▷ USP Class VI

Hose Barb	Style	Part Number	▷ PP	MN	▷ CVU
1/16"	Male	LMRL-1	▷ PP	MN	▷ CVU
3/32"	Male	LMRL-1.5	▷ PP	MN	▷ CVU
1/8"	Male	LMRL-2	▷ PP	MN	▷ CVU
5/32"	Male	LMRL-2.5	▷ PP	MN	▷ CVU
3/16"	Male	LMRL-3	▷ PP	MN	▷ CVU
1/4"	Male	LMRL-4	▷ PP	MN	▷ CVU

\* Use with Snap Lock Nuts or nut color options on the following page.



**Luer - Snap Lock Colors**  
RoHS Compliant

**Snap Lock Nut Colors**



▷ USP Class VI

Thread	Size	Color	Part Number	▷ PP	NN	▷ CVU
Luer Thread	Standard	B Berry	LSLR	▷ PP	NN	▷ CVU
Luer Thread	Standard	R Rose	LSLR	▷ PP	NN	▷ CVU
Luer Thread	Standard	Y Yellow	LSLR	▷ PP	NN	▷ CVU
Luer Thread	Standard	L Lime	LSLR	▷ PP	NN	▷ CVU
Luer Thread	Standard	V Violet	LSLR	▷ PP	NN	▷ CVU
Luer Thread	Standard	O Orange	LSLR	▷ PP	NN	▷ CVU



CVU CrystalVu™ and PP Polypropylene - Colors vary with material opacity \*Also Available in Nylon opaque Colors

Snap Lock Nut colors pictured in CrystalVu™ material



**Luer - Snap Lock Nuts (Natural)**

RoHS Compliant ▷ USP Class VI

Use with Rotating Lock Luer Body on the preceding page and Luer Locking and Rotating Plugs on the following page

Thread	Size	Part Number	▷ PP	MN	▷ CVU
Luer Thread	Standard	LSLR	▷ PP	MN	▷ CVU

**Luer - Snap Lock Nuts Antimicrobial (protected)**

Thread	Size	Part Number	PPAG	MNAG	CVUAG
Luer Thread	Standard	LSLR	PPAG	MNAG	special order

**Plugs-Caps-Accessories**

**Luer Locking Plug**

LMSLN-P  
RoHS Compliant

▷ USP Class VI

Non-rotating Nut Assembly



color options above

Size	Style	Part Number	▷ PP	NN	▷ CVU
Standard	Locking Plug	LMSLN-P - (PP, MN, CVU) - * Nut Color	▷ PP	NN	▷ CVU

\*\_\_ Please specify the nut's color code letter at the end of the part number - Nut options on following page.

**Luer Rotating Plug**

LMRLN-P  
RoHS Compliant

▷ USP Class VI

Rotating Nut Assembly  
Nut and plug body rotate independently



color options above

Size	Style	Part Number	▷ PP	NN	▷ CVU
Standard	Rotating Plug	LMRLN-P - (PP, MN, CVU) - * Nut Color	▷ PP	NN	▷ CVU

**Luer Locking Plug**

LMSL-P\* RoHS Compliant

**Plugs-Caps-Accessories**

▷ USP Class VI

\*Normally used with Snap Lock Nuts on preceding page

Size	Style	Part Number	▷ PP	MN	NN	▷ TPE	▷ CVU
Standard	Locking Plug	LMSL-P	▷ PP	MN	NN	▷ TPE	▷ CVU

**Luer Locking Plug** *Antimicrobial (protected)*

Size	Style	Part Number	PPAG	MNAG	CVUAG
Standard	AG Locking Plug	LMSL-P	PPAG	MNAG	special order

**Luer Rotating Plug** LMRL-P\*

RoHS Compliant



▷ USP Class VI

\*Normally used with Snap Lock Nuts on preceding page

Size	Style	Part Number	▷ PP	MN	NN	▷ TPE	▷ CVU
Standard	Rotating Plug	LMRL-P	▷ PP	MN	NN	▷ TPE	▷ CVU

**Luer Rotating Plug** *Antimicrobial (protected)*

Size	Style	Part Number	PPAG	MNAG	CVUAG
Standard	AG Rotating Plug	LMRL-P	PPAG	MNAG	special order

**Luer Female Plug** LF-P

RoHS Compliant



▷ USP Class VI

Size	Style	Part Number	▷ PP	MN	NN	▷ TPE	▷ CVU
Standard	Female Plug	LF-P	▷ PP	MN	NN	▷ TPE	▷ CVU

**Luer Female Plug** *Antimicrobial (protected)*

Size	Style	Part Number	PPAG	MNAG	CVUAG
Standard	AG Female Plug	LF-P	PPAG	MNAG	special order

**Luer Male Plug** LM-P

RoHS Compliant



▷ USP Class VI

Size	Style	Part Number	▷ PP	MN	NN	▷ TPE	▷ CVU
Standard	Male Plug	LM-P	▷ PP	MN	NN	▷ TPE	▷ CVU

**Luer Male Plug** *Antimicrobial (protected)*

Size	Style	Part Number	PPAG	MNAG	CVUAG
Standard	AG Male Plug	LM-P	PPAG	MNAG	special order

**Luer Slip Plug M** LMS-P

RoHS Compliant



▷ USP Class VI

Size	Style	Part Number	▷ PP	MN	NN	▷ TPE	▷ CVU
Standard	Slip Plug	LMS-P	▷ PP	MN	NN	▷ TPE	▷ CVU

Continued →



### Luer Slip Plug M *Antimicrobial (protected)*

Size	Style	Part Number	PPAG	MNAG	CVUAG
Standard	AG Slip Plug	LMS-P	PPAG	MNAG	special order

### Large Bore Plug F LBLF-P RoHS Compliant

▷ USP Class VI

### Plugs-Caps-Accessories



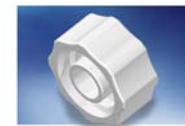
Size	Style	Part Number	▷ PP	MN	NN	▷ TPE	▷ CVU
Large Bore	Female Plug	LBLF-P	▷ PP	MN	NN	▷ TPE	▷ CVU

### Large Bore Plug F *Antimicrobial (protected)*

Size	Style	Part Number	PPAG	MNAG	CVUAG
Large Bore	AG Female Plug	LBLF-P	PPAG	MNAG	special order

### Large Bore Plug M LBLM-P RoHS Compliant

▷ USP Class VI



Size	Style	Part Number	▷ PP	MN	NN	▷ TPE	▷ CVU
Large Bore	Male Plug	LBLM-P	▷ PP	MN	NN	▷ TPE	▷ CVU

### Large Bore Plug M *Antimicrobial (protected)*

Size	Style	Part Number	PPAG	MNAG	CVUAG
Large Bore	AG Male Plug	LBLM-P	PPAG	MNAG	special order

### Luer Coupler LF-C RoHS Compliant

▷ USP Class VI



Thread	Style	Part Number	▷ PP	MN	NN	▷ TPE	▷ CVU
Luer Thread	Female Coupler	LF-C	▷ PP	MN	NN	▷ TPE	▷ CVU

### Luer Coupler *Antimicrobial (protected)*

Thread	Style	Part Number	PPAG	MNAG	CVUAG
Luer Thread	AG Female Coupler	LF-C	PPAG	MNAG	special order

### Luer Slip Elbow LSL RoHS Compliant

▷ USP Class VI

ISO 9001  
Quality System



Size	Style	Part Number	▷ PP	MN	NN	▷ TPE	▷ CVU
Standard	Slip Elbow	LSL	▷ PP	MN	NN	▷ TPE	▷ CVU

### Luer Slip Elbow *Antimicrobial (protected)*

Size	Style	Part Number	PPAG	MNAG	CVUAG
Standard	AG Slip Elbow	LSL	PPAG	MNAG	special order

## Oxygen Thread

*Diameter Index Safety System Swivel Disconnects™*



**Straight Female**  
RoHS Compliant

**90° Female Elbow**  
RoHS Compliant



▷ USP Class VI

Thread F • Barb	Part Number	NN	▷ CVU
9/16"-18 • 1/4"	SAF9-4	NN	▷ CVU
9/16"-18 • 3/8"	SAF9-6	NN	▷ CVU

Thread F • Barb	Part Number	NN	▷ CVU
9/16"-18 • 1/4"	SL90F9-4	NN	▷ CVU
9/16"-18 • 3/8"	SL90F9-6	NN	▷ CVU



**Straight Male**  
RoHS Compliant

**90° Male Elbow**  
RoHS Compliant



▷ USP Class VI

Thread M • Barb	Part Number	NN	▷ CVU
9/16"-18 • 1/4"	SAM9-4	NN	▷ CVU
9/16"-18 • 3/8"	SAM9-6	NN	▷ CVU

Thread M • Barb	Part Number	NN	▷ CVU
9/16"-18 3/16"	LAM9-3	NN	▷ CVU

*A reliable disconnect system with no springs, gaskets or O-rings.  
Single material, ball-seat construction is easy to qualify*



Shown with color clip



**Plug Male/Female**  
RoHS Compliant

**NPT Conversion**  
RoHS Compliant

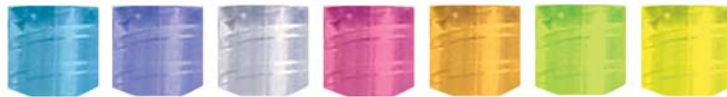


▷ USP Class VI

Thread F • Thread M	Number	NN	▷ CVU
9/16"-18 F • 9/16"-18 M	SUP9	NN	▷ CVU

Thread 1 • Thread 2	Number	NN	▷ CVU
9/16"-18 • 1/4"-18 NPT	SN9-4	NN	▷ CVU

**CrystalVu™** (CVU) is a transparent autoclavable material meeting USP Class VI requirements. CVU nut & clip color options are the same as those offered for luers on pages 10-11



**CVU Colors**

Berry (B) Violet (V) Clear (N) Rose (R) Orange (O) Lime (L) Yellow (Y)

### Nylon Colors

Part Number	SCR BLN	SCR YN	SCR BN	SCR OR	SCR WN	SCR GN	SCR RN	SCR PN
Color Code Clips fit SAM9, LAM9, SUP9 and SN9 above - colors match swivel nuts on following page								
Material: Colored Nylon	Blue	Yellow	Black	Orange	White	Green	Red	Purple

\*Note: Swivel Disconnects™ are not manufactured in the cleanroom environment

## Oxygen Thread

*Diameter Index Safety System  
Swivel Disconnects™*



**Straight Swivel**  
9/16"-18 Nut • 1/4" Barb

NYLON Nut Color	Part Number	NYLON part suffix	CVU Nut Color	CVU part suffix
Natural	SAF9-4	NN NN	Clear	CVU N
Black	SAF9-4	NN BN	–	–
Purple	SAF9-4	NN PN	Violet	CVU V
Red	SAF9-4	NN RN	Rose	CVU R
Orange	SAF9-4	NN ON	Orange	CVU O
Yellow	SAF9-4	NN YN	Yellow	CVU Y
Green	SAF9-4	NN GN	Lime	CVU L
Blue	SAF9-4	NN BLN	Berry	CVU B
White	SAF9-4	NN WN	–	–



**Straight Swivel**  
9/16"-18 Nut • 3/8" Barb

NYLON Nut Color	Part Number	NYLON part suffix	CVU Nut Color	CVU part suffix
Natural	SAF9-6	NN NN	Clear	CVU N
Black	SAF9-6	NN BN	–	–
Purple	SAF9-6	NN PN	Violet	CVU V
Red	SAF9-6	NN RN	Rose	CVU R
Orange	SAF9-6	NN ON	Orange	CVU O
Yellow	SAF9-6	NN YN	Yellow	CVU Y
Green	SAF9-6	NN GN	Lime	CVU L
Blue	SAF9-6	NN BLN	Berry	CVU B
White	SAF9-6	NN WN	–	–



**90° Swivel Elbows**  
9/16"-18 Nut • 1/4" Barb

NYLON Nut Color	Part Number	NYLON part suffix	CVU Nut Color	CVU part suffix
Natural	SL90F9-4	NN NN	Clear	CVU N
Black	SL90F9-4	NN BN	–	–
Purple	SL90F9-4	NN PN	Violet	CVU V
Red	SL90F9-4	NN RN	Rose	CVU R
Orange	SL90F9-4	NN ON	Orange	CVU O
Yellow	SL90F9-4	NN YN	Yellow	CVU Y
Green	SL90F9-4	NN GN	Lime	CVU L
Blue	SL90F9-4	NN BLN	Berry	CVU B
White	SL90F9-4	NN WN	–	–



**90° Swivel Elbows**  
9/16"-18 Nut • 3/8" Barb

NYLON Nut Color	Part Number	NYLON part suffix	CVU Nut Color	CVU part suffix
Natural	SL90F9-6	NN NN	Clear	CVU N
Black	SL90F9-6	NN BN	–	–
Purple	SL90F9-6	NN PN	Violet	CVU V
Red	SL90F9-6	NN RN	Rose	CVU R
Orange	SL90F9-6	NN ON	Orange	CVU O
Yellow	SL90F9-6	NN YN	Yellow	CVU Y
Green	SL90F9-6	NN GN	Lime	CVU L
Blue	SL90F9-6	NN BLN	Berry	CVU B
White	SL90F9-6	NN WN	–	–

**Plug - Male/Female Colors**  
9/16"-18 Nut • 9/16"-18 Male Thread



NYLON Nut Color	Part Number	NYLON part suffix	CVU Nut Color	CVU part suffix
Black	SUP9	NN BN	–	–
Purple	SUP9	NN PN	Violet	CVU V
Red	SUP9	NN RN	Rose	CVU R
Orange	SUP9	NN ON	Orange	CVU O

NYLON Nut Color	Part Number	NYLON part suffix	CVU Nut Color	CVU part suffix
Yellow	SUP9	NN YN	Yellow	CVU Y
Green	SUP9	NN GN	Lime	CVU L
Blue	SUP9	NN BLN	Berry	CVU B
White	SUP9	NN WN	–	–



## Natural Materials

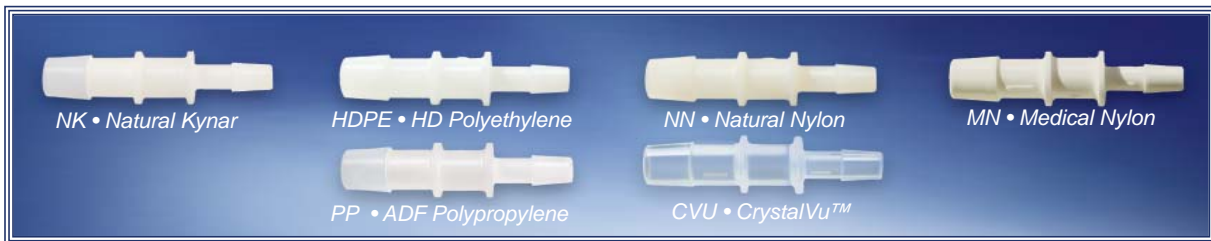
With the exception of Medical Nylon (white), the fittings listed in this section are made from virgin resin materials with no additives or colorants. Medical Nylon consists of virgin nylon resin with a white pigment additive that is FDA listed (21 CFR 178.3297).



**Autoclavable Materials:** Materials in this section that are autoclavable to 135 °C (275 °F) include: NK Natural Kynar®, NN Natural Nylon and MN Medical Nylon. Autoclavable materials listed in other parts of this catalog include TPE and CVU CrystalVu™



**Animal Derivative Free Components:** To serve pharmaceutical, biotech and medical markets, Eldon James offers fittings that are free of animal derivative components. NK Natural Kynar® and PP Polypropylene are listed in this section. Other ADF materials are listed in the biomedical section of this catalog: CVU CrystalVu™ and TPE - see pages 5-13.



**Cleanroom Production:** A large number of the items listed in the Natural Materials Section are available as cleanroom product from the EJ BioMed facility in Ft. Collins Colorado. These products, designated by the addition of -QC to the product suffix, are manufactured and double packaged in an ISO class 8 environment. Please contact Customer Support for information, availability and pricing on specific cleanroom manufactured products.



**USP Class VI:** PP Polypropylene, NP Polypropylene and Kynar® meet USP Class VI requirements. In addition, these materials have a history of qualification in medical device, pharmaceutical and bioprocess applications. Medical Nylon, HDPE and Natural Nylon are not USP Class VI materials, but are frequently used when USP Class VI is not a requirement. TPE and CrystalVu™ materials, listed in the biomedical section, are also USP Class VI materials.

**Partnership Manufacturing:** Eldon James has a history of working with other manufacturers and designers to facilitate speed-to-market. The company shares its expertise and manufacturing experience with organizations that are interested in developing relationships beneficial to both parties. In addition; molding or extrusion, based on a customer's requirements, is often possible when quantity requirements are sufficient to offset tooling costs.

**Custom Assembly:** Eldon James offers state-of-the-art, technical assembly services. Please contact Customer Support for information about custom fabrication capabilities and lead times.

**Adapters - Miniature**  
RoHS Compliant

**Adapters**

10-32 UNF • 10-32 Taper • 1/4-28 UNF • 1/16" NPT  
5 mm Metric • 6 mm Metric



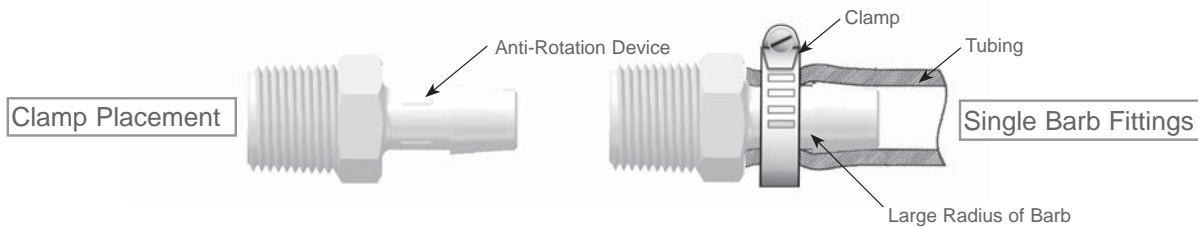
▷ USP Class VI

Animal Derivative Free

Animal Derivative Free

Thread - Barb	Part Number	▷ NK	▷ PP	MN	NN	HDPE
10-32 UNF • 1/16"	A1032-1	▷ NK	▷ PP	MN	NN	HDPE
10-32 UNF • 3/32"	A1032-1.5	▷ NK	▷ PP	MN	NN	HDPE
10-32 UNF • 1/8"	A1032-2	▷ NK	▷ PP	MN	NN	HDPE
10-32 UNF • 5/32"	A1032-2.5	▷ NK	▷ PP	MN	NN	HDPE
10-32 Taper • 1/16"	A1032T-1	▷ NK	▷ PP	MN	NN	HDPE
10-32 Taper • 3/32"	A1032T-1.5	▷ NK	▷ PP	MN	NN	HDPE
10-32 Taper • 1/8"	A1032T-2	▷ NK	▷ PP	MN	NN	HDPE
10-32 Taper • 5/32"	A1032T-2.5	▷ NK	▷ PP	MN	NN	HDPE
1/4-28 UNF • 1/16"	A1428-1	▷ NK	▷ PP	MN	NN	HDPE
1/4-28 UNF • 3/32"	A1428-1.5	▷ NK	▷ PP	MN	NN	HDPE
1/4-28 UNF • 1/8"	A1428-2	▷ NK	▷ PP	MN	NN	HDPE
1/4-28 UNF • 5/32"	A1428-2.5	▷ NK	▷ PP	MN	NN	HDPE
1/4-28 UNF • 3/16"	A1428-3	▷ NK	▷ PP	MN	NN	HDPE
1/16" NPT • 1/16"	A1-1	▷ NK	▷ PP	MN	NN	HDPE
1/16" NPT • 3/32"	A1-1.5	▷ NK	▷ PP	MN	NN	HDPE
1/16" NPT • 1/8"	A1-2	▷ NK	▷ PP	MN	NN	HDPE
1/16" NPT • 5/32"	A1-2.5	▷ NK	▷ PP	MN	NN	HDPE
1/16" NPT • 3/16"	A1-3	▷ NK	▷ PP	MN	NN	HDPE
1/16" NPT • 1/4"	A1-4	▷ NK	▷ PP	MN	NN	HDPE
<b>5 mm • 6 mm Metric Threads</b>						
5 mm • 1/16"	A5M-1	▷ NK	▷ PP	MN	NN	HDPE
5 mm • 3/32"	A5M-1.5	▷ NK	▷ PP	MN	NN	HDPE
5 mm • 1/8"	A5M-2	▷ NK	▷ PP	MN	NN	HDPE
5 mm • 5/32"	A5M-2.5	▷ NK	▷ PP	MN	NN	HDPE
6 mm • 1/16"	A6M-1	▷ NK	▷ PP	MN	NN	HDPE
6 mm • 3/32"	A6M-1.5	▷ NK	▷ PP	MN	NN	HDPE
6 mm • 1/8"	A6M-2	▷ NK	▷ PP	MN	NN	HDPE
6 mm • 5/32"	A6M-2.5	▷ NK	▷ PP	MN	NN	HDPE
6 mm • 3/16"	A6M-3	▷ NK	▷ PP	MN	NN	HDPE

1/8" to 1" Adapters - Following Page



Kynar® NK	White Medical Nylon MN	Natural Nylon MN
Animal Derivative Free Polypropylene PP	High Density Polyethylene HDPE	

**Adapters** - 1/8" to 1" NPT  
RoHS Compliant



Quality System

USP Class VI

**Adapters**

Natural Materials



Animal Derivative Free

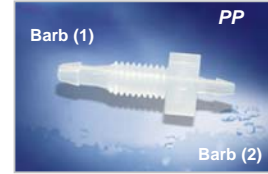
Animal Derivative Free

Thread - Barb	Part Number	▷ NK	▷ PP	NN	HDPE
1/8" NPT • 1/16"	A2-1	▷ NK	▷ PP	NN	HDPE
1/8" NPT • 3/32"	A2-1.5	▷ NK	▷ PP	NN	HDPE
1/8" NPT • 1/8"	A2-2	▷ NK	▷ PP	NN	HDPE
1/8" NPT • 5/32"	A2-2.5	▷ NK	▷ PP	NN	HDPE
1/8" NPT • 3/16"	A2-3	▷ NK	▷ PP	NN	HDPE
1/8" NPT • 1/4"	A2-4	▷ NK	▷ PP	NN	HDPE
1/8" NPT • 5/16"	A2-5	▷ NK	▷ PP	NN	HDPE
1/8" NPT • 3/8"	A2-6	▷ NK	▷ PP	NN	HDPE
1/4" NPT • 1/8"	A4-2	▷ NK	▷ PP	NN	HDPE
1/4" NPT • 5/32"	A4-2.5	▷ NK	▷ PP	NN	HDPE
1/4" NPT • 3/16"	A4-3	▷ NK	▷ PP	NN	HDPE
1/4" NPT • 1/4"	A4-4	▷ NK	▷ PP	NN	HDPE
1/4" NPT • 5/16"	A4-5	▷ NK	▷ PP	NN	HDPE
1/4" NPT • 3/8"	A4-6	▷ NK	▷ PP	NN	HDPE
1/4" NPT • 1/2"	A4-8	▷ NK	▷ PP	NN	HDPE
3/8" NPT • 1/4"	A6-4	▷ NK	▷ PP	NN	HDPE
3/8" NPT • 5/16"	A6-5	▷ NK	▷ PP	NN	HDPE
3/8" NPT • 3/8"	A6-6	▷ NK	▷ PP	NN	HDPE
3/8" NPT • 1/2"	A6-8	▷ NK	▷ PP	NN	HDPE
1/2" NPT • 1/4"	A8-4	▷ NK	▷ PP	NN	HDPE
1/2" NPT • 5/16"	A8-5	▷ NK	▷ PP	NN	HDPE
1/2" NPT • 3/8"	A8-6	▷ NK	▷ PP	NN	HDPE
1/2" NPT • 1/2"	A8-8	▷ NK	▷ PP	NN	HDPE
1/2" NPT • 5/8"	A8-10	▷ NK	▷ PP	NN	HDPE
1/2" NPT • 3/4"	A8-12	▷ NK	▷ PP	NN	HDPE
3/4" NPT • 1/4"	A12-4	▷ NK	▷ PP	NN	HDPE
3/4" NPT • 3/8"	A12-6	▷ NK	▷ PP	NN	HDPE
3/4" NPT • 1/2"	A12-8	▷ NK	▷ PP	NN	HDPE
3/4" NPT • 5/8"	A12-10	▷ NK	▷ PP	NN	HDPE
3/4" NPT • 3/4"	A12-12	▷ NK	▷ PP	NN	HDPE
3/4" NPT • 1"	A12-16	▷ NK	▷ PP	NN	HDPE
1" NPT • 1"	A16-16	▷ NK	▷ PP	NN	HDPE

Kynar® NK	White Medical Nylon MN	Natural Nylon MN
Animal Derivative Free Polypropylene PP	High Density Polyethylene HDPE	

**Adapters**  
 Miniature Bulkhead  
 RoHS Compliant

**Bulkhead Adapters**

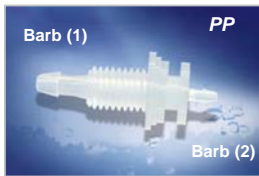


▷ USP Class VI

Animal Derivative Free

Animal Derivative Free

Barb - Barb 1 2	Part Number	▷ NK	▷ PP	MN	NN	HDPE
<b>10-32 UNF Thread (No Flange)</b>						
1/16" • 1/16"	BH 1032 1-1	▷ NK	▷ PP	MN	NN	HDPE
3/32" • 1/16"	BH 1032 1.5-1	▷ NK	▷ PP	MN	NN	HDPE
3/32" • 3/32"	BH 1032 1.5-1.5	▷ NK	▷ PP	MN	NN	HDPE
<b>1/4-28 UNF Thread (No Flange)</b>						
1/8" • 1/16"	BH 1428 2-1	▷ NK	▷ PP	MN	NN	HDPE
1/8" • 3/32"	BH 1428 2-1.5	▷ NK	▷ PP	MN	NN	HDPE
1/8" • 1/8"	BH 1428 2-2	▷ NK	▷ PP	MN	NN	HDPE



**Bulkhead Adapters**

▷ USP Class VI

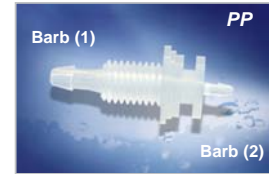
Animal Derivative Free

Animal Derivative Free

Barb - Barb 1 2	Part Number	▷ NK	▷ PP	MN	NN	HDPE
<b>5/16-24 UNF Thread (With Flange)</b>						
5/32" • 1/16"	BH 51624 2.5-1	▷ NK	▷ PP	MN	NN	HDPE
5/32" • 3/32"	BH 51624 2.5-1.5	▷ NK	▷ PP	MN	NN	HDPE
5/32" • 1/8"	BH 51624 2.5-2	▷ NK	▷ PP	MN	NN	HDPE
5/32" • 5/32"	BH 51624 2.5-2.5	▷ NK	▷ PP	MN	NN	HDPE
3/16" • 1/16"	BH 51624 3-1	▷ NK	▷ PP	MN	NN	HDPE
3/16" • 3/32"	BH 51624 3-1.5	▷ NK	▷ PP	MN	NN	HDPE
3/16" • 1/8"	BH 51624 3-2	▷ NK	▷ PP	MN	NN	HDPE
3/16" • 5/32"	BH 51624 3-2.5	▷ NK	▷ PP	MN	NN	HDPE
3/16" • 3/16"	BH 51624 3-3	▷ NK	▷ PP	MN	NN	HDPE
<b>1/8" Straight NPSM Thread (With Flange)</b>						
3/16" • 1/16"	BH 2S 3-1	▷ NK	▷ PP	MN	NN	HDPE
3/16" • 3/32"	BH 2S 3-1.5	▷ NK	▷ PP	MN	NN	HDPE
3/16" • 1/8"	BH 2S 3-2	▷ NK	▷ PP	MN	NN	HDPE
3/16" • 5/32"	BH 2S 3-2.5	▷ NK	▷ PP	MN	NN	HDPE
3/16" • 3/16"	BH 2S 3-3	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 1/16"	BH 2S 4-1	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 3/32"	BH 2S 4-1.5	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 1/8"	BH 2S 4-2	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 5/32"	BH 2S 4-2.5	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 3/16"	BH 2S 4-3	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 1/4"	BH 2S 4-4	▷ NK	▷ PP	MN	NN	HDPE

**Adapters - Miniature**  
Bulkhead  
RoHS Compliant

**Bulkhead Adapters**



USP Class VI

Animal Derivative Free

Animal Derivative Free

Barb - Barb 1 2	Part Number	▷ NK	▷ PP	MN	NN	HDPE
<b>1/4" NPSM Straight Thread (With Flange)</b>						
3/16" • 1/16"	BH 4S 3-1	▷ NK	▷ PP	MN	NN	HDPE
3/16" • 3/32"	BH 4S 3-1.5	▷ NK	▷ PP	MN	NN	HDPE
3/16" • 1/8"	BH 4S 3-2	▷ NK	▷ PP	MN	NN	HDPE
3/16" • 5/32"	BH 4S 3-2.5	▷ NK	▷ PP	MN	NN	HDPE
3/16" • 3/16"	BH 4S 3-3	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 1/16"	BH 4S 4-1	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 3/32"	BH 4S 4-1.5	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 1/8"	BH 4S 4-2	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 5/32"	BH 4S 4-2.5	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 3/16"	BH 4S 4-3	▷ NK	▷ PP	MN	NN	HDPE

Standard size Bulkhead Adapters page 21

**90° Bulkhead - Miniature**  
RoHS Compliant

**90° Bulkhead**



USP Class VI

Animal Derivative Free

Animal Derivative Free

Barb - Barb 1 2	Part Number	▷ NK	▷ PP	MN	NN	HDPE
<b>10-32 UNF Thread (No Flange)</b>						
3/32" • 1/16"	BHL 1032 1.5-1	▷ NK	▷ PP	MN	NN	HDPE
3/32" • 3/32"	BHL 1032 1.5-1.5	▷ NK	▷ PP	MN	NN	HDPE
<b>1/4-28 UNF Thread (No Flange)</b>						
1/8" • 1/16"	BHL 1428 2-1	▷ NK	▷ PP	MN	NN	HDPE
1/8" • 3/32"	BHL 1428 2-1.5	▷ NK	▷ PP	MN	NN	HDPE
1/8" • 1/8"	BHL 1428 2-2	▷ NK	▷ PP	MN	NN	HDPE



**90° Bulkhead - Miniature**  
RoHS Compliant

USP Class VI

Animal Derivative Free

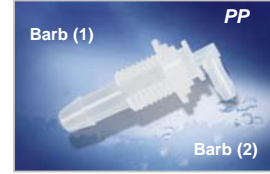
Animal Derivative Free

Barb - Barb 1 2	Part Number	▷ NK	▷ PP	MN	NN	HDPE
<b>5/16-24 UNF Thread (With Flange)</b>						
5/32" • 3/32"	BHL 51624 2.5-1.5	▷ NK	▷ PP	MN	NN	HDPE
5/32" • 1/8"	BHL 51624 2.5-2	▷ NK	▷ PP	MN	NN	HDPE
5/32" • 5/32"	BHL 51624 2.5-2.5	▷ NK	▷ PP	MN	NN	HDPE



**90° Bulkhead - Miniature**  
(continued)  
RoHS Compliant

**90° Bulkhead**



▷ USP Class VI

Animal Derivative Free

Animal Derivative Free

Barb - Barb 1 2	Part Number	▷ NK	▷ PP	MN	NN	HDPE
<b>1/8" NPSM Straight Thread (With Flange)</b>						
1/4" • 3/32"	BHL 2S 4-1.5	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 1/8"	BHL 2S 4-2	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 5/32"	BHL 2S 4-2.5	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 3/16"	BHL 2S 4-3	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 1/4"	BHL 2S 4-4	▷ NK	▷ PP	MN	NN	HDPE
<b>1/4" NPSM Straight Thread (With Flange)</b>						
1/4" • 3/32"	BHL 4S 4-1.5	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 1/8"	BHL 4S 4-2	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 5/32"	BHL 4S 4-2.5	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 3/16"	BHL 4S 4-3	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 1/4"	BHL 4S 4-4	▷ NK	▷ PP	MN	NN	HDPE

**Bulkhead Standard**

**Adapters - Bulkhead**  
Standard  
RoHS Compliant



ISO 9001  
Quality System

▷ USP Class VI

Animal Derivative Free

Animal Derivative Free

Barb - Barb 1 2	Part Number	▷ NK	▷ PP	NN	HDPE
<b>1/4" NPSM Straight Thread (With Flange)</b>					
1/4" • 1/4"	BH 4S 4-4	▷ NK	▷ PP	NN	HDPE
5/16" • 1/4"	BH 4S 5-4	▷ NK	▷ PP	NN	HDPE
5/16" • 5/16"	BH 4S 5-5	▷ NK	▷ PP	NN	HDPE
3/8" • 1/4"	BH 4S 6-4	▷ NK	▷ PP	NN	HDPE
3/8" • 5/16"	BH 4S 6-5	▷ NK	▷ PP	NN	HDPE
3/8" • 3/8"	BH 4S 6-6	▷ NK	▷ PP	NN	HDPE

**Bulkhead & Panel Mount - Nuts**











Thread Spec.	Part Number	Black Nylon	Natural Nylon
10-32 UNF Thread	HEX1032	HEX1032 BN	HEX1032 NN
1/4-28 UNF Thread	HEX1428	HEX1428 BN	HEX1428 NN
5/16-24 UNF Thread	HEX51624	HEX51624 BN	HEX51624 NN
1/8" NPSF Straight Thread	HEX1827	HEX1827 BN	HEX1827 NN
1/4" NPSF Straight Thread	G102-150	G102-150-78	G102-150-18

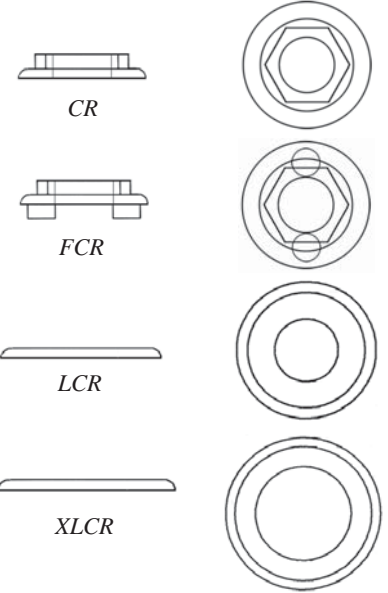
**Bulkhead - Color Code Clips**

Part Number	SCR BLN	SCR YN	SCR BN	SCR OR	SCR WN	SCR GN	SCR RN	SCRPN
Standard Bulkhead Clip Rings Fit Standard Size Bulkheads Only								
Material: Colored Nylon	Blue	Yellow	Black	Orange	White	Green	Red	Purple

**Bulkhead & Panel Mount - Miniature - Color Code Mounting Rings**

Color	(10-32) & (1/4-28) Threads		(1/8") & (5/16-24) & (1/4") Threads	
	CR	FCR	LCR	XLCR
	CR BLPP	FCR BLPP	LCR BLPP	XLCR BLPP
	CR YPP	FCR YPP	LCR YPP	XLCR YPP
	CR BPP	FCR BPP	LCR BPP	XLCR BPP
	CR OPP	FCR OPP	LCR OPP	XLCR OPP
	CR WPP	FCR WPP	LCR WPP	XLCR WPP
	CR GPP	FCR GPP	LCR GPP	XLCR GPP
	CR RPP	FCR RPP	LCR RPP	XLCR RPP
	CR PPP	FCR PPP	LCR PPP	XLCR PPP

colored polypropylene



**Adapter Panel Mount**

Miniature  
RoHS Compliant



▷ USP Class VI

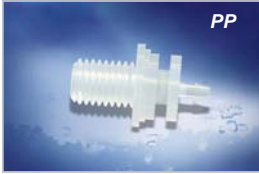
Animal Derivative Free

Animal Derivative Free

Thread - Barb	Part Number	▷ NK	▷ PP	MN	NN	HDPE
<b>10-32 UNF Thread (No Flange)</b>						
1032 UNF • 1/16"	PM 1032-1	▷ NK	▷ PP	MN	NN	HDPE
1032 UNF • 3/32"	PM 1032-1.5	▷ NK	▷ PP	MN	NN	HDPE
1032 UNF • 1/8"	PM 1032-2	▷ NK	▷ PP	MN	NN	HDPE
1032 UNF • 5/32"	PM 1032-2.5	▷ NK	▷ PP	MN	NN	HDPE
<b>1/4-28 UNF Thread (No Flange)</b>						
1/4-28 UNF • 1/16"	PM 1428-1	▷ NK	▷ PP	MN	NN	HDPE
1/4-28 UNF • 3/32"	PM 1428-1.5	▷ NK	▷ PP	MN	NN	HDPE
1/4-28 UNF • 1/8"	PM 1428-2	▷ NK	▷ PP	MN	NN	HDPE
1/4-28 UNF • 5/32"	PM 1428-2.5	▷ NK	▷ PP	MN	NN	HDPE
1/4-28 UNF • 3/16"	PM 1428-3	▷ NK	▷ PP	MN	NN	HDPE



**Adapter Panel Mount**  
Miniature  
RoHS Compliant



▷ USP Class VI

Animal Derivative Free

Animal Derivative Free

Thread - Barb	Part Number	▷ NK	▷ PP	MN	NN	HDPE
<b>5/16-24 UNF Thread (With Flange)</b>						
5/16-24 UNF • 1/16"	PM 51624-1	▷ NK	▷ PP	MN	NN	HDPE
5/16-24 UNF • 3/32"	PM 51624-1.5	▷ NK	▷ PP	MN	NN	HDPE
5/16-24 UNF • 1/8"	PM 51624-2	▷ NK	▷ PP	MN	NN	HDPE
5/16-24 UNF • 5/32"	PM 51624-2.5	▷ NK	▷ PP	MN	NN	HDPE
5/16-24 UNF • 3/16"	PM 51624-3	▷ NK	▷ PP	MN	NN	HDPE
5/16-24 UNF • 1/4"	PM 51624-4	▷ NK	▷ PP	MN	NN	HDPE
<b>1/8" NPSM Straight Thread (With Flange)</b>						
1/8" NPSM • 1/16"	PM 2S-1	▷ NK	▷ PP	MN	NN	HDPE
1/8" NPSM • 3/32"	PM 2S-1.5	▷ NK	▷ PP	MN	NN	HDPE
1/8" NPSM • 1/8"	PM 2S-2	▷ NK	▷ PP	MN	NN	HDPE
1/8" NPSM • 5/32"	PM 2S-2.5	▷ NK	▷ PP	MN	NN	HDPE
1/8" NPSM • 3/16"	PM 2S-3	▷ NK	▷ PP	MN	NN	HDPE
1/8" NPSM • 1/4"	PM 2S-4	▷ NK	▷ PP	MN	NN	HDPE
<b>1/4" NPSM Straight Thread (With Flange)</b>						
1/4" NPSM • 1/16"	PM 4S-1	▷ NK	▷ PP	MN	NN	HDPE
1/4" NPSM • 3/32"	PM 4S-1.5	▷ NK	▷ PP	MN	NN	HDPE
1/4" NPSM • 1/8"	PM 4S-2	▷ NK	▷ PP	MN	NN	HDPE

**Adapter Panel Mounts**  
Standard Size  
RoHS Compliant



▷ USP Class VI

Animal Derivative Free

Animal Derivative Free

Thread - Barb	Part Number	▷ NK	▷ PP	NN	HDPE
<b>1/4" NPSM Straight Thread (With Flange)</b>					
1/4" NPSM • 5/32"	PM 4S-2.5	▷ NK	▷ PP	NN	HDPE
1/4" NPSM • 3/16"	PM 4S-3	▷ NK	▷ PP	NN	HDPE
1/4" NPSM • 1/4"	PM 4S-4	▷ NK	▷ PP	NN	HDPE
1/4" NPSM • 5/16"	PM 4S-5	▷ NK	▷ PP	NN	HDPE
1/4" NPSM • 3/8"	PM 4S-6	▷ NK	▷ PP	NN	HDPE
1/4" NPSM • 1/2"	PM 4S-8	▷ NK	▷ PP	NN	HDPE

Kynar® NK	White Medical Nylon MN	Natural Nylon MN
Animal Derivative Free Polypropylene PP	High Density Polyethylene HDPE	

**90° Panel Mount**  
Miniature  
RoHS Compliant

▷ USP Class VI



Animal Derivative Free

Thread - Barb	Part Number	▷ NK	▷ PP	MN	NN	HDPE
<b>10-32 UNF Thread (No Flange)</b>						
1032 UNF • 1/16"	PML 1032-1	▷ NK	▷ PP	MN	NN	HDPE
1032 UNF • 3/32"	PML 1032-1.5	▷ NK	▷ PP	MN	NN	HDPE
1032 UNF • 1/8"	PML 1032-2	▷ NK	▷ PP	MN	NN	HDPE
<b>1/4-28 UNF Thread (No Flange)</b>						
1/4-28 UNF • 1/16"	PML 1428-1	▷ NK	▷ PP	MN	NN	HDPE
1/4-28 UNF • 3/32"	PML 1428-1.5	▷ NK	▷ PP	MN	NN	HDPE
1/4-28 UNF • 1/8"	PML 1428-2	▷ NK	▷ PP	MN	NN	HDPE
1/4-28 UNF • 5/32"	PML 1428-2.5	▷ NK	▷ PP	MN	NN	HDPE



**90° Panel Mount**  
Miniature  
RoHS Compliant

▷ USP Class VI

Animal Derivative Free

Thread - Barb	Part Number	▷ NK	▷ PP	MN	NN	HDPE
<b>5/16-24 UNF Thread (With Flange)</b>						
5/16-24 UNF • 3/32"	PML 51624-1.5	▷ NK	▷ PP	MN	NN	HDPE
5/16-24 UNF • 1/8"	PML 51624-2	▷ NK	▷ PP	MN	NN	HDPE
5/16-24 UNF • 5/32"	PML 51624-2.5	▷ NK	▷ PP	MN	NN	HDPE
<b>1/8" Straight NPSM Thread (With Flange)</b>						
1/8" NPSM • 3/32"	PML 2S-1.5	▷ NK	▷ PP	MN	NN	HDPE
1/8" NPSM • 1/8"	PML 2S-2	▷ NK	▷ PP	MN	NN	HDPE
1/8" NPSM • 5/32"	PML 2S-2.5	▷ NK	▷ PP	MN	NN	HDPE
1/8" NPSM • 3/16"	PML 2S-3	▷ NK	▷ PP	MN	NN	HDPE
1/8" NPSM • 1/4"	PML 2S-4	▷ NK	▷ PP	MN	NN	HDPE
<b>1/4" NPSM Thread (With Flange)</b>						
1/4" NPSM • 3/32"	PML 4S-1.5	▷ NK	▷ PP	MN	NN	HDPE
1/4" NPSM • 1/8"	PML 4S-2	▷ NK	▷ PP	MN	NN	HDPE
1/4" NPSM • 5/32"	PML 4S-2.5	▷ NK	▷ PP	MN	NN	HDPE
1/4" NPSM • 3/16"	PML 4S-3	▷ NK	▷ PP	MN	NN	HDPE
1/4" NPSM • 1/4"	PML 4S-4	▷ NK	▷ PP	MN	NN	HDPE

Kynar® NK	White Medical Nylon MN	Natural Nylon MN
Animal Derivative Free Polypropylene PP	High Density Polyethylene HDPE	

**Couplers - Straight**  
RoHS Compliant

**Couplers**



Natural Materials

▷ USP Class VI

Animal Derivative Free

Animal Derivative Free

Barb Size	Part Number	▷ NK	▷ PP	NN	HDPE
1/16"	C0-1	▷ NK	▷ PP	NN	HDPE
3/32"	C0-1.5	▷ NK	▷ PP	NN	HDPE
1/8"	C0-2	▷ NK	▷ PP	NN	HDPE
5/32"	C0-2.5	▷ NK	▷ PP	NN	HDPE
3/16"	C0-3	▷ NK	▷ PP	NN	HDPE
1/4"	C0-4	▷ NK	▷ PP	NN	HDPE
5/16"	C0-5	▷ NK	▷ PP	NN	HDPE
3/8"	C0-6	▷ NK	▷ PP	NN	HDPE
1/2"	C0-8	▷ NK	▷ PP	NN	HDPE
5/8"	C0-10	▷ NK	▷ PP	NN	HDPE
3/4"	C0-12	▷ NK	▷ PP	NN	HDPE
1"	C0-16	▷ NK	▷ PP	NN	HDPE

**Couplers - Reduction**  
RoHS Compliant

**Reducers**



Natural Materials

▷ USP Class VI

Animal Derivative Free

Animal Derivative Free

Barb Sizes	Part Number	▷ NK	▷ PP	NN	HDPE
3/32" • 1/16"	C1.5-1	▷ NK	▷ PP	NN	HDPE
1/8" • 1/16"	C2-1	▷ NK	▷ PP	NN	HDPE
1/8" • 3/32"	C2-1.5	▷ NK	▷ PP	NN	HDPE
5/32" • 1/16"	C2.5-1	▷ NK	▷ PP	NN	HDPE
5/32" • 3/32"	C2.5-1.5	▷ NK	▷ PP	NN	HDPE
5/32" • 1/8"	C2.5-2	▷ NK	▷ PP	NN	HDPE
3/16" • 1/16"	C3-1	▷ NK	▷ PP	NN	HDPE
3/16" • 3/32"	C3-1.5	▷ NK	▷ PP	NN	HDPE
3/16" • 1/8"	C3-2	▷ NK	▷ PP	NN	HDPE
3/16" • 5/32"	C3-2.5	▷ NK	▷ PP	NN	HDPE
1/4" • 1/16"	C4-1	▷ NK	▷ PP	NN	HDPE
1/4" • 3/32"	C4-1.5	▷ NK	▷ PP	NN	HDPE
1/4" • 1/8"	C4-2	▷ NK	▷ PP	NN	HDPE
1/4" • 5/32"	C4-2.5	▷ NK	▷ PP	NN	HDPE
1/4" • 3/16"	C4-3	▷ NK	▷ PP	NN	HDPE
5/16" • 5/32"	C5-2.5	▷ NK	▷ PP	NN	HDPE
5/16" • 1/4"	C5-4	▷ NK	▷ PP	NN	HDPE
3/8" • 1/8"	C6-2	▷ NK	▷ PP	NN	HDPE
3/8" • 5/32"	C6-2.5	▷ NK	▷ PP	NN	HDPE
3/8" • 1/4"	C6-4	▷ NK	▷ PP	NN	HDPE
3/8" • 5/16"	C6-5	▷ NK	▷ PP	NN	HDPE



**Couplers - Reduction**  
RoHS Compliant (continued)

**Reducers**



▷ USP Class VI

Animal Derivative Free

Animal Derivative Free

Barb Sizes	Part Number	▷ NK	▷ PP	NN	HDPE
1/2" • 1/4"	C8-4	▷ NK	▷ PP	NN	HDPE
1/2" • 5/16"	C8-5	▷ NK	▷ PP	NN	HDPE
1/2" • 3/8"	C8-6	▷ NK	▷ PP	NN	HDPE
5/8" • 1/4"	C10-4	▷ NK	▷ PP	NN	HDPE
5/8" • 5/16"	C10-5	▷ NK	▷ PP	NN	HDPE
5/8" • 3/8"	C10-6	▷ NK	▷ PP	NN	HDPE
5/8" • 1/2"	C10-8	▷ NK	▷ PP	NN	HDPE
3/4" • 3/8"	C12-6	▷ NK	▷ PP	NN	HDPE
3/4" • 1/2"	C12-8	▷ NK	▷ PP	NN	HDPE
3/4" • 5/8"	C12-10	▷ NK	▷ PP	NN	HDPE
1" • 1/2"	C16-8	▷ NK	▷ PP	NN	HDPE
1" • 5/8"	C16-10	▷ NK	▷ PP	NN	HDPE
1" • 3/4"	C16-12	▷ NK	▷ PP	NN	HDPE

**Cross Fittings - X's**  
RoHS Compliant

**Crosses**



▷ USP Class VI

Animal Derivative Free

Animal Derivative Free

Barb Size	Part Number	▷ NK	▷ PP	NN	HDPE
1/16"	X0-1	▷ NK	▷ PP	NN	HDPE
3/32"	X0-1.5	▷ NK	▷ PP	NN	HDPE
1/8"	X0-2	▷ NK	▷ PP	NN	HDPE
5/32"	X0-2.5	▷ NK	▷ PP	NN	HDPE
3/16"	X0-3	▷ NK	▷ PP	NN	HDPE
1/4"	X0-4	▷ NK	▷ PP	NN	HDPE
3/8"	X0-6	▷ NK	▷ PP	NN	HDPE

**Elbows - Equal**  
RoHS Compliant

**Elbows**



▷ USP Class VI

Animal Derivative Free

Animal Derivative Free

Barb Size	Part Number	▷ NK	▷ PP	NN	HDPE
1/16"	L0-1	▷ NK	▷ PP	NN	HDPE
3/32"	L0-1.5	▷ NK	▷ PP	NN	HDPE
1/8"	L0-2	▷ NK	▷ PP	NN	HDPE
5/32"	L0-2.5	▷ NK	▷ PP	NN	HDPE
3/16"	L0-3	▷ NK	▷ PP	NN	HDPE

**Elbows - Equal**  
RoHS Compliant (continued)



▷ USP Class VI

Animal Derivative Free

Barb Size	Part Number	▷ NK	▷ PP	NN	HDPE
1/4"	L0-4	▷ NK	▷ PP	NN	HDPE
5/16"	L0-5	▷ NK	▷ PP	NN	HDPE
3/8"	L0-6	▷ NK	▷ PP	NN	HDPE
1/2"	L0-8	▷ NK	▷ PP	NN	HDPE
5/8"	L0-10	▷ NK	▷ PP	NN	HDPE
3/4"	L0-12	▷ NK	▷ PP	NN	HDPE
1"	L0-16	▷ NK	▷ PP	NN	HDPE

**Elbows - Miniature Reduction**  
RoHS Compliant



▷ USP Class VI

Animal Derivative Free

Barb Sizes	Part Number	▷ NK	▷ PP	NN	HDPE
3/32" • 1/16"	RL1.5-1	▷ NK	▷ PP	NN	HDPE
1/8" • 1/16"	RL2-1	▷ NK	▷ PP	NN	HDPE
1/8" • 3/32"	RL2-1.5	▷ NK	▷ PP	NN	HDPE

Animal Derivative Free

Barb Sizes	Part Number	▷ NK	▷ PP	MN	NN	HDPE
5/32" • 1/16"	RL2.5-1	▷ NK	▷ PP	MN	NN	HDPE
5/32" • 3/32"	RL2.5-1.5	▷ NK	▷ PP	MN	NN	HDPE
5/32" • 1/8"	RL2.5-2	▷ NK	▷ PP	MN	NN	HDPE
3/16" • 1/16"	RL3-1	▷ NK	▷ PP	MN	NN	HDPE
3/16" • 3/32"	RL3-1.5	▷ NK	▷ PP	MN	NN	HDPE
3/16" • 1/8"	RL3-2	▷ NK	▷ PP	MN	NN	HDPE
3/16" • 5/32"	RL3-2.5	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 1/16"	RL4-1	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 3/32"	RL4-1.5	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 1/8"	RL4-2	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 5/32"	RL4-2.5	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 3/16"	RL4-3	▷ NK	▷ PP	MN	NN	HDPE

Kynar® NK	White Medical Nylon MN	Natural Nylon MN
Animal Derivative Free Polypropylene PP	High Density Polyethylene HDPE	

**Elbows - Reduction**  
RoHS Compliant

**Reduction Elbows**



Natural Materials

ISO 9001  
Quality System

USP Class VI

Animal Derivative Free

Animal Derivative Free

Barb Sizes	Part Number	▷ NK	▷ PP	NN	HDPE
5/16" • 1/4"	RL5-4	▷ NK	▷ PP	NN	HDPE
3/8" • 1/4"	RL6-4	▷ NK	▷ PP	NN	HDPE
1/2" • 1/4"	RL8-4	▷ NK	▷ PP	NN	HDPE
1/2" • 3/8"	RL8-6	▷ NK	▷ PP	NN	HDPE

**Elbows**  
Threaded Miniature  
RoHS Compliant

**Elbows-Threaded**



10-32 UNF • 10-32 Taper • 1/4-28 UNF • 1/16" NPT

USP Class VI

Animal Derivative Free

Animal Derivative Free

Thread - Barb	Part Number	▷ NK	▷ PP	NN	HDPE
10-32 UNF • 1/16"	L1032-1	▷ NK	▷ PP	NN	HDPE
10-32 UNF • 3/32"	L1032-1.5	▷ NK	▷ PP	NN	HDPE
10-32 UNF • 1/8"	L1032-2	▷ NK	▷ PP	NN	HDPE
10-32 Taper • 1/16"	L1032T-1	▷ NK	▷ PP	NN	HDPE
10-32 Taper • 3/32"	L1032T-1.5	▷ NK	▷ PP	NN	HDPE
10-32 Taper • 1/8"	L1032T-2	▷ NK	▷ PP	NN	HDPE
1/4-28 UNF • 1/16"	L1428-1	▷ NK	▷ PP	NN	HDPE
1/4-28 UNF • 3/32"	L1428-1.5	▷ NK	▷ PP	NN	HDPE
1/4-28 UNF • 1/8"	L1428-2	▷ NK	▷ PP	NN	HDPE
1/4-28 UNF • 5/32"	L1428-2.5	▷ NK	▷ PP	NN	HDPE
1/4-28 UNF • 3/16"	L1428-3	▷ NK	▷ PP	NN	HDPE
1/16" NPT • 1/16"	L1-1	▷ NK	▷ PP	NN	HDPE
1/16" NPT • 3/32"	L1-1.5	▷ NK	▷ PP	NN	HDPE
1/16" NPT • 1/8"	L1-2	▷ NK	▷ PP	NN	HDPE
1/16" NPT • 5/32"	L1-2.5	▷ NK	▷ PP	NN	HDPE
1/16" NPT • 3/16"	L1-3	▷ NK	▷ PP	NN	HDPE
1/16" NPT • 1/4"	L1-4	▷ NK	▷ PP	NN	HDPE

Kynar® NK	White Medical Nylon MN	Natural Nylon MN
Animal Derivative Free Polypropylene PP	High Density Polyethylene HDPE	

## Elbows - Metric Threaded Miniature RoHS Compliant

### Metric Elbows



▷ USP Class VI

Animal Derivative Free

Animal Derivative Free

Thread - Barb	Part Number	▷ NK	▷ PP	MN	NN	HDPE
<b>5 mm • 6 mm Metric Threads</b>						
5 mm • 1/16"	L5M-1	▷ NK	▷ PP	MN	NN	HDPE
5 mm • 3/32"	L5M-1.5	▷ NK	▷ PP	MN	NN	HDPE
5 mm • 1/8"	L5M-2	▷ NK	▷ PP	MN	NN	HDPE
5 mm • 5/32"	L5M-2.5	▷ NK	▷ PP	MN	NN	HDPE
6 mm • 1/16"	L6M-1	▷ NK	▷ PP	MN	NN	HDPE
6 mm • 3/32"	L6M-1.5	▷ NK	▷ PP	MN	NN	HDPE
6 mm • 1/8"	L6M-2	▷ NK	▷ PP	MN	NN	HDPE
6 mm • 5/32"	L6M-2.5	▷ NK	▷ PP	MN	NN	HDPE
6 mm • 3/16"	L6M-3	▷ NK	▷ PP	MN	NN	HDPE

## Elbows - Threaded 1/8" to 1" NPT RoHS Compliant

### Elbows-Threaded



Natural Materials

▷ USP Class VI

Animal Derivative Free

Animal Derivative Free

Thread - Barb	Part Number	▷ NK	▷ PP	NN	HDPE
1/8" NPT • 1/16"	L2-1	▷ NK	▷ PP	NN	HDPE
1/8" NPT • 3/32"	L2-1.5	▷ NK	▷ PP	NN	HDPE
1/8" NPT • 1/8"	L2-2	▷ NK	▷ PP	NN	HDPE
1/8" NPT • 5/32"	L2-2.5	▷ NK	▷ PP	NN	HDPE
1/8" NPT • 3/16"	L2-3	▷ NK	▷ PP	NN	HDPE
1/8" NPT • 1/4"	L2-4	▷ NK	▷ PP	NN	HDPE
1/8" NPT • 5/16"	L2-5	▷ NK	▷ PP	NN	HDPE
1/8" NPT • 3/8"	L2-6	▷ NK	▷ PP	NN	HDPE
1/4" NPT • 1/8"	L4-2	▷ NK	▷ PP	NN	HDPE
1/4" NPT • 5/32"	L4-2.5	▷ NK	▷ PP	NN	HDPE
1/4" NPT • 3/16"	L4-3	▷ NK	▷ PP	NN	HDPE
1/4" NPT • 1/4"	L4-4	▷ NK	▷ PP	NN	HDPE
1/4" NPT • 5/16"	L4-5	▷ NK	▷ PP	NN	HDPE
1/4" NPT • 3/8"	L4-6	▷ NK	▷ PP	NN	HDPE
1/4" NPT • 1/2"	L4-8	▷ NK	▷ PP	NN	HDPE
3/8" NPT • 1/4"	L6-4	▷ NK	▷ PP	NN	HDPE
3/8" NPT • 5/16"	L6-5	▷ NK	▷ PP	NN	HDPE
3/8" NPT • 3/8"	L6-6	▷ NK	▷ PP	NN	HDPE
3/8" NPT • 1/2"	L6-8	▷ NK	▷ PP	NN	HDPE

**Elbows - Threaded**  
1/8" to 1" NPT  
RoHS Compliant

**Elbows-Threaded**  
Natural Materials



▷ USP Class VI

Animal Derivative Free

Animal Derivative Free

Thread - Barb	Part Number	▷ NK	▷ PP	NN	HDPE
1/2" NPT • 1/4"	L8-4	▷ NK	▷ PP	NN	HDPE
1/2" NPT • 3/8"	L8-6	▷ NK	▷ PP	NN	HDPE
1/2" NPT • 1/2"	L8-8	▷ NK	▷ PP	NN	HDPE
1/2" NPT • 5/8"	L8-10	▷ NK	▷ PP	NN	HDPE
1/2" NPT • 3/4"	L8-12	▷ NK	▷ PP	NN	HDPE
3/4" NPT • 1/4"	L12-4	▷ NK	▷ PP	NN	HDPE
3/4" NPT • 3/8"	L12-6	▷ NK	▷ PP	NN	HDPE
3/4" NPT • 1/2"	L12-8	▷ NK	▷ PP	NN	HDPE
3/4" NPT • 5/8"	L12-10	▷ NK	▷ PP	NN	HDPE
3/4" NPT • 3/4"	L12-12	▷ NK	▷ PP	NN	HDPE
3/4" NPT • 1"	L12-16	▷ NK	▷ PP	NN	HDPE
1" NPT • 3/4"	L16-12	▷ NK	▷ PP	NN	HDPE
1" NPT • 1"	L16-16	▷ NK	▷ PP	NN	HDPE

**Female Junctions**  
10-32F UNF  
RoHS Compliant

**Miniature Junctions**  
Female Threaded Junctions



▷ USP Class VI

Animal Derivative Free

Animal Derivative Free

Female Thread - Style	Part Number	NK	▷ PP	MN	NN	HDPE
10-32F UNF • Straight	1032F-C	n/a	▷ PP	n/a	NN	n/a
10-32F UNF • Elbow	1032F-L	n/a	▷ PP	n/a	NN	n/a
10-32F UNF • Tee	1032F-T	n/a	▷ PP	n/a	NN	n/a
10-32F UNF • Cross	1032F-X	n/a	▷ PP	n/a	NN	n/a



For quick prototype, short run and design customization



**Garden Hose Adapter**  
RoHS Compliant

**Garden Hose Thread**



▷ USP Class VI

Natural Materials

Animal Derivative Free

Thread • Barb	Part Number	▷ NK	▷ PP	NN	HDPE
3/4" GH • 1/4"	A12GH-4	n/a	▷ PP	NN	HDPE
3/4" GH • 3/8"	A12GH-6	n/a	▷ PP	NN	HDPE
3/4" GH • 1/2"	A12GH-8	n/a	▷ PP	NN	HDPE
3/4" GH • 5/8"	A12GH-10	n/a	▷ PP	NN	HDPE
3/4" GH • 3/4"	A12GH-12	n/a	▷ PP	NN	HDPE
3/4" GH • 1"	A12GH-16	n/a	▷ PP	NN	HDPE

**Nipples - UNF & NPT**  
RoHS Compliant

**Pipe Nipples**



▷ USP Class VI

Natural Materials

Animal Derivative Free

Thread Size	Part Number	▷ NK	▷ PP	NN	HDPE
10-32 UNF	N1032	▷ NK	▷ PP	NN	HDPE
1032 Taper	N1032T	▷ NK	▷ PP	NN	HDPE
1/8" NPT	N2	▷ NK	▷ PP	NN	HDPE
1/4" NPT	N4	▷ NK	▷ PP	NN	HDPE
3/8" NPT	N6	▷ NK	▷ PP	NN	HDPE
1/2" NPT	N8	▷ NK	▷ PP	NN	HDPE
3/4" NPT	N12	▷ NK	▷ PP	NN	HDPE
1" NPT	N16	▷ NK	▷ PP	NN	HDPE

**Nipples**  
Reduction & Conversion  
RoHS Compliant

**Conversion Nipples**



▷ USP Class VI

Natural Materials

Animal Derivative Free

Thread • Thread	Part Number	▷ NK	▷ PP	NN	HDPE
1/16" NPT • 1/4-28 UNF	RN1-1428	▷ NK	▷ PP	NN	HDPE
1/8" NPT • 1/16" NPT	RN2-1	▷ NK	▷ PP	NN	HDPE
1/4" NPT • 1/8" NPT	RN4-2	▷ NK	▷ PP	NN	HDPE
3/8" NPT • 1/8" NPT	RN6-2	▷ NK	▷ PP	NN	HDPE
3/8" NPT • 1/4" NPT	RN6-4	▷ NK	▷ PP	NN	HDPE
1/2" NPT • 1/8" NPT	RN8-2	▷ NK	▷ PP	NN	HDPE
1/2" NPT • 1/4" NPT	RN8-4	▷ NK	▷ PP	NN	HDPE
1/2" NPT • 3/8" NPT	RN8-6	▷ NK	▷ PP	NN	HDPE
1" NPT • 3/4" NPT	RN16-12	▷ NK	▷ PP	NN	HDPE

## Insert Plugs

**Plugs - Insert**  
RoHS Compliant

▷ USP Class VI

Natural Materials



Animal Derivative Free

Animal Derivative Free

Barb Size	Part Number	▷ NK	▷ PP	NN	HDPE
1/16"	P0-1	▷ NK	▷ PP	NN	HDPE
3/32"	P0-1.5	▷ NK	▷ PP	NN	HDPE
1/8"	P0-2	▷ NK	▷ PP	NN	HDPE
5/32"	P0-2.5	▷ NK	▷ PP	NN	HDPE
3/16"	P0-3	▷ NK	▷ PP	NN	HDPE
1/4"	P0-4	▷ NK	▷ PP	NN	HDPE
3/8"	P0-6	▷ NK	▷ PP	NN	HDPE
1/2"	P0-8	▷ NK	▷ PP	NN	HDPE

## Threaded Plugs

**Plugs - Threaded**  
Metric, UNF & NPT  
RoHS Compliant

▷ USP Class VI

Natural Materials



Animal Derivative Free

Animal Derivative Free

Thread Size	Part Number	▷ NK	▷ PP	NN	HDPE
5 mm (metric)	P5M	▷ NK	▷ PP	NN	HDPE
6 mm (metric)	P6M	▷ NK	▷ PP	NN	HDPE
10-32 UNF	P1032	▷ NK	▷ PP	NN	HDPE
10-32 Taper	P1032T	▷ NK	▷ PP	NN	HDPE
1/4-28 UNF	P1428	▷ NK	▷ PP	NN	HDPE
1/16" NPT	P1	▷ NK	▷ PP	NN	HDPE
1/8" NPT	P2	▷ NK	▷ PP	NN	HDPE
1/4" NPT	P4	▷ NK	▷ PP	NN	HDPE
3/8" NPT	P6	▷ NK	▷ PP	NN	HDPE
1/2" NPT	P8	▷ NK	▷ PP	NN	HDPE
3/4" NPT	P12	▷ NK	▷ PP	NN	HDPE
1" NPT	P16	▷ NK	▷ PP	NN	HDPE

## Tees

**Tees - Equal Barb**  
RoHS Compliant

▷ USP Class VI

Natural Materials



Animal Derivative Free

Animal Derivative Free

Barb Size	Part Number	▷ NK	▷ PP	NN	HDPE
1/16"	T0-1	▷ NK	▷ PP	NN	HDPE
3/32"	T0-1.5	▷ NK	▷ PP	NN	HDPE
1/8"	T0-2	▷ NK	▷ PP	NN	HDPE

**Tees - Equal Barb**  
RoHS Compliant



Natural Materials

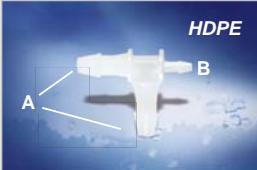
▷ USP Class VI

Animal Derivative Free

Animal Derivative Free

Barb Size	Part Number	▷ NK	▷ PP	NN	HDPE
5/32"	T0-2.5	▷ NK	▷ PP	NN	HDPE
3/16"	T0-3	▷ NK	▷ PP	NN	HDPE
1/4"	T0-4	▷ NK	▷ PP	NN	HDPE
5/16"	T0-5	▷ NK	▷ PP	NN	HDPE
3/8"	T0-6	▷ NK	▷ PP	NN	HDPE
1/2"	T0-8	▷ NK	▷ PP	NN	HDPE
5/8"	T0-10	▷ NK	▷ PP	NN	HDPE
3/4"	T0-12	▷ NK	▷ PP	NN	HDPE
1"	T0-16	▷ NK	▷ PP	NN	HDPE

**Tees - Miniature Asymmetric**  
RoHS Compliant



▷ USP Class VI

Animal Derivative Free

Animal Derivative Free

Barbs (A) - Barb (B)	Part Number	▷ NK	▷ PP	NN	HDPE
3/32" • 1/16"	LRT1.5-1	▷ NK	▷ PP	NN	HDPE
1/8" • 3/32"	LRT2-1	▷ NK	▷ PP	NN	HDPE
1/8" • 3/32"	LRT2-1.5	▷ NK	▷ PP	NN	HDPE

Animal Derivative Free

Animal Derivative Free

Barbs (A) - Barb (B)	Part Number	▷ NK	▷ PP	MN	NN	HDPE
5/32" • 1/16"	LRT2.5-1	▷ NK	▷ PP	MN	NN	HDPE
5/32" • 3/32"	LRT2.5-1.5	▷ NK	▷ PP	MN	NN	HDPE
5/32" • 1/8"	LRT2.5-2	▷ NK	▷ PP	MN	NN	HDPE
3/16" • 1/16"	LRT3-1	▷ NK	▷ PP	MN	NN	HDPE
3/16" • 3/32"	LRT3-1.5	▷ NK	▷ PP	MN	NN	HDPE
3/16" • 1/8"	LRT3-2	▷ NK	▷ PP	MN	NN	HDPE
3/16" • 5/32"	LRT3-2.5	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 1/16"	LRT4-1	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 3/32"	LRT4-1.5	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 1/8"	LRT4-2	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 5/32"	LRT4-2.5	▷ NK	▷ PP	MN	NN	HDPE
1/4" • 3/16"	LRT4-3	▷ NK	▷ PP	MN	NN	HDPE

Kynar® NK	White Medical Nylon MN	Natural Nylon MN
Animal Derivative Free Polypropylene PP	High Density Polyethylene HDPE	

**Tees - Miniature Reduction**  
RoHS Compliant



Natural Materials

▷ USP Class VI

Animal Derivative Free

Animal Derivative Free

(2) Run - (1) Leg	Part Number	▷ NK	▷ PP	NN	HDPE
1/16" • 3/32"	RT1-1.5	▷ NK	▷ PP	NN	HDPE
1/16" • 1/8"	RT1-2	▷ NK	▷ PP	NN	HDPE
1/16" • 5/32"	RT1-2.5	▷ NK	▷ PP	NN	HDPE
3/32" • 1/16"	RT1.5-1	▷ NK	▷ PP	NN	HDPE
3/32" • 1/8"	RT1.5-2	▷ NK	▷ PP	NN	HDPE
3/32" • 5/32"	RT1.5-2.5	▷ NK	▷ PP	NN	HDPE
3/32" • 3/16"	RT1.5-3	▷ NK	▷ PP	NN	HDPE
1/8" • 1/16"	RT2-1	▷ NK	▷ PP	NN	HDPE
1/8" • 3/32"	RT2-1.5	▷ NK	▷ PP	NN	HDPE
1/8" • 5/32"	RT2-2.5	▷ NK	▷ PP	NN	HDPE
1/8" • 3/16"	RT2-3	▷ NK	▷ PP	NN	HDPE
1/8" • 1/4"	RT2-4	▷ NK	▷ PP	NN	HDPE
5/32" • 1/16"	RT2.5-1	▷ NK	▷ PP	NN	HDPE
5/32" • 3/32"	RT2.5-1.5	▷ NK	▷ PP	NN	HDPE
5/32" • 1/8"	RT2.5-2	▷ NK	▷ PP	NN	HDPE
5/32" • 3/16"	RT2.5-3	▷ NK	▷ PP	NN	HDPE
5/32" • 1/4"	RT2.5-4	▷ NK	▷ PP	NN	HDPE
5/32" • 3/8"	RT2.5-6	▷ NK	▷ PP	NN	HDPE
3/16" • 1/16"	RT3-1	▷ NK	▷ PP	NN	HDPE
3/16" • 3/32"	RT3-1.5	▷ NK	▷ PP	NN	HDPE
3/16" • 1/8"	RT3-2	▷ NK	▷ PP	NN	HDPE
3/16" • 5/32"	RT3-2.5	▷ NK	▷ PP	NN	HDPE
3/16" • 1/4"	RT3-4	▷ NK	▷ PP	NN	HDPE
1/4" • 1/16"	RT4-1	▷ NK	▷ PP	NN	HDPE
1/4" • 3/32"	RT4-1.5	▷ NK	▷ PP	NN	HDPE
1/4" • 1/8"	RT4-2	▷ NK	▷ PP	NN	HDPE
1/4" • 5/32"	RT4-2.5	▷ NK	▷ PP	NN	HDPE
1/4" • 3/16"	RT4-3	▷ NK	▷ PP	NN	HDPE

**Tees - Reduction**  
Standard Size  
RoHS Compliant



Natural Materials

▷ USP Class VI

Animal Derivative Free

Animal Derivative Free

(2) Run - (1) Leg	Part Number	▷ NK	▷ PP	NN	HDPE
1/4" • 3/8"	RT4-6	▷ NK	▷ PP	NN	HDPE
1/4" • 5/8"	RT4-10	▷ NK	▷ PP	NN	HDPE
3/8" • 5/32"	RT6-2.5	▷ NK	▷ PP	NN	HDPE

**Tees - Reduction**  
Standard (continued)  
RoHS Compliant

**Tee Reductions**



▷ USP Class VI

Animal Derivative Free

Animal Derivative Free

(2) Run - (1) Leg	Part Number	▷ NK	▷ PP	NN	HDPE
3/8" • 1/4"	RT6-4	▷ NK	▷ PP	NN	HDPE
1/2" • 1/4"	RT8-4	▷ NK	▷ PP	NN	HDPE
1/2" • 5/16"	RT8-5	▷ NK	▷ PP	NN	HDPE
1/2" • 3/8"	RT8-6	▷ NK	▷ PP	NN	HDPE
5/8" • 5/16"	RT10-5	▷ NK	▷ PP	NN	HDPE
5/8" • 3/8"	RT10-6	▷ NK	▷ PP	NN	HDPE
3/4" • 3/8"	RT12-6	▷ NK	▷ PP	NN	HDPE
3/4" • 1/2"	RT12-8	▷ NK	▷ PP	NN	HDPE
3/4" • 5/8"	RT12-10	▷ NK	▷ PP	NN	HDPE
1" • 5/8"	RT16-10	▷ NK	▷ PP	NN	HDPE

**Tees - Threaded Miniature**  
RoHS Compliant

**Tees-Threaded**



▷ USP Class VI

10-32 UNF • 10-32 Taper • 1/4-28 UNF • 1/16" NPT

Animal Derivative Free

Animal Derivative Free

Thread - Barbs	Part Number	▷ NK	▷ PP	NN	HDPE
10-32 UNF • 1/16"	T1032-1	▷ NK	▷ PP	NN	HDPE
10-32 UNF • 3/32"	T1032-1.5	▷ NK	▷ PP	NN	HDPE
10-32 UNF • 1/8"	T1032-2	▷ NK	▷ PP	NN	HDPE
10-32 UNF • 5/32"	T1032-2.5	▷ NK	▷ PP	NN	HDPE
10-32 Taper • 1/16"	T1032T-1	▷ NK	▷ PP	NN	HDPE
10-32 Taper • 3/32"	T1032T-1.5	▷ NK	▷ PP	NN	HDPE
10-32 Taper • 1/8"	T1032T-2	▷ NK	▷ PP	NN	HDPE
10-32 Taper • 5/32"	T1032T-2.5	▷ NK	▷ PP	NN	HDPE
1/4-28 UNF • 1/16"	T1428-1	▷ NK	▷ PP	NN	HDPE
1/4-28 UNF • 3/32"	T1428-1.5	▷ NK	▷ PP	NN	HDPE
1/4-28 UNF • 1/8"	T1428-2	▷ NK	▷ PP	NN	HDPE
1/4-28 UNF • 5/32"	T1428-2.5	▷ NK	▷ PP	NN	HDPE
1/4-28 UNF • 3/16"	T1428-3	▷ NK	▷ PP	NN	HDPE
1/16" NPT • 1/16"	T1-1	▷ NK	▷ PP	NN	HDPE
1/16" NPT • 3/32"	T1-1.5	▷ NK	▷ PP	NN	HDPE
1/16" NPT • 1/8"	T1-2	▷ NK	▷ PP	NN	HDPE
1/16" NPT • 3/32"	T1-2.5	▷ NK	▷ PP	NN	HDPE
1/16" NPT • 3/16"	T1-3	▷ NK	▷ PP	NN	HDPE



### Tees-Threaded

**Tees - Metric**  
Threaded Miniature  
RoHS Compliant

Metric



▷ USP Class VI

Animal Derivative Free

Animal Derivative Free

Thread - Barbs	Part Number	▷ NK	▷ PP	MN	NN	HDPE
<b>5 mm • 6 mm Metric Threads</b>						
5 mm • 1/16"	T5M-1	▷ NK	▷ PP	MN	NN	HDPE
5 mm • 3/32"	T5M-1.5	▷ NK	▷ PP	MN	NN	HDPE
5 mm • 1/8"	T5M-2	▷ NK	▷ PP	MN	NN	HDPE
5 mm • 5/32"	T5M-2.5	▷ NK	▷ PP	MN	NN	HDPE
6 mm • 1/16"	T6M-1	▷ NK	▷ PP	MN	NN	HDPE
6 mm • 3/32"	T6M-1.5	▷ NK	▷ PP	MN	NN	HDPE
6 mm • 1/8"	T6M-2	▷ NK	▷ PP	MN	NN	HDPE
6 mm • 5/32"	T6M-2.5	▷ NK	▷ PP	MN	NN	HDPE
6 mm • 3/16"	T6M-3	▷ NK	▷ PP	MN	NN	HDPE

**Tees - Threaded**  
1/8" to 1" NPT  
RoHS Compliant

### Tees-Threaded



▷ USP Class VI

Animal Derivative Free

Animal Derivative Free

Thread - Barbs	Part Number	▷ NK	▷ PP	NN	HDPE
1/8" NPT • 1/16"	T2-1	▷ NK	▷ PP	NN	HDPE
1/8" NPT • 3/32"	T2-1.5	▷ NK	▷ PP	NN	HDPE
1/8" NPT • 1/8"	T2-2	▷ NK	▷ PP	NN	HDPE
1/8" NPT • 5/32"	T2-2.5	▷ NK	▷ PP	NN	HDPE
1/8" NPT • 3/16"	T2-3	▷ NK	▷ PP	NN	HDPE
1/8" NPT • 1/4"	T2-4	▷ NK	▷ PP	NN	HDPE
1/8" NPT • 5/16"	T2-5	▷ NK	▷ PP	NN	HDPE
1/8" NPT • 3/8"	T2-6	▷ NK	▷ PP	NN	HDPE
1/4" NPT • 1/8"	T4-2	▷ NK	▷ PP	NN	HDPE
1/4" NPT • 5/32"	T4-2.5	▷ NK	▷ PP	NN	HDPE
1/4" NPT • 3/16"	T4-3	▷ NK	▷ PP	NN	HDPE
1/4" NPT • 1/4"	T4-4	▷ NK	▷ PP	NN	HDPE
1/4" NPT • 5/16"	T4-5	▷ NK	▷ PP	NN	HDPE
1/4" NPT • 3/8"	T4-6	▷ NK	▷ PP	NN	HDPE
1/4" NPT • 1/2"	T4-8	▷ NK	▷ PP	NN	HDPE
3/8" NPT • 1/4"	T6-4	▷ NK	▷ PP	NN	HDPE
3/8" NPT • 5/16"	T6-5	▷ NK	▷ PP	NN	HDPE
3/8" NPT • 3/8"	T6-6	▷ NK	▷ PP	NN	HDPE
3/8" NPT • 1/2"	T6-8	▷ NK	▷ PP	NN	HDPE

**Tees - Threaded**  
 1/8" to 1" NPT (continued)  
 RoHS Compliant

**Tees-Threaded**



▷ USP Class VI

Animal Derivative Free

Animal Derivative Free

Thread - Barbs	Part Number	▷ NK	▷ PP	NN	HDPE
1/2" NPT • 1/4"	T8-4	▷ NK	▷ PP	NN	HDPE
1/2" NPT • 3/8"	T8-6	▷ NK	▷ PP	NN	HDPE
1/2" NPT • 1/2"	T8-8	▷ NK	▷ PP	NN	HDPE
1/2" NPT • 5/8"	T8-10	▷ NK	▷ PP	NN	HDPE
1/2" NPT • 3/4"	T8-12	▷ NK	▷ PP	NN	HDPE
3/4" NPT • 1/4"	T12-4	▷ NK	▷ PP	NN	HDPE
3/4" NPT • 3/8"	T12-6	▷ NK	▷ PP	NN	HDPE
3/4" NPT • 1/2"	T12-8	▷ NK	▷ PP	NN	HDPE
3/4" NPT • 5/8"	T12-10	▷ NK	▷ PP	NN	HDPE
3/4" NPT • 3/4"	T12-12	▷ NK	▷ PP	NN	HDPE
3/4" NPT • 1"	T12-16	▷ NK	▷ PP	NN	HDPE
1" NPT • 3/4"	T16-12	▷ NK	▷ PP	NN	HDPE
1" NPT • 1"	T16-16	▷ NK	▷ PP	NN	HDPE

**Y-Connectors**  
 RoHS Compliant

**Y Connectors**



▷ USP Class VI

Animal Derivative Free

Animal Derivative Free

Size	Part Number	▷ NK	▷ PP	NN	HDPE
1/16"	Y0-1	▷ NK	▷ PP	NN	HDPE
3/32"	Y0-1.5	▷ NK	▷ PP	NN	HDPE
1/8"	Y0-2	▷ NK	▷ PP	NN	HDPE
5/32"	Y0-2.5	▷ NK	▷ PP	NN	HDPE
3/16"	Y0-3	▷ NK	▷ PP	NN	HDPE
1/4"	Y0-4	▷ NK	▷ PP	NN	HDPE
5/16"	Y0-5	▷ NK	▷ PP	NN	HDPE
3/8"	Y0-6	▷ NK	▷ PP	NN	HDPE
1/2"	Y0-8	▷ NK	▷ PP	NN	HDPE
5/8"	Y0-10	▷ NK	▷ PP	NN	HDPE
3/4"	Y0-12	▷ NK	▷ PP	NN	HDPE
1"	Y0-16	▷ NK	▷ PP	NN	HDPE

Y-Reductions on following page

Kynar® NK	White Medical Nylon MN	Natural Nylon MN
Animal Derivative Free Polypropylene PP	High Density Polyethylene HDPE	

**Y-Reductions**  
RoHS Compliant

*Y Reductions*



▷ USP Class VI

Animal Derivative Free

Animal Derivative Free

(2) Barbs - (1) Barb	Part Number	▷ NK	▷ PP	NN	HDPE
1/8" • 1/4"	RY2-4	▷ NK	▷ PP	NN	HDPE
3/16" • 5/16"	RY3-5	▷ NK	▷ PP	NN	HDPE
1/4" • 3/8"	RY4-6	▷ NK	▷ PP	NN	HDPE
3/8" • 1/2"	RY6-8	▷ NK	▷ PP	NN	HDPE
1/2" • 5/8"	RY8-10	▷ NK	▷ PP	NN	HDPE
5/8" • 3/4"	RY10-12	▷ NK	▷ PP	NN	HDPE
3/4" • 1"	RY12-16	▷ NK	▷ PP	NN	HDPE



Quality System

Natural Materials Fitting Kits - See Pages: 66-69

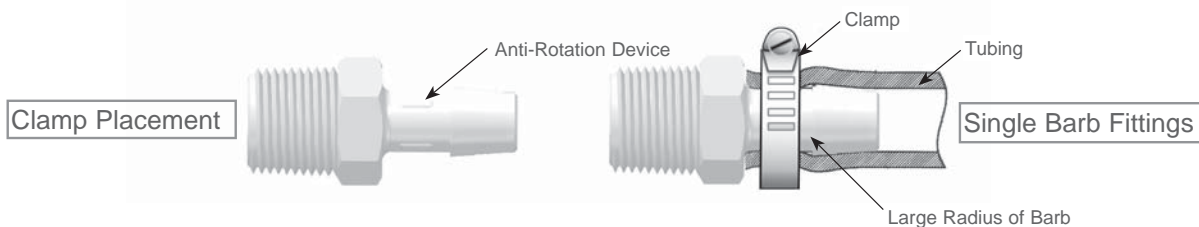


Eldon James offers a selected range of commonly specified fittings sizes arranged in 27 different kits. The kits are available Black Nylon, as well as in the following Natural Materials: Polypropylene, Polyethylene (white HDPE) and Natural Kynar®.

Clamping Solutions - See Pages: 63-65



Eldon James stocks one of the largest assortments of clamp sizes in the USA. In addition, a variety of special purpose sizes and styles are available as special order items.



Kynar® NK	White Medical Nylon MN	Natural Nylon MN
Animal Derivative Free Polypropylene PP	High Density Polyethylene HDPE	

**Adapters**  
BSPT RoHS Compliant

**Adapters**



USP Class VI

British Threaded - BSPT Fittings

Animal Derivative Free

Thread - Barb	Part Number	▷ NK	▷ PP	NN	HDPE
1/8" BSPT • 1/8"	A2B-2	▷ NK	▷ PP	NN	HDPE
1/8" BSPT • 5/32"	A2B-2.5	▷ NK	▷ PP	NN	HDPE
1/8" BSPT • 1/4"	A2B-4	▷ NK	▷ PP	NN	HDPE
1/8" BSPT • 5/16"	A2B-5	▷ NK	▷ PP	NN	HDPE
1/8" BSPT • 3/8"	A2B-6	▷ NK	▷ PP	NN	HDPE
1/4" BSPT • 1/8"	A4B-2	▷ NK	▷ PP	NN	HDPE
1/4" BSPT • 5/32"	A4B-2.5	▷ NK	▷ PP	NN	HDPE
1/4" BSPT • 3/16"	A4B-3	▷ NK	▷ PP	NN	HDPE
1/4" BSPT • 1/4"	A4B-4	▷ NK	▷ PP	NN	HDPE
1/4" BSPT • 5/16"	A4B-5	▷ NK	▷ PP	NN	HDPE
1/4" BSPT • 3/8"	A4B-6	▷ NK	▷ PP	NN	HDPE
1/4" BSPT • 1/2"	A4B-8	▷ NK	▷ PP	NN	HDPE
3/8" BSPT • 1/4"	A6B-4	▷ NK	▷ PP	NN	HDPE
3/8" BSPT • 5/16"	A6B-5	▷ NK	▷ PP	NN	HDPE
3/8" BSPT • 3/8"	A6B-6	▷ NK	▷ PP	NN	HDPE
3/8" BSPT • 1/2"	A6B-8	▷ NK	▷ PP	NN	HDPE

**Plugs**  
BSPT RoHS Compliant

**Plugs**



USP Class VI

British Threaded - BSPT Fittings

Animal Derivative Free

Thread Size	Part Number	▷ NK	▷ PP	NN	HDPE
1/8" BSPT	P2B	▷ NK	▷ PP	NN	HDPE
1/4" BSPT	P4B	▷ NK	▷ PP	NN	HDPE
3/8" BSPT	P6B	▷ NK	▷ PP	NN	HDPE

Size	Threads / Inch	Approximate Thread Pitch	Length of Useful Threads
1/8" BSPT	28	.0357 Inches	.250 Inches
1/4" BSPT	19	.0526 Inches	.380 Inches
3/8" BSPT	19	.0526 Inches	.390 Inches

**BSPT - British Standard Pipe Thread Tapered**

BSPT threads are based on the Whitworth thread form, which is designed to provide a pressure-tight fit through mating of the threads. This is accomplished by cutting the threads on a taper. Because they are tapered, the thread can only screw into the companion female thread a certain distance before it jams. The standard specifies this distance as a length based on hand-tight engagement; however, a convenient rule-of-thumb for plastic threads is: finger-tight plus 1/2 to 1 turn with a wrench. Do not over-tighten plastic threads - stress on the fitting can result in its failure.



**Elbows - Threaded**  
BSPT RoHS Compliant

**Elbows**



▷ USP Class VI

British Threaded - BSPT Fittings

Animal Derivative Free

Thread - Barb	Part Number	▷ NK	▷ PP	NN	HDPE
1/8" BSPT • 1/8"	L2B-2	▷ NK	▷ PP	NN	HDPE
1/8" BSPT • 5/32"	L2B-2.5	▷ NK	▷ PP	NN	HDPE
1/8" BSPT • 1/4"	L2B-4	▷ NK	▷ PP	NN	HDPE
1/8" BSPT • 5/16"	L2B-5	▷ NK	▷ PP	NN	HDPE
1/8" BSPT • 3/8"	L2B-6	▷ NK	▷ PP	NN	HDPE
1/4" BSPT • 1/8"	L4B-2	▷ NK	▷ PP	NN	HDPE
1/4" BSPT • 5/32"	L4B-2.5	▷ NK	▷ PP	NN	HDPE
1/4" BSPT • 3/16"	L4B-3	▷ NK	▷ PP	NN	HDPE
1/4" BSPT • 1/4"	L4B-4	▷ NK	▷ PP	NN	HDPE
1/4" BSPT • 5/16"	L4B-5	▷ NK	▷ PP	NN	HDPE
1/4" BSPT • 3/8"	L4B-6	▷ NK	▷ PP	NN	HDPE
1/4" BSPT • 1/2"	L4B-8	▷ NK	▷ PP	NN	HDPE
3/8" BSPT • 1/4"	L6B-4	▷ NK	▷ PP	NN	HDPE
3/8" BSPT • 5/16"	L6B-5	▷ NK	▷ PP	NN	HDPE
3/8" BSPT • 3/8"	L6B-6	▷ NK	▷ PP	NN	HDPE
3/8" BSPT • 1/2"	L6B-8	▷ NK	▷ PP	NN	HDPE

**Tees - Threaded**  
BSPT RoHS Compliant

**Tees**



▷ USP Class VI

British Threaded - BSPT Fittings

Animal Derivative Free

Thread - Barbs	Part Number	▷ NK	▷ PP	NN	HDPE
1/8" BSPT • 5/32"	T2B-2.5	▷ NK	▷ PP	NN	HDPE
1/8" BSPT • 1/4"	T2B-4	▷ NK	▷ PP	NN	HDPE
1/8" BSPT • 3/8"	T2B-6	▷ NK	▷ PP	NN	HDPE
1/4" BSPT • 5/32"	T4B-2.5	▷ NK	▷ PP	NN	HDPE
1/4" BSPT • 3/16"	T4B-3	▷ NK	▷ PP	NN	HDPE
1/4" BSPT • 1/4"	T4B-4	▷ NK	▷ PP	NN	HDPE
1/4" BSPT • 5/16"	T4B-5	▷ NK	▷ PP	NN	HDPE
1/4" BSPT • 3/8"	T4B-6	▷ NK	▷ PP	NN	HDPE
1/4" BSPT • 1/2"	T4B-8	▷ NK	▷ PP	NN	HDPE
3/8" BSPT • 1/4"	T6B-4	▷ NK	▷ PP	NN	HDPE
3/8" BSPT • 5/16"	T6B-5	▷ NK	▷ PP	NN	HDPE
3/8" BSPT • 3/8"	T6B-6	▷ NK	▷ PP	NN	HDPE
3/8" BSPT • 1/2"	T6B-8	▷ NK	▷ PP	NN	HDPE

**Adapters**  
Schedule 80  
RoHS Compliant

**S80 Schedule 80 Fittings**



▷ USP Class VI

Natural Materials

Animal Derivative Free

Thread - Barb	Part Number	▷ NK	▷ PP
1/4" NPT • 1/4"	A4-4 S80	▷ NK	▷ PP
1/4" NPT • 3/8"	A4-6 S80	▷ NK	▷ PP
1/4" NPT • 1/2"	A4-8 S80	▷ NK	▷ PP
3/8" NPT • 1/4"	A6-4 S80	▷ NK	▷ PP
3/8" NPT • 3/8"	A6-6 S80	▷ NK	▷ PP
3/8" NPT • 1/2"	A6-8 S80	▷ NK	▷ PP
1/2" NPT • 1/4"	A8-4 S80	▷ NK	▷ PP
1/2" NPT • 3/8"	A8-6 S80	▷ NK	▷ PP
1/2" NPT • 1/2"	A8-8 S80	▷ NK	▷ PP
3/4" NPT • 1/4"	A12-4 S80	▷ NK	▷ PP
3/4" NPT • 3/8"	A12-6 S80	▷ NK	▷ PP
3/4" NPT • 1/2"	A12-8 S80	▷ NK	▷ PP
3/4" NPT • 3/4"	A12-12 S80	▷ NK	▷ PP
1" NPT • 1"	A16-16 S80	▷ NK	▷ PP

**Plugs - Schedule 80**  
RoHS Compliant



Animal Derivative Free

Thread	Part Number	▷ NK	▷ PP
1/4" NPT	P4 S80	▷ NK	▷ PP
3/8" NPT	P6 S80	▷ NK	▷ PP
1/2" NPT	P8 S80	▷ NK	▷ PP
3/4" NPT	P12 S80	▷ NK	▷ PP

**Nipples - Schedule 80**  
RoHS Compliant



Animal Derivative Free

Thread	Part Number	▷ NK	▷ PP
1/4" NPT	N4 S80	▷ NK	▷ PP
3/8" NPT	N6 S80	▷ NK	▷ PP
1/2" NPT	N8 S80	▷ NK	▷ PP
3/4" NPT	N12 S80	▷ NK	▷ PP

Standard Adapter



Thicker Wall  
Schedule 80 Adapter



Schedule 80 fittings are more robust than fittings with a standard wall thickness, making them more suitable for applications using higher pressure.



*Notes:*

Eldon James

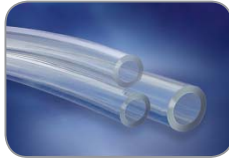
Tubing • Clamps  
Antimicrobial Protected  
Tubing & Fittings



Tubing & Clamps  
Antimicrobial

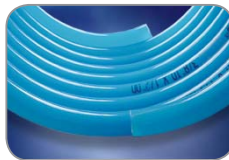


## *Tubing • Clamps • Fittings Kits*



**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	✓	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	N/A 135 °C 121 °C	✓	Gamma, EtO 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  $\leq 73$ . 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 O<sub>2</sub> (CC/MIL/100 | N<sub>2</sub> /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



121 °C

Soft - Shore A 54 Tubing

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

ISO 9001  
Quality System

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
- 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
- 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
- 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 +121 °C ( -58 °F to + 250 °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



135 °C

**Flexelene FLX95E**

USP Class VI • Biomedical • Bioprocess

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



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



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, autoclave (121 °C)

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

**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, autoclave (121 °C)

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



Animal Derivative Free

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

**Flexelene MFXAG**



Antimicrobial Protected Biomedical Tubing

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

### Flexelene™ FX

RoHS Compliant



- 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

ISO 9001

Quality System

**Flexelene FX**

USP Class VI Tubing

USP Class VI  
ISO 10993-4  
ISO 10993-5

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 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

For Antimicrobial Protected Polyolefin Tubing - See FXAG Listing on Page 59

**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

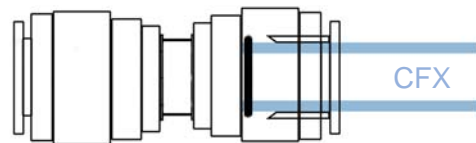


- UV stable
- Suitable for use with deionized water
- No phthalate plasticizers or DEHP additives
- Ultra-low extractables / leachables
- Sterilize with E-beam or gamma to 25 kGy

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



**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

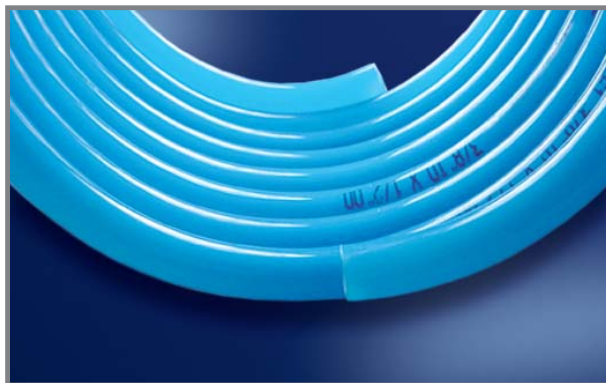


Ph. 970.667.2728 • [eldonjames.com](http://eldonjames.com) • fax 970.667.3204



*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*

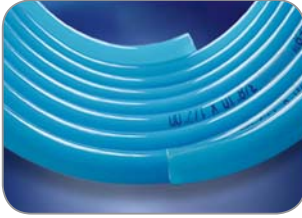


*MFXAG Medical Tubing*

## 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



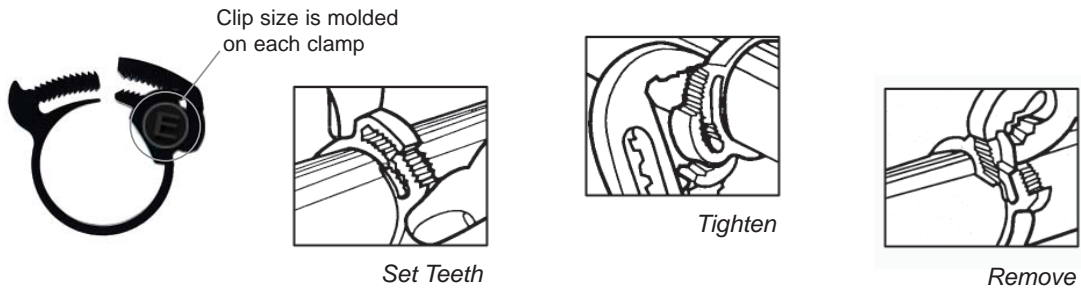
Tough 6/6 Nylon  
Temperature Resistant to  
150 °C



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

*Notes:*

Eldon James

Fittings Kits  
Natural Materials  
Automotive • Biofuels



Fittings Kits



## Fittings Kits

Maintenance • Design • Quick Prototype



GFBN - Glass-Filled  
Black Nylon



PVDF - Gray Kynar



BN - Black Nylon

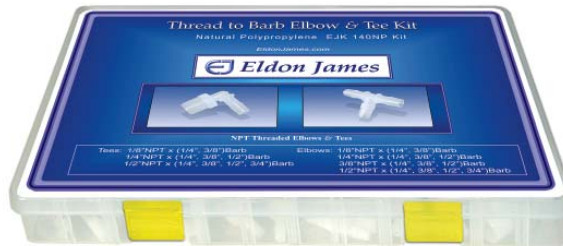
### Automotive & Biofuels Kits



NP - Natural Polypropylene



HDPE - High Density Polyethylene



NK - Natural Kynar

### General Purpose Kits



BN - Black Nylon

**Eldon James**

Ph. 970.667.2728 • [eldonjames.com](http://eldonjames.com) • fax 970.667.3204



# NEW Fittings Kits

## Luers and Swivel Disconnects™

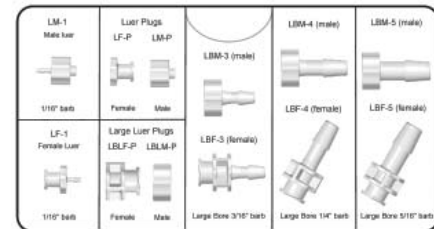
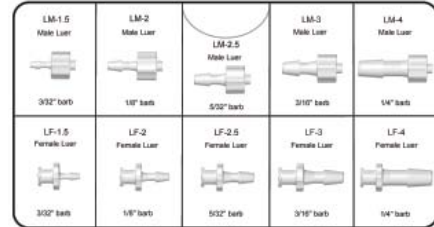
**NEW**



Luers - Mini 310 Kit  
Standard and Large Bore Luers

EJK 310 Kit	Polypropylene	Crystal Vu™
98 fittings	EJK 310 PP	EJK 310 CVU

Animal Derivative Free Components



ADF Polypropylene or CrystalVu™

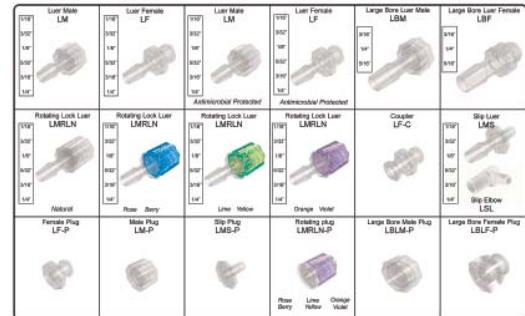
**NEW**



Luers - Large 312 Kit with  
Colored Rotating Lock Luers

EJK 312 Kit	Polypropylene	CrystalVu™
113 fittings	EJK 312 PP	EJK 312 CVU

Animal Derivative Free Components



CrystalVu™ (illustrated) or ADF Polypropylene

**NEW**



314 Swivel Disconnects™ Kit in CrystalVu™  
or Natural Nylon

EJK 314 Kit	Polypropylene	CrystalVu™
assorted fittings	EJK 314 NN	EJK 314 CVU

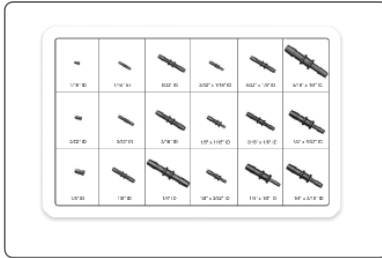


CrystalVu™ or Nylon (illustrated)

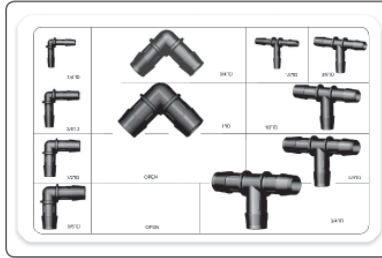
Fittings Kits

# Fittings Kits

Black Nylon • Polypropylene • Natural Kynar® • High Density Polyethylene



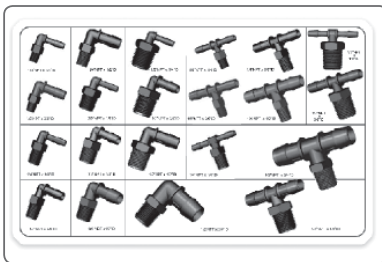
**EJK137 Kit • Barbed Couplers, Reducers & Plugs Kit**



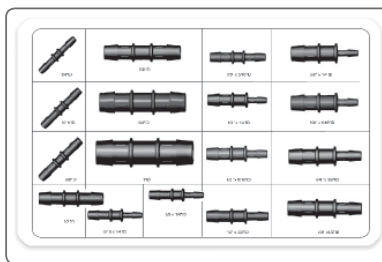
**EJK139 Kit • Barbed Elbows & Tees Kit**



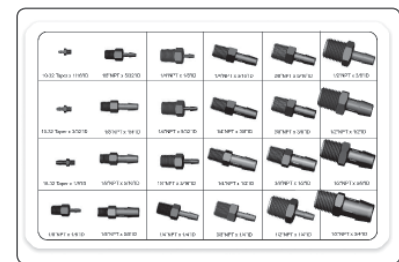
**EJK201 Kit • Barbed Elbows, Tees & Ys**



**EJK140 Kit • Threaded Elbows & Tees Kit**



**EJK141 Kit • Barbed Couplers & Reducers Kit**



**EJK200 Adapter Kit**

Fittings Kits

EJK 137 Kit	Black Nylon	Polypropylene	Natural Kynar®	HDPE
36 fittings - 2 per size	EJK 137 BN	EJK 137 PP	EJK 137 NK	EJK 137 HDPE
EJK 139 Kit	Black Nylon	Polypropylene	Natural Kynar®	HDPE
22 fittings - 2 per size	EJK 139 BN	EJK 139 PP	EJK 139 NK	EJK 139 HDPE
EJK 201 Kit	Black Nylon	Polypropylene	Natural Kynar®	HDPE
36 fittings - 2 per size	EJK 201 BN	EJK 201 PP	EJK 201 NK	EJK 201 HDPE
EJK 140 Kit	Black Nylon	Polypropylene	Natural Kynar®	HDPE
42 fittings - 2 per size	EJK 140 BN	EJK 140 PP	EJK 140 NK	EJK 140 HDPE
EJK 141 Kit	Black Nylon	Polypropylene	Natural Kynar®	HDPE
34 fittings - 2 per size	EJK 141 BN	EJK 141 PP	EJK 141 NK	EJK 141 HDPE
EJK 200 Kit	Black Nylon	Polypropylene	Natural Kynar®	HDPE
48 fittings - 2 per size	EJK 200 BN	EJK 200 PP	EJK 200 NK	EJK 200 HDPE

BN = Black Nylon PP = Polypropylene  
 NK = Natural Kynar HDPE = High Density Polyethylene



# Fittings Kits

Black Nylon • Polypropylene • Natural Kynar® • High Density Polyethylene



Automotive kits - next page

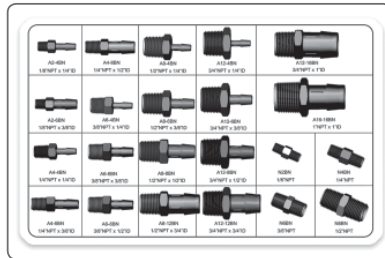


<http://eldonjames.com>

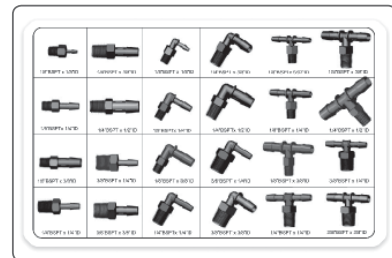
Kit contents details can be found at  
eldonjames.com



EJK202 Kit • Threaded  
Elbows, Tees, Nipples & Plug



EJK138 Kit • Adapter Kit



EJK203 Kit  
British Standard Pipe Threads

EJK 202 Kit	Black Nylon	Polypropylene	Natural Kynar®	HDPE
36 fittings - 2 per size	EJK 202 BN	EJK 202 PP	EJK 202 NK	EJK 202 HDPE

EJK 138 Kit	Black Nylon	Polypropylene	Natural Kynar®	HDPE
44 fittings - 2 per size	EJK 138 BN	EJK 138 PP	EJK 138 NK	EJK 138 HDPE

EJK 203 Kit	Black Nylon	Polypropylene	Natural Kynar®	HDPE
48 fittings - 2 per size	EJK 203 BN	EJK 203 PP	EJK 203 NK	EJK 203 HDPE



**PP Polypropylene** - USP Class VI material - resistant to solvents and many chemicals - use at temperatures < 150 °F and pressures < 122 psi @ 70 °F



**NK Natural Kynar** - USP Class VI, food grade material - chemical resistant, autoclavable - use at temperatures < 226 °F and pressures < 260 psi @ 70 °F



**HDPE Natural High Density Polyethylene** - Low temperature, low pressure, food grade material - pure white color. HDPE is a softer material than nylon or Kynar®.



**BN Black Nylon** - Utility material with good strength and impact resistance - use at temperatures < 275 °F and pressures < 150 psi @ 70 °F

Please read properties of materials disclaimer on page 4

Fittings Kits

# Automotive Marine and Biofuels Kits

EJK148 Large Biofuels Kit



EJK147 Small Biofuels Kit

## Biofuels Kits

Biofuels kits contain fittings made from Kynar®, which is resistant to the organic acids present in most biofuels. The fittings are compatible with E-85 ethanol and other flex-fuels, as well as, biodiesel and algae produced fuels. They are molded from a highly durable PVDF material (Polyvinylidene Fluoride) that has a working temperature range of -80 °F to +226 ° F.

Kit configurations and fittings sizes are the same as those shown in the fuel line and cooling system kit illustrations below.

Fittings Kits

## Automotive & Marine Kits



Cooling System Heater Hose Kit  
EJK 145

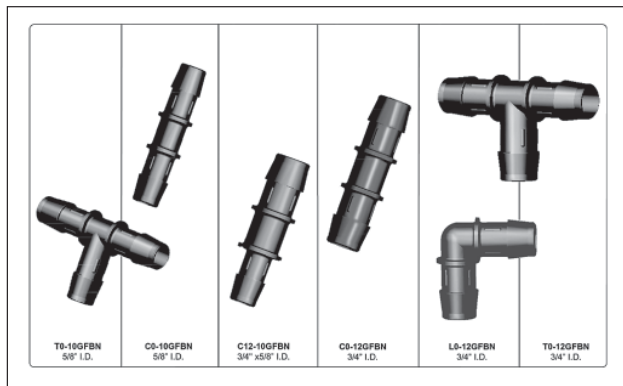
Fuel Line Kit  
#EJK 146

### Fuel Line Kit - EJK 146

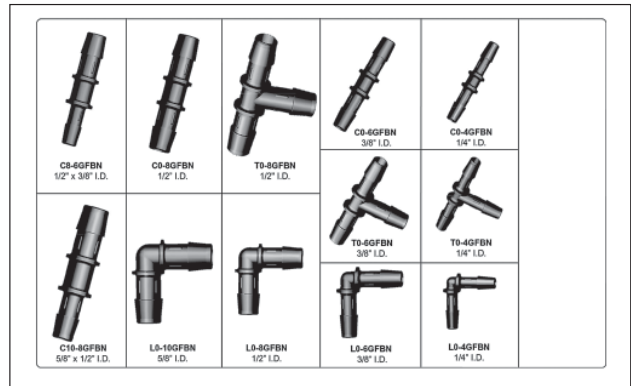
 C0-1.5BN 3/32" ID	 C0-2BN 1/8" ID	 C0-2.5BN 5/32" ID	 C0-3BN 3/16" ID	 C2-1.5BN 1/8" x 3/32" ID	 Y0-2BN 1/8" ID
 L0-1.5BN 3/32" ID	 L0-2BN 1/8" ID	 L0-2.5BN 5/32" ID	 L0-3BN 3/16" ID	 C2-5-2BN 5/32" x 1/8" ID	 Y0-3BN 3/16" ID
 T0-1.5BN 3/32" ID	 T0-2BN 1/8" ID	 T0-2.5BN 5/32" ID	 T0-3BN 3/16" ID	 C4-3BN 3/16" 1/4" ID	 Y0-4BN 1/4" ID

36 Black Nylon Fittings (2 each)

### Automotive Kit - EJK 145



**Features:** 36 Eldon James *single barb* premium **Glass-Filled Black Nylon** fittings - 1/4", 3/8", 1/2", 5/8" & 3/4" hose IDs



36 Glass-filled Black Nylon Fittings (2 each)



Automotive • Stainless Steel  
Industrial • Utility



Industrial  
Automotive



## Transportation & Automotive Fittings

*Industrial & utility fittings*

**ISO 9001**  
Quality System

**Eldon James**



**Biofuels Compatible Fittings Kits:**  
*Kynar® Fittings - resistant to ethanol and organic acids found in biofuels.*



**Oetiker Stainless Steel Clamps** - An expanded range of sizes and configurations are now available.

**New Marine Fittings:** produced with specially engineered thread molds that compensate for swelling due to Nylon's hygroscopic property (its ability of to attract water molecules from the surrounding environment).



**BN - Black Nylon**

**BN** -Temperature Range -50 °F to 275 °F • Pressure 150 psi @ 70 °F  
> High impact resistance and tensile strength - Resistant to fuels and lubricants  
> Commonly used in fuel line, vacuum system and general purpose applications  
> Automotive industry approved material



**GFBN - Glass-Filled Black Nylon**

**GFBN** -Temperature Range -50 °F to 275 °F • Pressure 150 psi @ 70 °F  
> Heat Deflection Temperature - ASTM D64: 475 °F (246 °C) @ 264 psi  
> GFBN exhibits enhanced impact resistance resulting from the inclusion of glass fibers • Commonly used in under-the-hood, heater and coolant applications.  
> Automotive industry approved material

Please read disclaimer on page 4

**Automotive Approvals:**

Eldon James part numbers shown in the Automotive Fittings Section that have a **BN** suffix are molded from materials that have the following approvals:

- GM.....GMP.PA66.062(N)
- Ford.....(ESA-M4D379-A&B) WSK-M4D666-A
- DCX.....DB41 CPN2565
- Delphi.....DCM5150
- Other Approvals: SAEJ1639PA0172, ASTMD4066PA0181



**Automotive Approvals:**

Eldon James part numbers with the **GFBN** suffix are molded from materials that have the following approvals:

- GM.....GMP.PA66.013
- Ford.....WSK-M4D663-A
- Other Approvals: ASTMPA12G35





## Stainless Steel Fittings

Pharmaceutical • Automotive • Industrial • Dairy • Beverage

Modern design combined with state-of-the-art metallurgy has enabled Eldon James to offer MIM (Metal Injection Molded) fittings in seamless configurations impossible to produce with welded fabrication. In addition, our molybdenum bearing, austenitic 316L stainless products are far more resistant to pitting and corrosion than those built using welded 304 stainless steel construction.

### SS Adapters 316L Stainless Steel



RoHS Compliant

316L fittings are designed to withstand extreme conditions  
Heat • Corrosion • Impact

Size	Part Number	316L Stainless	Metric Hose ID
1/8" NPT • 1/4"	A2-4	SS	6.35 mm
1/4" NPT • 1/4"	A4-4	SS	6.35 mm
1/4" NPT • 5/16"	A4-5	SS	7.94 mm

### SS Couplers 316L Stainless Steel



RoHS Compliant

Size	Part Number	316L Stainless	Metric Hose ID
1/8"	C0-2	SS	3.18 mm
5/32"	C0-2.5	SS	3.97 mm
3/16"	C0-3	SS	4.76 mm
1/4"	C0-4	SS	6.35 mm
5/16"	C0-5	SS	7.94 mm
3/8"	C0-6	SS	9.50 mm
1/2"	C0-8	SS	12.7 mm
5/8"	C0-10	SS	15.9 mm
3/4"	C0-12	SS	19.0 mm

### SS Couplers - Reduction 316L Stainless Steel



RoHS Compliant

Size	Part Number	316L Stainless	Metric Hose ID
1/8" • 3/32"	C2-1.5	SS	3.18 mm • 2.38 mm
5/32" • 3/32"	C2.5-1.5	SS	3.97 mm • 2.38 mm
1/4" • 1/8"	C4-2	SS	6.35 mm • 3.18 mm
1/4" • 5/32"	C4-2.5	SS	6.35 mm • 3.97 mm
1/4" • 3/16"	C4-3	SS	6.35 mm • 4.76 mm
5/16" • 1/4"	C5-4	SS	7.94 mm • 6.35 mm
1/2" • 1/4"	C8-4	SS	12.7 mm • 6.35 mm
3/4" • 1/2"	C12-8	SS	19.0 mm • 12.7 mm

Stainless Steel

Eldon James 316L Stainless Steel range of products is manufactured to meet the chemical and mechanical property specifications of ASTM A240 and ASME SA-240

\* Metric (mm) sizes shown are measured at the approximate midway point on the barb's taper. The barb's dimension will be slightly larger at the maximum circumference and slightly smaller the barb's insert point.

## Stainless Steel Fittings

### SS Elbows 316L Stainless Steel



RoHS Compliant

Size	Part Number	316L Stainless	Metric Hose ID
1/8"	L0-2	SS	3.18 mm
5/32"	L0-2.5	SS	3.97 mm
3/16"	L0-3	SS	4.76 mm
1/4"	L0-4	SS	6.35 mm
5/16"	L0-5	SS	7.94 mm
3/8"	L0-6	SS	9.50 mm
1/2"	L0-8	SS	12.7 mm
5/8"	L0-10	SS	15.9 mm
3/4"	L0-12	SS	19.0 mm

### SS Elbow - Reduction 316L Stainless Steel



RoHS Compliant

Size	Part Number	316L Stainless	Metric Hose ID
3/8" • 5/16"	RL6-5	SS	9.50 mm • 7.94 mm

316L fittings are designed to withstand extreme conditions  
Heat • Corrosion • Impact

### SS Tees 316L Stainless Steel



RoHS Compliant

Size	Part Number	316L Stainless	Metric Hose ID
1/8"	T0-2	SS	3.18 mm
5/32"	T0-2.5	SS	3.97 mm
3/16"	T0-3	SS	4.76 mm
1/4"	T0-4	SS	6.35 mm
5/16"	T0-5	SS	7.94 mm
3/8"	T0-6	SS	9.50 mm
1/2"	T0-8	SS	12.7 mm
5/8"	T0-10	SS	15.9 mm
3/4"	T0-12	SS	19.0 mm

### SS Tee - Reduction 316L Stainless Steel



RoHS Compliant

Size	Part Number	316L Stainless	Metric Hose ID
1/8" • 5/16"	RT2-5	SS	3.18 mm • 7.94 mm
3/8" • 5/16"	RT6-5	SS	9.50 mm • 7.94 mm
1/2" • 5/16"	RT8-5	SS	12.7 mm • 7.94 mm
5/8" • 5/16"	RT10-5	SS	15.9 mm • 7.94 mm
5/8" • 3/8"	RT10-6	SS	15.9 mm • 9.50 mm

## Stainless Steel Fittings

### SS Y-Connectors 316L Stainless Steel



RoHS Compliant

Size	Part Number	316L Stainless	Metric Hose ID
5/32"	Y0-2.5	SS	3.97 mm
3/16"	Y0-3	SS	4.76 mm
5/16"	Y0-5	SS	7.94 mm
3/8"	Y0-6	SS	9.50 mm
1/2"	Y0-8	SS	12.7 mm

### 316L Stainless steel - Chemical Compatibility

Acetic Acid	A	Hydrofluoric Acid	B
Acetone	A	Isopropyl Alcohol	B
Air	A	Methyl Ethyl Ketone (MEK)	A
Ammonia	A	Methanol	A
Benzene	B	Oxygen	A
Carbon Dioxide	A	Ozone	A
Chlorine Water	C	Steam	A
Ethanol	A	Sulfuric Acid	B
Ethylene Glycol	A	Toluene	A
Gasoline, Unleaded	A	Trichloroethylene	B
Hydrochloric Acid	D	Water, Fresh	A

**A** = Excellent (No Effect)   **B** = Good (Minor Effect)   **C** = Fair (Moderate Effect)   **D** = Poor (Severe Effect)

NOTE: Eldon James stainless steel fittings have been developed for use with specialty tubing and hose. Applications using rigid, high durometer, thick walled tubing or hose may require a smaller fitting; therefore, individual part sampling is recommended prior to placing a quantity order.

Eldon James maintains stock for most sizes of stainless steel fittings; however, due to the complex multi-stage process involved in producing metal injected fittings, the production lead time for large quantity orders is a minimum of 6-8 weeks.

### SS Barb Specifications

Hose ID Size	Metric Equivalent	Thru Hole ID	Barb Diameter	Hose ID Size	Metric Equivalent	Thru Hole ID	Barb Diameter
3/32"	2.38 mm	.066"	.152"	5/16"	7.94 mm	.217"	.372"
1/8"	3.18 mm	.082"	.180"	3/8"	9.50 mm	.312"	.498"
5/32"	3.97 mm	.100"	.215"	1/2"	12.7 mm	.400"	.619"
3/16"	4.76 mm	.127"	.260"	5/8"	15.9 mm	.495"	.743"
1/4"	6.35 mm	.167"	.314"	3/4"	19.0 mm	.667"	.956"

Data presented for properties of materials 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. None of the information provided constitutes a recommendation or endorsement of any kind by Eldon James Corporation.

**Adapters - Miniature**  
RoHS Compliant

**Adapters**

**Automotive Materials**  
Excellent Tensile Strength  
Automotive Approvals

10-32 UNF • 10-32 Taper • 1/4-28 UNF • 1/16" NPT

5 mm • 6 mm

Thread - Barb	Part Number	BN
10-32 UNF • 3/32"	A1032-1.5	BN
10-32 UNF • 1/8"	A1032-2	BN
10-32 UNF • 5/32"	A1032-2.5	BN
10-32 Taper • 3/32"	A1032T-1.5	BN
10-32 Taper • 1/8"	A1032T-2	BN
10-32 Taper • 5/32"	A1032T-2.5	BN
1/4-28 UNF • 3/32"	A1428-1.5	BN
1/4-28 UNF • 1/8"	A1428-2	BN
1/4-28 UNF • 5/32"	A1428-2.5	BN
1/4-28 UNF • 3/16"	A1428-3	BN
1/16" NPT • 3/32"	A1-1.5	BN
1/16" NPT • 1/8"	A1-2	BN
1/16" NPT • 5/32"	A1-2.5	BN
1/16" NPT • 3/16"	A1-3	BN
1/16" NPT • 1/4"	A1-4	BN

Thread - Barb	Part Number	BN
<b>Metric Threads</b>		
5 mm • 3/32"	A5M-1.5	BN
5 mm • 1/8"	A5M-2	BN
5 mm • 5/32"	A5M-2.5	BN
6 mm • 3/32"	A6M-1.5	BN
6 mm • 1/8"	A6M-2	BN
6 mm • 5/32"	A6M-2.5	BN
6 mm • 3/16"	A6M-3	BN

ISO 9001  
Quality System



1/16" barb size Black Nylon Adapters are listed in the Industrial Fittings Section



**Marine Fittings - see page 89**

**Adapters 1/8"-1" NPT**  
RoHS Compliant

Thread - Barb	Part Number	BN
1/8" NPT • 3/32"	A2-1.5	BN
1/8" NPT • 1/8"	A2-2	BN
1/8" NPT • 5/32"	A2-2.5	BN
1/8" NPT • 3/16"	A2-3	BN
1/8" NPT • 1/4"	A2-4	BN
1/8" NPT • 5/16"	A2-5	BN
1/8" NPT • 3/8"	A2-6	BN
1/4" NPT • 1/8"	A4-2	BN
1/4" NPT • 5/32"	A4-2.5	BN
1/4" NPT • 3/16"	A4-3	BN
1/4" NPT • 1/4"	A4-4	BN
1/4" NPT • 5/16"	A4-5	BN
1/4" NPT • 3/8"	A4-6	BN
1/4" NPT • 1/2"	A4-8	BN
3/8" NPT • 1/4"	A6-4	BN
3/8" NPT • 5/16"	A6-5	BN
3/8" NPT • 3/8"	A6-6	BN
3/8" NPT • 1/2"	A6-8	BN

Thread - Barb	Part Number	GFBN
1/8" NPT • 3/32"	A2-1.5	n/a
1/8" NPT • 1/8"	A2-2	GFBN
1/8" NPT • 5/32"	A2-2.5	GFBN
1/8" NPT • 3/16"	A2-3	GFBN
1/8" NPT • 1/4"	A2-4	GFBN
1/8" NPT • 5/16"	A2-5	GFBN
1/8" NPT • 3/8"	A2-6	GFBN
1/4" NPT • 1/8"	A4-2	GFBN
1/4" NPT • 5/32"	A4-2.5	GFBN
1/4" NPT • 3/16"	A4-3	GFBN
1/4" NPT • 1/4"	A4-4	GFBN
1/4" NPT • 5/16"	A4-5	GFBN
1/4" NPT • 3/8"	A4-6	GFBN
1/4" NPT • 1/2"	A4-8	GFBN
3/8" NPT • 1/4"	A6-4	GFBN
3/8" NPT • 5/16"	A6-5	GFBN
3/8" NPT • 3/8"	A6-6	GFBN
3/8" NPT • 1/2"	A6-8	GFBN

Automotive

Black Nylon BN      Glass-Filled Black Nylon GFBN

Continued  
**Adapters** 1/8"-1" NPT  
 RoHS Compliant

**Adapters**



Thread - Barb	Part Number	BN
1/2" NPT • 1/4"	A8-4	BN
1/2" NPT • 5/16"	A8-5	BN
1/2" NPT • 3/8"	A8-6	BN
1/2" NPT • 1/2"	A8-8	BN
1/2" NPT • 5/8"	A8-10	BN
1/2" NPT • 3/4"	A8-12	BN
3/4" NPT • 1/4"	A12-4	BN
3/4" NPT • 3/8"	A12-6	BN
3/4" NPT • 1/2"	A12-8	BN
3/4" NPT • 5/8"	A12-10	BN
3/4" NPT • 3/4"	A12-12	BN
3/4" NPT • 1"	A12-16	BN
1" NPT • 1"	A16-16	BN

Thread - Barb	Part Number	GFBN
1/2" NPT • 1/4"	A8-4	GFBN
1/2" NPT • 5/16"	A8-5	GFBN
1/2" NPT • 3/8"	A8-6	GFBN
1/2" NPT • 1/2"	A8-8	GFBN
1/2" NPT • 5/8"	A8-10	GFBN
1/2" NPT • 3/4"	A8-12	GFBN
3/4" NPT • 1/4"	A12-4	GFBN
3/4" NPT • 3/8"	A12-6	GFBN
3/4" NPT • 1/2"	A12-8	GFBN
3/4" NPT • 5/8"	A12-10	GFBN
3/4" NPT • 3/4"	A12-12	GFBN
3/4" NPT • 1"	A12-16	GFBN
1" NPT • 1"	A16-16	GFBN

**Bulkhead Adapters**

**Adapters**  
 Miniature Bulkhead  
 RoHS Compliant

Standard Size Bulkheads page 75



Barb 1 - Barb 2	Part Number	BN
<b>10-32 UNF Thread (No Flange)</b>		
3/32" • 3/32"	BH 1032 1.5-1.5	BN
<b>1/4-28 UNF Thread (No Flange)</b>		
1/8" • 3/32"	BH 1428 2-1.5	BN
1/8" • 1/8"	BH 1428 2-2	BN

Barb 1 - Barb 2	Part Number	BN
<b>5/16-24 UNF Thread (With Flange)</b>		
5/32" • 3/32"	BH 51624 2.5-1.5	BN
5/32" • 1/8"	BH 51624 2.5-2	BN
5/32" • 5/32"	BH 51624 2.5-2.5	BN
3/16" • 3/32"	BH 51624 3-1.5	BN
3/16" • 1/8"	BH 51624 3-2	BN
3/16" • 5/32"	BH 51624 3-2.5	BN
3/16" • 3/16"	BH 51624 3-3	BN

Barb 1 - Barb 2	Part Number	BN
<b>1/8" Straight NPSM Thread (With Flange)</b>		
3/16" • 3/32"	BH 2S 3-1.5	BN
3/16" • 1/8"	BH 2S 3-2	BN
3/16" • 5/32"	BH 2S 3-2.5	BN
3/16" • 3/16"	BH 2S 3-3	BN
1/4" • 3/32"	BH 2S 4-1.5	BN
1/4" • 1/8"	BH 2S 4-2	BN
1/4" • 5/32"	BH 2S 4-2.5	BN
1/4" • 3/16"	BH 2S 4-3	BN
1/4" • 1/4"	BH 2S 4-4	BN

Barb 1 - Barb 2	Part Number	BN
<b>1/4" NPSM Straight Thread (With Flange)</b>		
3/16" • 3/32"	BH 4S 3-1.5	BN
3/16" • 1/8"	BH 4S 3-2	BN
3/16" • 5/32"	BH 4S 3-2.5	BN
3/16" • 3/16"	BH 4S 3-3	BN
1/4" • 3/32"	BH 4S 4-1.5	BN
1/4" • 1/8"	BH 4S 4-2	BN
1/4" • 5/32"	BH 4S 4-2.5	BN
1/4" • 3/16"	BH 4S 4-3	BN

1/16" barb size Black Nylon Adapters are listed in the Industrial Fittings Section

Automotive

# 90° Bulkheads

## 90° Bulkhead - Miniature RoHS Compliant



Barb - Barb 1 2	Part Number	BN
<b>10-32 UNF Thread (No Flange)</b>		
3/32" • 3/32"	BHL 1032 1.5-1.5	BN
<b>1/4-28 UNF Thread (No Flange)</b>		
1/8" • 3/32"	BHL 1428 2-1.5	BN
1/8" • 1/8"	BHL 1428 2-2	BN

Barb - Barb 1 2	Part Number	BN
<b>1/8" NPSM Straight Thread (With Flange)</b>		
1/4" • 3/32"	BHL 2S 4-1.5	BN
1/4" • 1/8"	BHL 2S 4-2	BN
1/4" • 5/32"	BHL 2S 4-2.5	BN
1/4" • 3/16"	BHL 2S 4-3	BN
1/4" • 1/4"	BHL 2S 4-4	BN
<b>1/4" NPSM Straight Thread (With Flange)</b>		
1/4" • 3/32"	BHL 4S 4-1.5	BN
1/4" • 1/8"	BHL 4S 4-2	BN
1/4" • 5/32"	BHL 4S 4-2.5	BN
1/4" • 3/16"	BHL 4S 4-3	BN
1/4" • 1/4"	BHL 4S 4-4	BN

Barb - Barb 1 2	Part Number	BN
<b>5/16-24 UNF Thread (With Flange)</b>		
5/32" • 3/32"	BHL 51624 2.5-1.5	BN
5/32" • 1/8"	BHL 51624 2.5-2	BN
5/32" • 5/32"	BHL 51624 2.5-2.5	BN

\*1/16" barb size Black Nylon 90° Bulkheads are listed in the Industrial Fittings Section

## Adapters - Bulkhead Standard RoHS Compliant

Color Code Clips Pg. 22



Barb - Barb 1 2	Part Number	BN
<b>1/4" NPSM Straight Thread (With Flange)</b>		
1/4" • 1/4"	BH 4S 4-4	BN
5/16" • 1/4"	BH 4S 5-4	BN
5/16" • 5/16"	BH 4S 5-5	BN
3/8" • 1/4"	BH 4S 6-4	BN
3/8" • 5/16"	BH 4S 6-5	BN
3/8" • 3/8"	BH 4S 6-6	BN

## Bulkhead & Panel Mount - Nuts



Thread Spec.	Part Number	Black Nylon	Natural Nylon
10-32 UNF Thread	HEX1032	HEX1032 BN	HEX1032 NN
1/4-28 UNF Thread	HEX1428	HEX1428 BN	HEX1428 NN
5/16-24 UNF Thread	HEX51624	HEX51624 BN	HEX51624 NN
1/8" NPSF Straight Thread	HEX1827	HEX1827 BN	HEX1827 NN
1/4" NPSF Straight Thread	G102-150	G102-150-78	G102-150-18

Black Nylon BN

Glass-Filled Black Nylon GFBN



### Adapter Panel Mount

Miniature  
RoHS Compliant



With Flange

No Flange

## Panel Mounts

Standard larger sizes on following page

Thread - Barb	Part Number	BN
<b>10-32 UNF Thread (No Flange)</b>		
1032 UNF • 3/32"	PM 1032-1.5	BN
1032 UNF • 1/8"	PM 1032-2	BN
1032 UNF • 5/32"	PM 1032-2.5	BN
<b>1/4-28 UNF Thread (No Flange)</b>		
1/4-28 UNF • 3/32"	PM 1428-1.5	BN
1/4-28 UNF • 1/8"	PM 1428-2	BN
1/4-28 UNF • 5/32"	PM 1428-2.5	BN
1/4-28 UNF • 3/16"	PM 1428-3	BN

Thread - Barb	Part Number	BN
<b>1/8" NPSM Straight Thread (With Flange)</b>		
1/8" NPSM • 3/32"	PM 2S-1.5	BN
1/8" NPSM • 1/8"	PM 2S-2	BN
1/8" NPSM • 5/32"	PM 2S-2.5	BN
1/8" NPSM • 3/16"	PM 2S-3	BN
1/8" NPSM • 1/4"	PM 2S-4	BN
<b>1/4" NPSM Straight Thread (With Flange)</b>		
1/4" NPSM • 3/32"	PM 4S-1.5	BN
1/4" NPSM • 1/8"	PM 4S-2	BN

Thread - Barb	Part Number	BN
<b>5/16-24 UNF Thread (With Flange)</b>		
5/16-24 UNF • 3/32"	PM 51624-1.5	BN
5/16-24 UNF • 1/8"	PM 51624-2	BN
5/16-24 UNF • 5/32"	PM 51624-2.5	BN
5/16-24 UNF • 3/16"	PM 51624-3	BN
5/16-24 UNF • 1/4"	PM 51624-4	BN

**Panel Mount & Bulkhead  
Color Code Mounting Rings**

See page 22

\*1/16" barb size Black Nylon Panel Mounts are listed in the Industrial Fittings Section

Large barb 1/4" NPSM sizes →

### 90° Panel Mount

Miniature  
RoHS Compliant



With Flange

No Flange

## 90° Panel Mounts

Panel Mount Nuts  
see opposite page



Thread - Barb	Part Number	BN
<b>10-32 UNF Thread (No Flange)</b>		
1032 UNF • 3/32"	PML 1032-1.5	BN
1032 UNF • 1/8"	PML 1032-2	BN
<b>1/4-28 UNF Thread (No Flange)</b>		
1/4-28 UNF • 3/32"	PML 1428-1.5	BN
1/4-28 UNF • 1/8"	PML 1428-2	BN
1/4-28 UNF • 5/32"	PML 1428-2.5	BN

Thread - Barb	Part Number	BN
<b>1/8" Straight NPSM Thread (With Flange)</b>		
1/8" NPSM • 3/32"	PML 2S-1.5	BN
1/8" NPSM • 1/8"	PML 2S-2	BN
1/8" NPSM • 5/32"	PML 2S-2.5	BN
1/8" NPSM • 3/16"	PML 2S-3	BN
1/8" NPSM • 1/4"	PML 2S-4	BN
<b>1/4" NPSM Thread (With Flange)</b>		
1/4" NPSM • 3/32"	PML 4S-1.5	BN
1/4" NPSM • 1/8"	PML 4S-2	BN
1/4" NPSM • 5/32"	PML 4S-2.5	BN
1/4" NPSM • 3/16"	PML 4S-3	BN
1/4" NPSM • 1/4"	PML 4S-4	BN

Thread - Barb	Part Number	BN
<b>5/16-24 UNF Thread (With Flange)</b>		
5/16-24 UNF • 3/32"	PML 51624-1.5	BN
5/16-24 UNF • 1/8"	PML 51624-2	BN
5/16-24 UNF • 5/32"	PML 51624-2.5	BN

\*1/16" barb size Black Nylon 90° Panel Mounts are listed in the Industrial Fittings Section

### Adapter Panel Mounts

Standard Size  
RoHS Compliant

## Panel Mounts



← *Miniature sizes*

Thread - Barb	Part Number	BN
<b>1/4" NPSM Straight Thread (With Flange)</b>		
1/4" NPSM • 5/32"	PM 4S-2.5	BN
1/4" NPSM • 3/16"	PM 4S-3	BN
1/4" NPSM • 1/4"	PM 4S-4	BN
1/4" NPSM • 5/16"	PM 4S-5	BN
1/4" NPSM • 3/8"	PM 4S-6	BN
1/4" NPSM • 1/2"	PM 4S-8	BN

Thread - Barb	Part Number	GFBN
<b>1/4" NPSM Straight Thread (With Flange)</b>		
1/4" NPSM • 5/32"	PM 4S-2.5	GFBN
1/4" NPSM • 3/16"	PM 4S-3	GFBN
1/4" NPSM • 1/4"	PM 4S-4	GFBN
1/4" NPSM • 5/16"	PM 4S-5	GFBN
1/4" NPSM • 3/8"	PM 4S-6	GFBN
1/4" NPSM • 1/2"	PM 4S-8	GFBN

### Couplers - Straight

RoHS Compliant

## Couplers



Barb Size	Part Number	BN
1/16"	C0-1*	**
3/32"	C0-1.5	BN
1/8"	C0-2	BN
5/32"	C0-2.5	BN
3/16"	C0-3	BN
1/4"	C0-4	BN
5/16"	C0-5	BN
3/8"	C0-6	BN
1/2"	C0-8	BN
5/8"	C0-10	BN
3/4"	C0-12	BN
1"	C0-16	BN

Barb Size	Part Number	GFBN
1/16"	C0-1	n/a
3/32"	C0-1.5	n/a
1/8"	C0-2	n/a
5/32"	C0-2.5	GFBN
3/16"	C0-3	GFBN
1/4"	C0-4	GFBN
5/16"	C0-5	GFBN
3/8"	C0-6	GFBN
1/2"	C0-8	GFBN
5/8"	C0-10	GFBN
3/4"	C0-12	GFBN
1"	C0-16	GFBN

Automotive

\*\*1/16" barb size Black Nylon Couplers are listed in the Industrial Fittings Section



**BN - Black Nylon**



**GFBN - Glass-Filled Black Nylon**

**BN** -Temperature Range -50 °F to 275 °F • Pressure 150 psi @ 70 °F  
 > High impact resistance and tensile strength - Resistant to fuels and lubricants  
 > Commonly used in fuel line, vacuum system and general purpose applications  
 > Automotive industry approved material

**GFBN** -Temperature Range -50 °F to 275 °F • Pressure 150 psi @ 70 °F  
 > Heat Deflection Temperature - ASTM D64: 475 °F (246 °C) @ 264 psi  
 > GFBN exhibits enhanced impact resistance resulting from the inclusion of glass fibers • Commonly used in under-the-hood, heater and coolant applications.  
 > Automotive industry approved material

Please read disclaimer on page 4



## Couplers - Reduction

RoHS Compliant

## Reducers



Barb Sizes	Part Number	BN	Barb Sizes	Part Number	GFBN
3/32" • 1/16"	C1.5-1*	**	3/32" • 1/16"	C1.5-1	n/a
1/8" • 1/16"	C2-1*	**	1/8" • 1/16"	C2-1	n/a
1/8" • 3/32"	C2-1.5	BN	1/8" • 3/32"	C2-1.5	n/a
5/32" • 1/16"	C2.5-1*	**	5/32" • 1/16"	C2.5-1	n/a
5/32" • 3/32"	C2.5-1.5	BN	5/32" • 3/32"	C2.5-1.5	n/a
5/32" • 1/8"	C2.5-2	BN	5/32" • 1/8"	C2.5-2	GFBN
3/16" • 1/16"	C3-1*	**	3/16" • 1/16"	C3-1	n/a
3/16" • 3/32"	C3-1.5	BN	3/16" • 3/32"	C3-1.5	n/a
3/16" • 1/8"	C3-2	BN	3/16" • 1/8"	C3-2	GFBN
3/16" • 5/32"	C3-2.5	BN	3/16" • 5/32"	C3-2.5	n/a
1/4" • 1/16"	C4-1*	**	1/4" • 1/16"	C4-1	n/a
1/4" • 3/32"	C4-1.5	BN	1/4" • 3/32"	C4-1.5	n/a
1/4" • 1/8"	C4-2	BN	1/4" • 1/8"	C4-2	GFBN
1/4" • 5/32"	C4-2.5	BN	1/4" • 5/32"	C4-2.5	GFBN
1/4" • 3/16"	C4-3	BN	1/4" • 3/16"	C4-3	GFBN
5/16" • 5/32"	C5-2.5	BN	5/16" • 5/32"	C5-2.5	GFBN
5/16" • 1/4"	C5-4	BN	5/16" • 1/4"	C5-4	GFBN
3/8" • 1/8"	C6-2	BN	3/8" • 1/8"	C6-2	GFBN
3/8" • 5/32"	C6-2.5	BN	3/8" • 5/32"	C6-2.5	GFBN
3/8" • 1/4"	C6-4	BN	3/8" • 1/4"	C6-4	GFBN
3/8" • 5/16"	C6-5	BN	3/8" • 5/16"	C6-5	GFBN
1/2" • 1/4"	C8-4	BN	1/2" • 1/4"	C8-4	GFBN
1/2" • 5/16"	C8-5	BN	1/2" • 5/16"	C8-5	GFBN
1/2" • 3/8"	C8-6	BN	1/2" • 3/8"	C8-6	GFBN
5/8" • 1/4"	C10-4	BN	5/8" • 1/4"	C10-4	GFBN
5/8" • 5/16"	C10-5	BN	5/8" • 5/16"	C10-5	GFBN
5/8" • 3/8"	C10-6	BN	5/8" • 3/8"	C10-6	GFBN
5/8" • 1/2"	C10-8	BN	5/8" • 1/2"	C10-8	GFBN
3/4" • 3/8"	C12-6	BN	3/4" • 3/8"	C12-6	GFBN
3/4" • 1/2"	C12-8	BN	3/4" • 1/2"	C12-8	GFBN
3/4" • 5/8"	C12-10	BN	3/4" • 5/8"	C12-10	GFBN
1" • 1/2"	C16-8	BN	1" • 1/2"	C16-8	GFBN
1" • 5/8"	C16-10	BN	1" • 5/8"	C16-10	GFBN
1" • 3/4"	C16-12	BN	1" • 3/4"	C16-12	GFBN

\*\*1/16" barb size Black Nylon Couplers are listed in the Industrial Fittings Section

Automotive

**Eldon James**

Ph. 970.667.2728 • [eldonjames.com](http://eldonjames.com) • fax 970.667.3204

**Cross Fittings - X's**  
RoHS Compliant



Barb Size	Part Number	BN	Barb Size	Part Number	GFBN
1/16"	X0-1*	**	1/16"	X0-1	n/a
3/32"	X0-1.5	BN	3/32"	X0-1.5	n/a
1/8"	X0-2	BN	1/8"	X0-2	n/a
5/32"	X0-2.5	BN	5/32"	X0-2.5	n/a
3/16"	X0-3	BN	3/16"	X0-3	n/a
1/4"	X0-4	BN	1/4"	X0-4	GFBN

\*\*1/16" barb size Black Nylon Crosses are listed in the Industrial Fittings Section

**Elbows**  
RoHS Compliant



Barb Size	Part Number	BN	Barb Size	Part Number	GFBN
1/16"	L0-1*	**	1/16"	L0-1	n/a
3/32"	L0-1.5	BN	3/32"	L0-1.5	n/a
1/8"	L0-2	BN	1/8"	L0-2	n/a
5/32"	L0-2.5	BN	5/32"	L0-2.5	GFBN
3/16"	L0-3	BN	3/16"	L0-3	GFBN
1/4"	L0-4	BN	1/4"	L0-4	GFBN
5/16"	L0-5	BN	5/16"	L0-5	GFBN
3/8"	L0-6	BN	3/8"	L0-6	GFBN
1/2"	L0-8	BN	1/2"	L0-8	GFBN
5/8"	L0-10	BN	5/8"	L0-10	GFBN
3/4"	L0-12	BN	3/4"	L0-12	GFBN
1"	L0-16	BN	1"	L0-16	GFBN

\*\*1/16" barb size Black Nylon Elbows are listed in the Industrial Fittings Section

Automotive

**Elbows - Miniature Reduction**  
RoHS Compliant



Barb Sizes	Part Number	BN	Barb Sizes	Part Number	BN
1/8" • 3/32"	RL2-1.5	BN	3/16" • 5/32"	RL3-2.5	BN
5/32" • 3/32"	RL2.5-1.5	BN	1/4" • 3/32"	RL4-1.5	BN
5/32" • 1/8"	RL2.5-2	BN	1/4" • 1/8"	RL4-2	BN
3/16" • 3/32"	RL3-1.5	BN	1/4" • 5/32"	RL4-2.5	BN
3/16" • 1/8"	RL3-2	BN	1/4" • 3/16"	RL4-3	BN

\*1/16" barb size Black Nylon Reduction Elbows are listed in the Industrial Fittings Section

Black Nylon BN	Glass-Filled Black Nylon GFBN
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## Reduction Elbows



**Elbows - Reduction**  
RoHS Compliant

Barb Sizes	Part Number	BN
5/16" • 1/4"	RL5-4	BN
3/8" • 1/4"	RL6-4	BN
1/2" • 1/4"	RL8-4	BN
1/2" • 3/8"	RL8-6	BN

Barb Sizes	Part Number	GFBN
5/16" • 1/4"	RL5-4	GFBN
3/8" • 1/4"	RL6-4	GFBN
1/2" • 1/4"	RL8-4	GFBN
1/2" • 3/8"	RL8-6	GFBN

## Elbows-Threaded

**Elbows - Miniature Threaded**  
RoHS Compliant

10-32 UNF • 10-32 Taper • 1/4-28 UNF • 1/16" NPT

**Automotive Materials**  
Excellent Tensile Strength  
Automotive Approvals

Thread - Barb	Part Number	BN
10-32 UNF • 3/32"	L1032-1.5	BN
10-32 UNF • 1/8"	L1032-2	BN
10-32 Taper • 3/32"	L1032T-1.5	BN
10-32 Taper • 1/8"	L1032T-2	BN
1/4-28 UNF • 3/32"	L1428-1.5	BN
1/4-28 UNF • 1/8"	L1428-2	BN
1/4-28 UNF • 5/32"	L1428-2.5	BN
1/4-28 UNF • 3/16"	L1428-3	BN
1/16" NPT • 3/32"	L1-1.5	BN
1/16" NPT • 1/8"	L1-2	BN
1/16" NPT • 5/32"	L1-2.5	BN
1/16" NPT • 3/16"	L1-3	BN
1/16" NPT • 1/4"	L1-4	BN

ISO 9001  
Quality System



### Metric Threads

Thread - Barb	Part Number	BN
5 mm • 3/32"	L5M-1.5	BN
5 mm • 1/8"	L5M-2	BN
5 mm • 5/32"	L5M-2.5	BN
6 mm • 3/32"	L6M-1.5	BN
6 mm • 1/8"	L6M-2	BN
6 mm • 5/32"	L6M-2.5	BN
6 mm • 3/16"	L6M-3	BN

\*1/16" barb size Black Nylon Threaded Elbows are listed in the Industrial Fittings Section

**Elbows - Threaded**  
1/8" to 1" NPT  
RoHS Compliant

## Elbows-Threaded



Thread - Barb	Part Number	BN
1/8" NPT • 1/16"	L2-1*	**
1/8" NPT • 3/32"	L2-1.5	BN
1/8" NPT • 1/8"	L2-2	BN
1/8" NPT • 5/32"	L2-2.5	BN
1/8" NPT • 3/16"	L2-3	BN
1/8" NPT • 1/4"	L2-4	BN
1/8" NPT • 5/16"	L2-5	BN
1/8" NPT • 3/8"	L2-6	BN

Thread - Barb	Part Number	GFBN
1/8" NPT • 1/16"	L2-1	n/a
1/8" NPT • 3/32"	L2-1.5	n/a
1/8" NPT • 1/8"	L2-2	GFBN
1/8" NPT • 5/32"	L2-2.5	GFBN
1/8" NPT • 3/16"	L2-3	GFBN
1/8" NPT • 1/4"	L2-4	GFBN
1/8" NPT • 5/16"	L2-5	GFBN
1/8" NPT • 3/8"	L2-6	GFBN

\*\*1/16" barb size Black Nylon Threaded Elbows are listed in the Industrial Fittings Section

Black Nylon BN

Glass-Filled Black Nylon GFBN

**Elbows - Threaded**  
 1/8" to 1" NPT (continued)  
 RoHS Compliant



Automotive

Thread - Barb	Part Number	BN	Thread - Barb	Part Number	GFBN
1/4" NPT • 1/8"	L4-2	BN	1/4" NPT • 1/8"	L4-2	GFBN
1/4" NPT • 5/32"	L4-2.5	BN	1/4" NPT • 5/32"	L4-2.5	GFBN
1/4" NPT • 3/16"	L4-3	BN	1/4" NPT • 3/16"	L4-3	GFBN
1/4" NPT • 1/4"	L4-4	BN	1/4" NPT • 1/4"	L4-4	GFBN
1/4" NPT • 5/16"	L4-5	BN	1/4" NPT • 5/16"	L4-5	GFBN
1/4" NPT • 3/8"	L4-6	BN	1/4" NPT • 3/8"	L4-6	GFBN
1/4" NPT • 1/2"	L4-8	BN	1/4" NPT • 1/2"	L4-8	GFBN
3/8" NPT • 1/4"	L6-4	BN	3/8" NPT • 1/4"	L6-4	GFBN
3/8" NPT • 5/16"	L6-5	BN	3/8" NPT • 5/16"	L6-5	GFBN
3/8" NPT • 3/8"	L6-6	BN	3/8" NPT • 3/8"	L6-6	GFBN
3/8" NPT • 1/2"	L6-8	BN	3/8" NPT • 1/2"	L6-8	GFBN
1/2" NPT • 1/4"	L8-4	BN	1/2" NPT • 1/4"	L8-4	GFBN
1/2" NPT • 3/8"	L8-6	BN	1/2" NPT • 3/8"	L8-6	GFBN
1/2" NPT • 1/2"	L8-8	BN	1/2" NPT • 1/2"	L8-8	GFBN
1/2" NPT • 5/8"	L8-10	BN	1/2" NPT • 5/8"	L8-10	GFBN
1/2" NPT • 3/4"	L8-12	BN	1/2" NPT • 3/4"	L8-12	GFBN
3/4" NPT • 1/4"	L12-4	BN	3/4" NPT • 1/4"	L12-4	GFBN
3/4" NPT • 3/8"	L12-6	BN	3/4" NPT • 3/8"	L12-6	GFBN
3/4" NPT • 1/2"	L12-8	BN	3/4" NPT • 1/2"	L12-8	GFBN
3/4" NPT • 5/8"	L12-10	BN	3/4" NPT • 5/8"	L12-10	GFBN
3/4" NPT • 3/4"	L12-12	BN	3/4" NPT • 3/4"	L12-12	GFBN
3/4" NPT • 1"	L12-16	BN	3/4" NPT • 1"	L12-16	GFBN
1" NPT • 3/4"	L16-12	BN	1" NPT • 3/4"	L16-12	GFBN
1" NPT • 1"	L16-16	BN	1" NPT • 1"	L16-16	GFBN

**Marine Fittings - see page 89**

**Garden Hose Adapter**  
 RoHS Compliant



Thread • Barb	Part Number	BN	Size	Part Number	BN
3/4" GH • 1/4"	A12GH-4	BN	3/4" GH • 5/8"	A12GH-10	BN
3/4" GH • 3/8"	A12GH-6	BN	3/4" GH • 3/4"	A12GH-12	BN
3/4" GH • 1/2"	A12GH-8	BN	3/4" GH • 1"	A12GH-16	BN

Black Nylon BN	Glass-Filled Black Nylon GFBN
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**Nipples - UNF & NPT**  
RoHS Compliant

**Pipe Nipples**



Thread Size	Part Number	BN
10-32 UNF	N1032	BN
1032 Taper	N1032T	BN
1/8" NPT	N2	BN
1/4" NPT	N4	BN
3/8" NPT	N6	BN
1/2" NPT	N8	BN
3/4" NPT	N12	BN
1" NPT	N16	BN

Thread Size	Part Number	GFBN
10-32 UNF	N1032	n/a
1032 Taper	N1032T	n/a
1/8" NPT	N2	GFBN
1/4" NPT	N4	GFBN
3/8" NPT	N6	GFBN
1/2" NPT	N8	GFBN
3/4" NPT	N12	GFBN
1" NPT	N16	GFBN

**Nipples**  
Reduction & Conversion  
RoHS Compliant

**Conversion Nipples**



Thread • Thread	Part Number	BN
1/16" NPT • 1/4-28 UNF	RN1-1428	BN
1/8" NPT • 1/16" NPT	RN2-1	BN
1/4" NPT • 1/8" NPT	RN4-2	BN
3/8" NPT • 1/8" NPT	RN6-2	BN
3/8" NPT • 1/4" NPT	RN6-4	BN
1/2" NPT • 1/8" NPT	RN8-2	BN
1/2" NPT • 1/4" NPT	RN8-4	BN
1/2" NPT • 3/8" NPT	RN8-6	BN
1" NPT • 3/4" NPT	RN16-12	BN

Thread • Thread	Part Number	GFBN
1/16" NPT • 1/4-28 UNF	RN1-1428	n/a
1/8" NPT • 1/16" NPT	RN2-1	n/a
1/4" NPT • 1/8"	RN4-2	GFBN
3/8" NPT • 1/8" NPT	RN6-2	GFBN
3/8" NPT • 1/4" NPT	RN6-4	GFBN
1/2" NPT • 1/8" NPT	RN8-2	GFBN
1/2" NPT • 1/4" NPT	RN8-4	GFBN
1/2" NPT • 3/8"	RN8-6	GFBN
1" NPT • 3/4" NPT	RN16-12	GFBN

Automotive

**Female Junctions**

**Female Junctions**  
10-32F UNF  
RoHS Compliant



Female Thread - Style	Part Number	BN
10-32F UNF • Straight	1032F-C	BN
10-32F UNF • Elbow	1032F-E	BN
10-32F UNF • Tee	1032F-T	BN
10-32F UNF • Cross	1032F-X	BN

**Panel Mount Plug**

**Plug - Straight Thread**  
RoHS Compliant



Thread - Style	Part Number	BN
1/4" NPSM • Straight	PMP4S	BN

Black Nylon BN	Glass-Filled Black Nylon GFBN
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**Plugs - Insert**  
RoHS Compliant

**Insert Plugs**



Barb Size	Part Number	BN
1/16"	P0-1*	**
3/32"	P0-1.5	BN
1/8"	P0-2	BN
5/32"	P0-2.5	BN

Barb Size	Part Number	BN
3/16"	P0-3	BN
1/4"	P0-4	BN
3/8"	P0-6	BN
1/2"	P0-8	BN

\*1/16" barb size Black Nylon Insert Plugs are listed in the Industrial Fittings Section

**Plugs - Threaded**  
NPT & UNF  
RoHS Compliant

**Threaded Plugs**



Thread Size	Part Number	BN
5 mm (metric)	P5M	BN
6 mm (metric)	P6M	BN
10-32 UNF	P1032	BN
10-32 Taper	P1032T	BN
1/4-28 UNF	P1428	BN
1/16" NPT	P1	BN
1/8" NPT	P2	BN
1/4" NPT	P4	BN
3/8" NPT	P6	BN
1/2" NPT	P8	BN
3/4" NPT	P12	BN
1" NPT	P16	BN

Thread Size	Part Number	GFBN
5 mm (metric)	P5M	n/a
6 mm (metric)	P6M	n/a
10-32 UNF	P1032	n/a
10-32 Taper	P1032T	n/a
1/4-28 UNF	P1428	n/a
1/16" NPT	P1	n/a
1/8" NPT	P2	GFBN
1/4" NPT	P4	GFBN
3/8" NPT	P6	GFBN
1/2" NPT	P8	GFBN
3/4" NPT	P12	GFBN
1" NPT	P16	GFBN

Automotive

**Tees - Equal Barbed**  
RoHS Compliant

**Tees**



\*\*1/16" barb size Black Nylon Tees are listed in the Industrial Fittings Section

Barb Size	Part Number	BN
1/16"	T0-1*	**
3/32"	T0-1.5	BN
1/8"	T0-2	BN
5/32"	T0-2.5	BN
3/16"	T0-3	BN
1/4"	T0-4	BN
5/16"	T0-5	BN
3/8"	T0-6	BN
1/2"	T0-8	BN
5/8"	T0-10	BN
3/4"	T0-12	BN
1"	T0-16	BN

Barb Size	Part Number	GFBN
1/16"	T0-1	n/a
3/32"	T0-1.5	n/a
1/8"	T0-2	n/a
5/32"	T0-2.5	GFBN
3/16"	T0-3	GFBN
1/4"	T0-4	GFBN
5/16"	T0-5	GFBN
3/8"	T0-6	GFBN
1/2"	T0-8	GFBN
5/8"	T0-10	GFBN
3/4"	T0-12	GFBN
1"	T0-16	GFBN

**Tees - Asymmetric**  
RoHS Compliant

**Asymmetric Tees**



Barbs (A) - Barb (B)	Part Number	BN
1/8" • 3/32"	LRT2-1.5	BN
5/32" • 3/32"	LRT2.5-1.5	BN
5/32" • 1/8"	LRT2.5-2	BN
3/16" • 3/32"	LRT3-1.5	BN
3/16" • 1/8"	LRT3-2	BN

Barbs (A) - Barb (B)	Part Number	BN
3/16" • 5/32"	LRT3-2.5	BN
1/4" • 3/32"	LRT4-1.5	BN
1/4" • 1/8"	LRT4-2	BN
1/4" • 5/32"	LRT4-2.5	BN
1/4" • 3/16"	LRT4-3	BN

\*1/16" barb size Black Nylon Asymmetric Tees are listed in the Industrial Fittings Section

**Tees - Miniature Reduction**  
RoHS Compliant

**Tee Reductions**



(2) Run - (1) Leg	Part Number	BN
3/32" • 1/8"	RT1.5-2	BN
3/32" • 5/32"	RT1.5-2.5	BN
3/32" • 3/16"	RT1.5-3	BN
1/8" • 3/32"	RT2-1.5	BN
1/8" • 5/32"	RT2-2.5	BN
1/8" • 3/16"	RT2-3	BN
1/8" • 1/4"	RT2-4	BN
5/32" • 3/32"	RT2.5-1.5	BN
5/32" • 1/8"	RT2.5-2	BN
5/32" • 3/16"	RT2.5-3	BN

(2) Run - (1) Leg	Part Number	BN
5/32" • 1/4"	RT2.5-4	BN
5/32" • 3/8"	RT2.5-6	BN
3/16" • 3/32"	RT3-1.5	BN
3/16" • 1/8"	RT3-2	BN
3/16" • 5/32"	RT3-2.5	BN
3/16" • 1/4"	RT3-4	BN
1/4" • 3/32"	RT4-1.5	BN
1/4" • 1/8"	RT4-2	BN
1/4" • 5/32"	RT4-2.5	BN
1/4" • 3/16"	RT4-3	BN

\*1/16" barb size BN Miniature Reduction Tees are listed in the Industrial Fittings Section

**Tees - Reduction Standard**  
RoHS Compliant



(2) Run - (1) Leg	Part Number	BN
1/4" • 3/8"	RT4-6	BN
1/4" • 5/8"	RT4-10	BN
3/8" • 5/32"	RT6-2.5	BN
3/8" • 1/4"	RT6-4	BN
1/2" • 1/4"	RT8-4	BN
1/2" • 5/16"	RT8-5	BN
1/2" • 3/8"	RT8-6	BN
5/8" • 5/16"	RT10-5	BN
5/8" • 3/8"	RT10-6	BN
3/4" • 3/8"	RT12-6	BN
3/4" • 1/2"	RT12-8	BN
3/4" • 5/8"	RT12-10	BN
1" • 5/8"	RT16-10	BN

(2) Run - (1) Leg	Part Number	GFBN
1/4" • 3/8"	RT4-6	GFBN
1/4" • 5/8"	RT4-10	GFBN
3/8" • 5/32"	RT6-2.5	GFBN
3/8" • 1/4"	RT6-4	GFBN
1/2" • 1/4"	RT8-4	GFBN
1/2" • 5/16"	RT8-5	GFBN
1/2" • 3/8"	RT8-6	GFBN
5/8" • 5/16"	RT10-5	GFBN
5/8" • 3/8"	RT10-6	GFBN
3/4" • 3/8"	RT12-6	GFBN
3/4" • 1/2"	RT12-8	GFBN
3/4" • 5/8"	RT12-10	GFBN
1" • 5/8"	RT16-10	GFBN

Automotive

**Tees - Threaded**

**Tees - Threaded Miniature**  
RoHS Compliant

10-32 UNF • 10-32 Taper • 1/4-28 UNF • 1/16" NPT



Thread - Barbs	Part Number	BN	Thread - Barbs	Part Number	BN
10-32 UNF • 3/32"	T1032-1.5	BN	1/4-28 UNF • 1/8"	T1428-2	BN
10-32 UNF • 1/8"	T1032-2	BN	1/4-28 UNF • 5/32"	T1428-2.5	BN
10-32 UNF • 5/32"	T1032-2.5	BN	1/4-28 UNF • 3/16"	T1428-3	BN
10-32 Taper • 3/32"	T1032T-1.5	BN	1/16" NPT • 3/32"	T1-1.5	BN
10-32 Taper • 1/8"	T1032T-2	BN	1/16" NPT • 1/8"	T1-2	BN
10-32 Taper • 5/32"	T1032T-2.5	BN	1/16" NPT • 5/32"	T1-2.5	BN
1/4-28 UNF • 3/32"	T1428-1.5	BN	1/16" NPT • 3/16"	T1-3	BN

\*1/16" barb size Black Nylon Miniature Threaded Tees are listed in the Industrial Fittings Section

**5 mm • 6 mm Metric Threads**



Thread - Barbs	Part Number	BN	Thread - Barbs	Part Number	BN
5 mm • 3/32"	T5M-1.5	BN	6 mm • 3/32"	T6M-1.5	BN
5 mm • 1/8"	T5M-2	BN	6 mm • 1/8"	T6M-2	BN
5 mm • 5/32"	T5M-2.5	BN	6 mm • 5/32"	T6M-2.5	BN
			6 mm • 3/16"	T6M-3	BN

**Tees - Threaded**  
1/8" to 1" NPT  
RoHS Compliant



**ISO 9001**  
Quality System

\*\*1/16" barb size Black Nylon Threaded Tees are listed in the Industrial Fittings Section

Automotive

Thread - Barbs	Part Number	BN	Thread - Barbs	Part Number	GFBN
1/8" NPT • 1/16"	T2-1*	**	1/8" NPT • 1/16"	T2-1	n/a
1/8" NPT • 3/32"	T2-1.5	BN	1/8" NPT • 3/32"	T2-1.5	n/a
1/8" NPT • 1/8"	T2-2	BN	1/8" NPT • 1/8"	T2-2	GFBN
1/8" NPT • 5/32"	T2-2.5	BN	1/8" NPT • 5/32"	T2-2.5	GFBN
1/8" NPT • 3/16"	T2-3	BN	1/8" NPT • 3/16"	T2-3	GFBN
1/8" NPT • 1/4"	T2-4	BN	1/8" NPT • 1/4"	T2-4	GFBN
1/8" NPT • 5/16"	T2-5	BN	1/8" NPT • 5/16"	T2-5	GFBN
1/8" NPT • 3/8"	T2-6	BN	1/8" NPT • 3/8"	T2-6	GFBN
1/4" NPT • 1/8"	T4-2	BN	1/4" NPT • 1/8"	T4-2	GFBN
1/4" NPT • 5/32"	T4-2.5	BN	1/4" NPT • 5/32"	T4-2.5	GFBN
1/4" NPT • 3/16"	T4-3	BN	1/4" NPT • 3/16"	T4-3	GFBN
1/4" NPT • 1/4"	T4-4	BN	1/4" NPT • 1/4"	T4-4	GFBN
1/4" NPT • 5/16"	T4-5	BN	1/4" NPT • 5/16"	T4-5	GFBN
1/4" NPT • 3/8"	T4-6	BN	1/4" NPT • 3/8"	T4-6	GFBN
1/4" NPT • 1/2"	T4-8	BN	1/4" NPT • 1/2"	T4-8	GFBN
3/8" NPT • 1/4"	T6-4	BN	3/8" NPT • 1/4"	T6-4	GFBN
3/8" NPT • 5/16"	T6-5	BN	3/8" NPT • 5/16"	T6-5	GFBN
3/8" NPT • 3/8"	T6-6	BN	3/8" NPT • 3/8"	T6-6	GFBN
3/8" NPT • 1/2"	T6-8	BN	3/8" NPT • 1/2"	T6-8	GFBN

**Tees - Threaded**  
 1/8" to 1" NPT  
 RoHS Compliant

**Tees-Threaded**



Thread - Barbs	Part Number	BN
1/2" NPT • 1/4"	T8-4	BN
1/2" NPT • 3/8"	T8-6	BN
1/2" NPT • 1/2"	T8-8	BN
1/2" NPT • 5/8"	T8-10	BN
1/2" NPT • 3/4"	T8-12	BN
3/4" NPT • 1/4"	T12-4	BN
3/4" NPT • 3/8"	T12-6	BN
3/4" NPT • 1/2"	T12-8	BN
3/4" NPT • 5/8"	T12-10	BN
3/4" NPT • 3/4"	T12-12	BN
3/4" NPT • 1"	T12-16	BN
1" NPT • 3/4"	T16-12	BN
1" NPT • 1"	T16-16	BN

Thread - Barbs	Part Number	GFBN
1/2" NPT • 1/4"	T8-4	GFBN
1/2" NPT • 3/8"	T8-6	GFBN
1/2" NPT • 1/2"	T8-8	GFBN
1/2" NPT • 5/8"	T8-10	GFBN
1/2" NPT • 3/4"	T8-12	GFBN
3/4" NPT • 1/4"	T12-4	GFBN
3/4" NPT • 3/8"	T12-6	GFBN
3/4" NPT • 1/2"	T12-8	GFBN
3/4" NPT • 5/8"	T12-10	GFBN
3/4" NPT • 3/4"	T12-12	GFBN
3/4" NPT • 1"	T12-16	GFBN
1" NPT • 3/4"	T16-12	GFBN
1" NPT • 1"	T16-16	GFBN

**Y-Connectors**  
 RoHS Compliant



**Y Connectors**



Size	Part Number	BN
1/16"	Y0-1*	**
3/32"	Y0-1.5	BN
1/8"	Y0-2	BN
3/16"	Y0-3	BN
1/4"	Y0-4	BN
3/8"	Y0-6	BN
1/2"	Y0-8	BN
5/8"	Y0-10	BN

Size	Part Number	GFBN
1/16"	Y0-1	n/a
3/32"	Y0-1.5	n/a
1/8"	Y0-2	GFBN
3/16"	Y0-3	GFBN
1/4"	Y0-4	GFBN
3/8"	Y0-6	GFBN
1/2"	Y0-8	GFBN
5/8"	Y0-10	GFBN

\*\*1/16" barb size Black Nylon Ys are listed in the Industrial Fittings Section

Y sizes for up to 1" hose ID - see page 37

Automotive

**Y-Reduction**  
 RoHS Compliant

**Y Reductions**



(2) Barbs • (1) Barb	Part Number	BN
1/4" • 3/8"	RY4-6	BN

(2) Barbs • (1) Barb	Part Number	GFBN
1/4" • 3/8"	RY4-6	GFBN

\*Additional Y Reduction sizes are available in the Natural Materials section - page 38

**Adapters - BSPT**  
RoHS Compliant

**Adapters**



 British Threaded - BSPT Fittings

Thread - Barb	Part Number	BN
1/8" BSPT • 1/8"	A2B-2	BN
1/8" BSPT • 5/32"	A2B-2.5	BN
1/8" NPT • 1/4"	A2B-4	BN
1/8" BSPT • 5/16"	A2B-5	BN
1/8" BSPT • 3/8"	A2B-6	BN
1/4" BSPT • 1/8"	A4B-2	BN
1/4" BSPT • 5/32"	A4B-2.5	BN
1/4" BSPT • 3/16"	A4B-3	BN
1/4" BSPT • 1/4"	A4B-4	BN
1/4" BSPT • 5/16"	A4B-5	BN
1/4" BSPT • 3/8"	A4B-6	BN
1/4" BSPT • 1/2"	A4B-8	BN
3/8" BSPT • 1/4"	A6B-4	BN
3/8" BSPT • 5/16"	A6B-5	BN
3/8" BSPT • 3/8"	A6B-6	BN
3/8" BSPT • 1/2"	A6B-8	BN

Thread - Barb	Part Number	GFBN
1/8" BSPT • 1/8"	A2B-2	GFBN
1/8" BSPT • 5/32"	A2B-2.5	GFBN
1/8" BSPT • 1/4"	A2B-4	GFBN
1/8" BSPT • 5/16"	A2B-5	GFBN
1/8" BSPT • 3/8"	A2B-6	GFBN
1/4" BSPT • 1/8"	A4B-2	GFBN
1/4" BSPT • 5/32"	A4B-2.5	GFBN
1/4" BSPT • 3/16"	A4B-3	GFBN
1/4" BSPT • 1/4"	A4B-4	GFBN
1/4" BSPT • 5/16"	A4B-5	GFBN
1/4" BSPT • 3/8"	A4B-6	GFBN
1/4" BSPT • 1/2"	A4B-8	GFBN
3/8" BSPT • 1/4"	A6B-4	GFBN
3/8" BSPT • 5/16"	A6B-5	GFBN
3/8" BSPT • 3/8"	A6B-6	GFBN
3/8" BSPT • 1/2"	A6B-8	GFBN

**Elbows**

**Elbows - BSPT**  
RoHS Compliant



 British Threaded - BSPT Fittings

Thread - Barb	Part Number	BN
1/8" BSPT • 1/8"	L2B-2	BN
1/8" BSPT • 5/32"	L2B-2.5	BN
1/8" BSPT • 1/4"	L2B-4	BN
1/8" BSPT • 5/16"	L2B-5	BN
1/8" BSPT • 3/8"	L2B-6	BN
1/4" BSPT • 1/8"	L4B-2	BN
1/4" BSPT • 5/32"	L4B-2.5	BN
1/4" BSPT • 3/16"	L4B-3	BN
1/4" BSPT • 1/4"	L4B-4	BN
1/4" BSPT • 5/16"	L4B-5	BN
1/4" BSPT • 3/8"	L4B-6	BN
1/4" BSPT • 1/2"	L4B-8	BN
3/8" BSPT • 1/4"	L6B-4	BN
3/8" BSPT • 5/16"	L6B-5	BN
3/8" BSPT • 3/8"	L6B-6	BN
3/8" BSPT • 1/2"	L6B-8	BN

Thread - Barb	Part Number	GFBN
1/8" BSPT • 1/8"	L2B-2	GFBN
1/8" BSPT • 5/32"	L2B-2.5	GFBN
1/8" BSPT • 1/4"	L2B-4	GFBN
1/8" BSPT • 5/16"	L2B-5	GFBN
1/8" BSPT • 3/8"	L2B-6	GFBN
1/4" BSPT • 1/8"	L4B-2	GFBN
1/4" BSPT • 5/32"	L4B-2.5	GFBN
1/4" BSPT • 3/16"	L4B-3	GFBN
1/4" BSPT • 1/4"	L4B-4	GFBN
1/4" BSPT • 5/16"	L4B-5	GFBN
1/4" BSPT • 3/8"	L4B-6	GFBN
1/4" BSPT • 1/2"	L4B-8	GFBN
3/8" BSPT • 1/4"	L6B-4	GFBN
3/8" BSPT • 5/16"	L6B-5	GFBN
3/8" BSPT • 3/8"	L6B-6	GFBN
3/8" BSPT • 1/2"	L6B-8	GFBN

Automotive 



## Tees



**Tees - Threaded**  
BSPT RoHS Compliant

**British Threaded - BSPT Fittings**

Thread - Barbs	Part Number	BN	Thread - Barbs	Part Number	GFBN
1/8" BSPT • 5/32"	T2B-2.5	BN	1/8" BSPT • 5/32"	T2B-2.5	GFBN
1/8" BSPT • 1/4"	T2B-4	BN	1/8" BSPT • 1/4"	T2B-4	GFBN
1/8" BSPT • 3/8"	T2B-6	BN	1/8" BSPT • 3/8"	T2B-6	GFBN
1/4" BSPT • 5/32"	T4B-2.5	BN	1/4" BSPT • 5/32"	T4B-2.5	GFBN
1/4" BSPT • 3/16"	T4B-3	BN	1/4" BSPT • 3/16"	T4B-3	GFBN
1/4" BSPT • 1/4"	T4B-4	BN	1/4" BSPT • 1/4"	T4B-4	GFBN
1/4" BSPT • 5/16"	T4B-5	BN	1/4" BSPT • 5/16"	T4B-5	GFBN
1/4" BSPT • 3/8"	T4B-6	BN	1/4" BSPT • 3/8"	T4B-6	GFBN
1/4" BSPT • 1/2"	T4B-8	BN	1/4" BSPT • 1/2"	T4B-8	GFBN
3/8" BSPT • 1/4"	T6B-4	BN	3/8" BSPT • 1/4"	T6B-4	GFBN
3/8" BSPT • 5/16"	T6B-5	BN	3/8" BSPT • 5/16"	T6B-5	GFBN
3/8" BSPT • 3/8"	T6B-6	BN	3/8" BSPT • 3/8"	T6B-6	GFBN
3/8" BSPT • 1/2"	T6B-8	BN	3/8" BSPT • 1/2"	T6B-8	GFBN

## Plugs



**Plugs**  
BSPT RoHS Compliant

**British Threaded - BSPT Fittings**

Thread Size	Part Number	BN	Thread Size	Part Number	GFBN
1/8" BSPT	P2B	BN	1/8" BSPT	P2B	GFBN
1/4" BSPT	P4B	BN	1/4" BSPT	P4B	GFBN
3/8" BSPT	P6B	BN	3/8" BSPT	P6B	GFBN

Size	Threads / Inch	Approximate Thread Pitch	Length of Useful Threads
1/8" BSPT	28	.0357 Inches	.250 Inches
1/4" BSPT	19	.0526 Inches	.380 Inches
3/8" BSPT	19	.0526 Inches	.390 Inches

### BSPT - British Standard Pipe Thread Tapered

BSPT threads are based on the Whitworth thread form, which is designed to provide a pressure-tight fit through mating of the threads. This is accomplished by cutting the threads on a taper. Because they are tapered, the thread can only screw into the companion female thread a certain distance before it jams. The standard specifies this distance as a length based on hand-tight engagement; however, a convenient rule-of-thumb for plastic threads is: finger-tight plus 1/2 to 1 turn with a wrench. Do not over-tighten plastic threads - stress on the fitting can result in its failure.

**Automotive Industry Approved Materials:** **BN** Excellent Tensile Strength • **GFBN** High Impact Resistance

Black Nylon BN	Glass-Filled Black Nylon GFBN
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## Marine Fittings

Marine fittings are made from the same grade of impact resistant Glass-Filled Black Nylon as our automotive fittings on the preceding pages; however, special thread molds are used to compensate for nylon threads' tendency to swell in wet conditions. For marine applications requiring non-threaded, barbed fittings, standard automotive fittings may be used.

### Adapters 3/4" NPT RoHS Compliant

#### Marine Adapters



Thread - Barb	Part Number	GFBN
3/4" NPT • 1/4"	A12-4 GFBN-ALU	GFBN
3/4" NPT • 3/8"	A12-6 GFBN-ALU	GFBN
3/4" NPT • 1/2"	A12-8 GFBN-ALU	GFBN
3/4" NPT • 5/8"	A12-10 GFBN-ALU	GFBN
3/4" NPT • 3/4"	A12-12 GFBN-ALU	GFBN
3/4" NPT • 1"	A12-16 GFBN-ALU	GFBN

### Elbows 1/4" NPT RoHS Compliant

#### Marine Elbows



Thread - Barb	Part Number	GFBN
1/4" NPT • 1/8"	L4-2 GFBN-ALU	GFBN
1/4" NPT • 5/32"	L4-2.5 GFBN-ALU	GFBN
1/4" NPT • 1/4"	L4-4 GFBN-ALU	GFBN
1/4" NPT • 5/16"	L4-5 GFBN-ALU	GFBN
1/4" NPT • 3/8"	L4-6 GFBN-ALU	GFBN
1/4" NPT • 1/2"	L4-8 GFBN-ALU	GFBN

### Tees 1/4" NPT RoHS Compliant

#### Marine Tees



Thread - Barb	Part Number	GFBN
1/4" NPT • 1/8"	T4-2 GFBN-ALU	GFBN
1/4" NPT • 5/32"	T4-2.5 GFBN-ALU	GFBN
1/4" NPT • 1/4"	T4-4 GFBN-ALU	GFBN
1/4" NPT • 5/16"	T4-5 GFBN-ALU	GFBN
1/4" NPT • 3/8"	T4-6 GFBN-ALU	GFBN
1/4" NPT • 1/2"	T4-8 GFBN-ALU	GFBN

## Industrial & Utility Materials



Gray Kynar (PVDF)

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

Gray PVDF (Kynar) fittings withstand exposure to adverse conditions and exhibit excellent thermal stability to 150 °C or higher when not under pressure. They are resistant to a very wide range of chemicals, as well as, organic acids generated in the production of biofuels. Kynar is compatible with technologies that consume or produce ethanol and biodiesel. It is stronger than many other plastic materials including: nylon, polypropylene and polyethylene. PVDF fittings are sold in 100 unit multiples only.



Biofuels Kit

**Gray PVDF Biofuels Kits** - Large and small biofuels kits contain an assortment of common configurations and barb sizes. See page 69



White Polypropylene (WP)

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

White Polypropylene fittings offer a low cost alternative when compared with other materials. The bright white material has a wide range of uses where pressures and temperatures are moderate. Due to its bright white color, the fittings present a clean appearance. WP fittings are sold in 100 unit multiples only.



White Nylon (WN)

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

White Nylon offers good tensile strength and good thermal stability at temperatures to 135° C. Nylon is one of the most widely used plastic materials due to its durability and relatively low cost. It is an excellent choice for handling a variety of fluids. It also has wide application in moderate pressure pneumatic applications.



Black Nylon (BN)

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

Black Nylon is one of the most widely used industrial and utility materials. Most black nylon fittings are made from the same ultra-tough nylon as our automotive fittings; however, some miniature sizes are molded from the same material as Natural Nylon with a black colorant added. Nylon fittings are frequently used in automotive vacuum and fuel line applications, as well as for general fluid handling. Nylon has good chemical resistance, but please check compatibility before determining its suitability for your application. Black Nylon fittings are available in kits - see pages 67-69

*Material lot traceability certificates are available for Black Nylon fittings*

## Industrial Materials

## Adapters

Miniature  
RoHS Compliant

1032 UNF • 10-32 Taper • 1/4-28 UNF • 1/16" NPT

## Adapters



Thread - Barb	Part Number	PVDF	WP	WN	BN
10-32 UNF • 1/16"	A1032-1	PVDF	WP	WN	BN
10-32 UNF • 3/32"	A1032-1.5	PVDF	WP	WN	BN
10-32 UNF • 1/8"	A1032-2	PVDF	WP	WN	BN
10-32 UNF • 5/32"	A1032-2.5	PVDF	WP	WN	BN
10-32 Taper • 1/16"	A1032T-1	PVDF	WP	WN	BN
10-32 Taper • 3/32"	A1032T-1.5	PVDF	WP	WN	BN
10-32 Taper • 1/8"	A1032T-2	PVDF	WP	WN	BN
10-32 Taper • 5/32"	A1032T-2.5	PVDF	WP	WN	BN
1/4-28 UNF • 1/16"	A1428-1	PVDF	WP	WN	BN
1/4-28 UNF • 3/32"	A1428-1.5	PVDF	WP	WN	BN
1/4-28 UNF • 1/8"	A1428-2	PVDF	WP	WN	BN
1/4-28 UNF • 5/32"	A1428-2.5	PVDF	WP	WN	BN
1/4-28 UNF • 3/16"	A1428-3	PVDF	WP	WN	BN
1/16" NPT • 1/16"	A1-1	PVDF	WP	WN	BN
1/16" NPT • 3/32"	A1-1.5	PVDF	WP	WN	BN
1/16" NPT • 1/8"	A1-2	PVDF	WP	WN	BN
1/16" NPT • 5/32"	A1-2.5	PVDF	WP	WN	BN
1/16" NPT • 3/16"	A1-3	PVDF	WP	WN	BN
1/16" NPT • 1/4"	A1-4	PVDF	WP	WN	BN
<b>5 mm • 6 mm Metric Threads</b>					
5 mm • 1/16"	A5M-1	PVDF	WP	WN	BN
5 mm • 3/32"	A5M-1.5	PVDF	WP	WN	BN
5 mm • 1/8"	A5M-2	PVDF	WP	WN	BN
5 mm • 5/32"	A5M-2.5	PVDF	WP	WN	BN
6 mm • 1/16"	A6M-1	PVDF	WP	WN	BN
6 mm • 3/32"	A6M-1.5	PVDF	WP	WN	BN
6 mm • 1/8"	A6M-2	PVDF	WP	WN	BN
6 mm • 5/32"	A6M-2.5	PVDF	WP	WN	BN
6 mm • 3/16"	A6M-3	PVDF	WP	WN	BN

PVDF and WP sold in units of 100 or 500 pieces

Adapters - 1/8" to 1" NPT  
RoHS Compliant

NPT Adapters



Thread - Barb	Part Number	PVDF	WP	WN	BN
1/8" NPT • 1/16"	A2-1	PVDF	WP	WN	BN
1/8" NPT • 3/32"	A2-1.5	PVDF	WP	WN	BN
1/8" NPT • 1/8"	A2-2	PVDF	WP	WN	BN

Gray Kynar® PVDF

White Polypropylene WP

White Nylon WN

Black Nylon BN

**Adapters - 1/8" to 1" NPT**  
RoHS Compliant

**Adapters**



PVDF and WP sold in units of 100 or 500 pieces

Thread - Barb	Part Number	PVDF	WP	WN	BN
1/8" NPT • 5/32"	A2-2.5	PVDF	WP	WN	BN
1/8" NPT • 3/16"	A2-3	PVDF	WP	WN	BN
1/8" NPT • 1/4"	A2-4	PVDF	WP	WN	BN
1/8" NPT • 5/16"	A2-5	PVDF	WP	WN	BN
1/8" NPT • 3/8"	A2-6	PVDF	WP	WN	BN
1/4" NPT • 1/8"	A4-2	PVDF	WP	WN	BN
1/4" NPT • 5/32"	A4-2.5	PVDF	WP	WN	BN
1/4" NPT • 3/16"	A4-3	PVDF	WP	WN	BN
1/4" NPT • 1/4"	A4-4	PVDF	WP	WN	BN
1/4" NPT • 5/16"	A4-5	PVDF	WP	WN	BN
1/4" NPT • 3/8"	A4-6	PVDF	WP	WN	BN
1/4" NPT • 1/2"	A4-8	PVDF	WP	WN	BN
3/8" NPT • 1/4"	A6-4	PVDF	WP	WN	BN
3/8" NPT • 5/16"	A6-5	PVDF	WP	WN	BN
3/8" NPT • 3/8"	A6-6	PVDF	WP	WN	BN
3/8" NPT • 1/2"	A6-8	PVDF	WP	WN	BN
1/2" NPT • 1/4"	A8-4	PVDF	WP	WN	BN
1/2" NPT • 5/16"	A8-5	PVDF	WP	WN	BN
1/2" NPT • 3/8"	A8-6	PVDF	WP	WN	BN
1/2" NPT • 1/2"	A8-8	PVDF	WP	WN	BN
1/2" NPT • 5/8"	A8-10	PVDF	WP	WN	BN
1/2" NPT • 3/4"	A8-12	PVDF	WP	WN	BN
3/4" NPT • 1/4"	A12-4	PVDF	WP	WN	BN
3/4" NPT • 3/8"	A12-6	PVDF	WP	WN	BN
3/4" NPT • 1/2"	A12-8	PVDF	WP	WN	BN
3/4" NPT • 5/8"	A12-10	PVDF	WP	WN	BN
3/4" NPT • 3/4"	A12-12	PVDF	WP	WN	BN
3/4" NPT • 1"	A12-16	PVDF	WP	WN	BN
1" NPT • 1"	A16-16	PVDF	WP	WN	BN

Industrial & Utility

**Adapters**  
Miniature Bulkhead  
RoHS Compliant

**Bulkhead Adapters**



Barb - Barb 1 2	Part Number	PVDF	WP	WN	BN
<b>10-32 UNF Thread (No Flange)</b>					
1/16" • 1/16"	BH 1032 1-1	special order	special order	WN	BN
3/32" • 1/16"	BH 1032 1.5-1	special order	special order	WN	BN
3/32" • 3/32"	BH 1032 1.5-1.5	special order	special order	WN	BN

**Adapters**  
Miniature Bulkhead  
RoHS Compliant

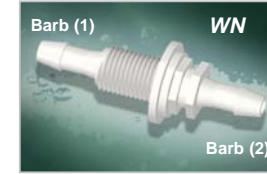


PVDF and WP sold in units of 100 or 500 pieces



Barb - Barb 1 2	Part Number	PVDF	WP	WN	BN
<b>1/4-28 UNF Thread (No Flange)</b>					
1/8" • 1/16"	BH 1428 2-1	special order	special order	WN	BN
1/8" • 3/32"	BH 1428 2-1.5	special order	special order	WN	BN
1/8" • 1/8"	BH 1428 2-2	special order	special order	WN	BN

**Adapters**  
Miniature Bulkhead  
RoHS Compliant



Barb - Barb 1 2	Part Number	PVDF	WP	WN	BN
<b>5/16-24 UNF Thread (With Flange)</b>					
5/32" • 1/16"	BH 51624 2.5-1	special order	special order	WN	BN
5/32" • 3/32"	BH 51624 2.5-1.5	special order	special order	WN	BN
5/32" • 1/8"	BH 51624 2.5-2	special order	special order	WN	BN
5/32" • 5/32"	BH 51624 2.5-2.5	special order	special order	WN	BN
3/16" • 1/16"	BH 51624 3-1	special order	special order	WN	BN
3/16" • 3/32"	BH 51624 3-1.5	special order	special order	WN	BN
3/16" • 1/8"	BH 51624 3-2	special order	special order	WN	BN
3/16" • 5/32"	BH 51624 3-2.5	special order	special order	WN	BN
3/16" • 3/16"	BH 51624 3-3	special order	special order	WN	BN
<b>1/8" Straight NPSM Thread (With Flange)</b>					
3/16" • 1/16"	BH 2S 3-1	special order	special order	WN	BN
3/16" • 3/32"	BH 2S 3-1.5	special order	special order	WN	BN
3/16" • 1/8"	BH 2S 3-2	special order	special order	WN	BN
3/16" • 5/32"	BH 2S 3-2.5	special order	special order	WN	BN
3/16" • 3/16"	BH 2S 3-3	special order	special order	WN	BN
1/4" • 1/16"	BH 2S 4-1	special order	special order	WN	BN
1/4" • 3/32"	BH 2S 4-1.5	special order	special order	WN	BN
1/4" • 1/8"	BH 2S 4-2	special order	special order	WN	BN
1/4" • 5/32"	BH 2S 4-2.5	special order	special order	WN	BN
1/4" • 3/16"	BH 2S 4-3	special order	special order	WN	BN
1/4" • 1/4"	BH 2S 4-4	special order	special order	WN	BN

See Natural Materials section for additional Bulkhead materials offerings

Special Order - non-inventory items may restricted to higher minimum quantity requirements

Gray Kynar® PVDF	White Polypropylene WP	White Nylon WN	Black Nylon BN
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Industrial & Utility



## Bulkhead Adapters

### Adapters

Miniature Bulkhead  
RoHS Compliant

PVDF and WP sold in units of 100 or 500 pieces

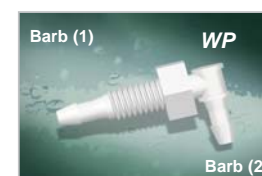


Barb - Barb 1 2	Part Number	PVDF	WP	WN	BN
<b>1/4" Straight NPSM Thread (With Flange)</b>					
3/16" • 1/16"	BH 4S 3-1	special order	special order	WN	BN
3/16" • 3/32"	BH 4S 3-1.5	special order	special order	WN	BN
3/16" • 1/8"	BH 4S 3-2	special order	special order	WN	BN
3/16" • 5/32"	BH 4S 3-2.5	special order	special order	WN	BN
3/16" • 3/16"	BH 4S 3-3	special order	special order	WN	BN
1/4" • 1/16"	BH 4S 4-1	special order	special order	WN	BN
1/4" • 3/32"	BH 4S 4-1.5	special order	special order	WN	BN
1/4" • 1/8"	BH 4S 4-2	special order	special order	WN	BN
1/4" • 5/32"	BH 4S 4-2.5	special order	special order	WN	BN
1/4" • 3/16"	BH 4S 4-3	special order	special order	WN	BN

Standard size Bulkhead Adapters page 95

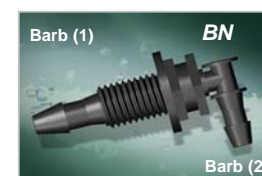
90° Bulkhead - Miniature  
RoHS Compliant

## 90° Bulkhead



Barb - Barb 1 2	Part Number	PVDF	WP	WN	BN
<b>10-32 UNF Thread (No Flange)</b>					
3/32" • 1/16"	BHL 1032 1.5-1	special order	special order	WN	BN
3/32" • 3/32"	BHL 1032 1.5-1.5	special order	special order	WN	BN
<b>1/4-28 UNF Thread (No Flange)</b>					
1/8" • 1/16"	BHL 1428 2-1	special order	special order	WN	BN
1/8" • 3/32"	BHL 1428 2-1.5	special order	special order	WN	BN
1/8" • 1/8"	BHL 1428 2-2	special order	special order	WN	BN

90° Bulkhead - Miniature  
RoHS Compliant



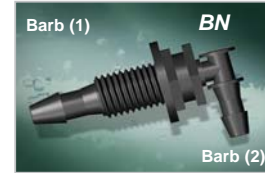
Barb - Barb 1 2	Part Number	PVDF	WP	WN	BN
<b>5/16-24 UNF Thread (With Flange)</b>					
5/32" • 1/16"	BHL 51624 2.5-1	special order	special order	WN	BN
5/32" • 3/32"	BHL 51624 2.5-1.5	special order	special order	WN	BN
5/32" • 1/8"	BHL 51624 2.5-2	special order	special order	WN	BN
5/32" • 5/32"	BHL 51624 2.5-2.5	special order	special order	WN	BN

Special Order - non-inventory items may be restricted to higher minimum quantity requirements

continued  
**90° Bulkhead** - Miniature  
 RoHS Compliant

**90° Bulkhead**

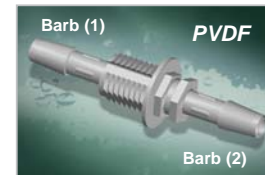
*PVDF and WP sold in units of 100 or 500 pieces*



Barb - Barb 1 2	Part Number	PVDF	WP	WN	BN
<b>1/8" NPSM Straight Thread (With Flange)</b>					
1/4" • 1/16"	BHL 2S 4-1	special order	special order	WN	BN
1/4" • 3/32"	BHL 2S 4-1.5	special order	special order	WN	BN
1/4" • 1/8"	BHL 2S 4-2	special order	special order	WN	BN
1/4" • 5/32"	BHL 2S 4-2.5	special order	special order	WN	BN
1/4" • 3/16"	BHL 2S 4-3	special order	special order	WN	BN
1/4" • 1/4"	BHL 2S 4-4	special order	special order	WN	BN
<b>1/4" NPSM Straight Thread (With Flange)</b>					
1/4" • 1/16"	BHL 4S 4-1	special order	special order	WN	BN
1/4" • 3/32"	BHL 4S 4-1.5	special order	special order	WN	BN
1/4" • 1/8"	BHL 4S 4-2	special order	special order	WN	BN
1/4" • 5/32"	BHL 4S 4-2.5	special order	special order	WN	BN
1/4" • 3/16"	BHL 4S 4-3	special order	special order	WN	BN
1/4" • 1/4"	BHL 4S 4-4	special order	special order	WN	BN

**Adapters - Bulkhead**  
 Standard  
 RoHS Compliant

**Bulkhead Standard**



Keyway feature prevents rotation when used in a keyed hole

Barb - Barb 1 2	Part Number	PVDF	WP	WN	BN
<b>1/4" NPSM Straight Thread (With Flange)</b>					
1/4" • 1/4"	BH 4S 4-4	PVDF	WP	WN	BN
5/16" • 1/4"	BH 4S 5-4	PVDF	WP	WN	BN
5/16" • 5/16"	BH 4S 5-5	PVDF	WP	WN	BN
3/8" • 1/4"	BH 4S 6-4	PVDF	WP	WN	BN
3/8" • 5/16"	BH 4S 6-5	PVDF	WP	WN	BN
3/8" • 3/8"	BH 4S 6-6	PVDF	WP	WN	BN

**Bulkhead & Panel Mount - Nuts**



Thread Spec.	Part Number	BN	Natural Nylon
10-32 UNF Thread	HEX1032	HEX1032 BN	HEX1032 NN
1/4-28 UNF Thread	HEX1428	HEX1428 BN	HEX1428 NN
5/16-24 UNF Thread	HEX51624	HEX51624 BN	HEX51624 NN
1/8" NPSF Straight Thread	HEX1827	HEX1827 BN	HEX1827 NN
1/4" NPSF Straight Thread	G102-150	G102-150-78	G102-150-18

Gray Kynar® PVDF	White Polypropylene WP	White Nylon WN	Black Nylon BN
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Industrial & Utility

**Bulkhead - Color Code Clips**

Part Number	SCR BLN	SCR YN	SCR BN	SCR OR	SCR WN	SCR GN	SCR RN	SCRPN
Standard Bulkhead Clip Rings Fit Standard Size Bulkheads Only								
Material: Colored Nylon	Blue	Yellow	Black	Orange	White	Green	Red	Purple

Miniature Panel Mount and Bulkhead Mounting Rings - Page 22



**Adapter Panel Mount**  
Miniature  
RoHS Compliant



Thread - Barb	Part Number	PVDF	WP	WN	BN
<b>10-32 UNF Thread (No Flange)</b>					
1032 UNF • 1/16"	PM 1032-1	special order	special order	WN	BN
1032 UNF • 3/32"	PM 1032-1.5	special order	special order	WN	BN
1032 UNF • 1/8"	PM 1032-2	special order	special order	WN	BN
1032 UNF • 5/32"	PM 1032-2.5	special order	special order	WN	BN
<b>1/4-28 UNF Thread (No Flange)</b>					
1/4-28 UNF • 1/16"	PM 1428-1	special order	special order	WN	BN
1/4-28 UNF • 3/32"	PM 1428-1.5	special order	special order	WN	BN
1/4-28 UNF • 1/8"	PM 1428-2	special order	special order	WN	BN
1/4-28 UNF • 5/32"	PM 1428-2.5	special order	special order	WN	BN
1/4-28 UNF • 3/16"	PM 1428-3	special order	special order	WN	BN

Continued →



Oetiker clamps and pincers page 63-65  
One of the largest selections of clamps in the USA



Eldon James 'Single Barb' fittings allow tubing to be compressed behind the barb. This creates a seal that is far more secure than what can be achieved using fittings with multiple barb configurations (sawtooth design).

Industrial Materials

**Adapter Panel Mount**

Miniature  
RoHS Compliant

PVDF and WP sold in units of 100 or 500 pieces



Thread - Barb	Part Number	PVDF	WP	WN	BN
<b>5/16-24 UNF Thread (With Flange)</b>					
5/16-24 UNF • 1/16"	PM 51624-1	special order	special order	WN	BN
5/16-24 UNF • 3/32"	PM 51624-1.5	special order	special order	WN	BN
5/16-24 UNF • 1/8"	PM 51624-2	special order	special order	WN	BN
5/16-24 UNF • 5/32"	PM 51624-2.5	special order	special order	WN	BN
5/16-24 UNF • 3/16"	PM 51624-3	special order	special order	WN	BN
5/16-24 UNF • 1/4"	PM 51624-4	special order	special order	WN	BN
<b>1/8" NPSM Straight Thread (With Flange)</b>					
1/8" NPSM • 1/16"	PM 2S-1	special order	special order	WN	BN
1/8" NPSM • 3/32"	PM 2S-1.5	special order	special order	WN	BN
1/8" NPSM • 1/8"	PM 2S-2	special order	special order	WN	BN
1/8" NPSM • 5/32"	PM 2S-2.5	special order	special order	WN	BN
1/8" NPSM • 3/16"	PM 2S-3	special order	special order	WN	BN
1/8" NPSM • 1/4"	PM 2S-4	special order	special order	WN	BN
<b>1/4" NPSM Straight Thread (With Flange)</b>					
1/4" NPSM • 1/16"	PM 4S-1	special order	special order	WN	BN
1/4" NPSM • 3/32"	PM 4S-1.5	special order	special order	WN	BN
1/4" NPSM • 1/8"	PM 4S-2	special order	special order	WN	BN

Special Order - non-inventory items may be restricted to higher minimum quantity requirements



**Adapter Panel Mounts**

Standard Size  
RoHS Compliant

Standard Size



Thread - Barb	Part Number	PVDF	WP	WN	BN
<b>1/4" NPSM Straight Thread (With Flange)</b>					
1/4" NPSM • 5/32"	PM 4S-2.5	PVDF	WP	WN	BN
1/4" NPSM • 3/16"	PM 4S-3	PVDF	WP	WN	BN
1/4" NPSM • 1/4"	PM 4S-4	PVDF	WP	WN	BN
1/4" NPSM • 5/16"	PM 4S-5	PVDF	WP	WN	BN
1/4" NPSM • 3/8"	PM 4S-6	PVDF	WP	WN	BN
1/4" NPSM • 1/2"	PM 4S-8	PVDF	WP	WN	BN



*Handy Clamps - offer the most economical clamping solution available.*

- No special tools required
- Easily removed and reusable
- Strong, lightweight nylon material

Industrial & Utility

**90° Panel Mount**  
Miniature  
RoHS Compliant

**90° Panel Mount**



Thread - Barb	Part Number	PVDF	WP	WN	BN
<b>10-32 UNF Thread (No Flange)</b>					
1032 UNF • 1/16"	PML 1032-1	special order	special order	WN	BN
1032 UNF • 3/32"	PML 1032-1.5	special order	special order	WN	BN
1032 UNF • 1/8"	PML 1032-2	special order	special order	WN	BN
<b>1/4-28 UNF Thread (No Flange)</b>					
1/4-28 UNF • 1/16"	PML 1428-1	special order	special order	WN	BN
1/4-28 UNF • 3/32"	PML 1428-1.5	special order	special order	WN	BN
1/4-28 UNF • 1/8"	PML 1428-2	special order	special order	WN	BN
1/4-28 UNF • 5/32"	PML 1428-2.5	special order	special order	WN	BN



**90° Panel Mount**

**90° Panel Mount**  
Miniature  
RoHS Compliant

*PVDF and WP sold in units of 100 or 500 pieces*

Thread - Barb	Part Number	PVDF	WP	WN	BN
<b>5/16-24 UNF Thread (With Flange)</b>					
5/16-24 UNF • 1/16"	PML 51624-1	special order	special order	WN	BN
5/16-24 UNF • 3/32"	PML 51624-1.5	special order	special order	WN	BN
5/16-24 UNF • 1/8"	PML 51624-2	special order	special order	WN	BN
5/16-24 UNF • 5/32"	PML 51624-2.5	special order	special order	WN	BN
<b>1/8" Straight NPSM Thread (With Flange)</b>					
1/8" NPSM • 1/16"	PML 2S-1	special order	special order	WN	BN
1/8" NPSM • 3/32"	PML 2S-1.5	special order	special order	WN	BN
1/8" NPSM • 1/8"	PML 2S-2	special order	special order	WN	BN
1/8" NPSM • 5/32"	PML 2S-2.5	special order	special order	WN	BN
1/8" NPSM • 3/16"	PML 2S-3	special order	special order	WN	BN
1/8" NPSM • 1/4"	PML 2S-4	special order	special order	WN	BN
<b>1/4" NPSM Thread (With Flange)</b>					
1/4" NPSM • 1/16"	PML 4S-1	special order	special order	WN	BN
1/4" NPSM • 3/32"	PML 4S-1.5	special order	special order	WN	BN
1/4" NPSM • 1/8"	PML 4S-2	special order	special order	WN	BN
1/4" NPSM • 5/32"	PML 4S-2.5	special order	special order	WN	BN
1/4" NPSM • 3/16"	PML 4S-3	special order	special order	WN	BN
1/4" NPSM • 1/4"	PML 4S-4	special order	special order	WN	BN

Special Order - non-inventory items may be restricted to higher minimum quantity requirements

Gray Kynar® PVDF	White Polypropylene WP	White Nylon WN	Black Nylon BN
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Industrial & Utility

## Couplers

**Couplers - Straight**  
RoHS Compliant

*PVDF and WP sold in units of 100 or 500 pieces*



Barb Size	Part Number	PVDF	WP	WN	BN
1/16"	C0-1	PVDF	WP	WN	BN
3/32"	C0-1.5	PVDF	WP	WN	BN
1/8"	C0-2	PVDF	WP	WN	BN
5/32"	C0-2.5	PVDF	WP	WN	BN
3/16"	C0-3	PVDF	WP	WN	BN
1/4"	C0-4	PVDF	WP	WN	BN
5/16"	C0-5	PVDF	WP	WN	BN
3/8"	C0-6	PVDF	WP	WN	BN
1/2"	C0-8	PVDF	WP	WN	BN
5/8"	C0-10	PVDF	WP	WN	BN
3/4"	C0-12	PVDF	WP	WN	BN
1"	C0-16	PVDF	WP	WN	BN

## Reducers

**Couplers - Reduction**  
RoHS Compliant

*PVDF and WP sold in units of 100 or 500 pieces*



Barb Sizes	Part Number	PVDF	WP	WN	BN
3/32" • 1/16"	C1.5-1	PVDF	WP	WN	BN
1/8" • 1/16"	C2-1	PVDF	WP	WN	BN
1/8" • 3/32"	C2-1.5	PVDF	WP	WN	BN
5/32" • 1/16"	C2.5-1	PVDF	WP	WN	BN
5/32" • 3/32"	C2.5-1.5	PVDF	WP	WN	BN
5/32" • 1/8"	C2.5-2	PVDF	WP	WN	BN
5/16" • 5/32"	C5-2.5	PVDF	WP	WN	BN
3/16" • 1/16"	C3-1	PVDF	WP	WN	BN
3/16" • 3/32"	C3-1.5	PVDF	WP	WN	BN
3/16" • 1/8"	C3-2	PVDF	WP	WN	BN
3/16" • 5/32"	C3-2.5	PVDF	WP	WN	BN
1/4" • 1/16"	C4-1	PVDF	WP	WN	BN
1/4" • 3/32"	C4-1.5	PVDF	WP	WN	BN
1/4" • 1/8"	C4-2	PVDF	WP	WN	BN
1/4" • 5/32"	C4-2.5	PVDF	WP	WN	BN
1/4" • 3/16"	C4-3	PVDF	WP	WN	BN
5/16" • 5/32"	C5-2.5	PVDF	WP	WN	BN
5/16" • 1/4"	C5-4	PVDF	WP	WN	BN
3/8" • 1/8"	C6-2	PVDF	WP	WN	BN
3/8" • 5/32"	C6-2.5	PVDF	WP	WN	BN
3/8" • 1/4"	C6-4	PVDF	WP	WN	BN
3/8" • 5/16"	C6-5	PVDF	WP	WN	BN

Industrial & Utility



## Couplers - Reduction

RoHS Compliant (continued)

### Reducers



Barb Sizes	Part Number	PVDF	WP	WN	BN
1/2" • 1/4"	C8-4	PVDF	WP	WN	BN
1/2" • 5/16"	C8-5	PVDF	WP	WN	BN
1/2" • 3/8"	C8-6	PVDF	WP	WN	BN
5/8" • 1/4"	C10-4	PVDF	WP	WN	BN
5/8" • 5/16"	C10-5	PVDF	WP	WN	BN
5/8" • 3/8"	C10-6	PVDF	WP	WN	BN
5/8" • 1/2"	C10-8	PVDF	WP	WN	BN
3/4" • 3/8"	C12-6	PVDF	WP	WN	BN
3/4" • 1/2"	C12-8	PVDF	WP	WN	BN
3/4" • 5/8"	C12-10	PVDF	WP	WN	BN
1" • 1/2"	C16-8	PVDF	WP	WN	BN
1" • 5/8"	C16-10	PVDF	WP	WN	BN
1" • 3/4"	C16-12	PVDF	WP	WN	BN

## Cross Fittings - X's

RoHS Compliant

### Crosses

PVDF and WP sold in units of 100 or 500 pieces



Barb Size	Part Number	PVDF	WP	WN	BN
1/16"	X0-1	PVDF	WP	WN	BN
3/32"	X0-1.5	PVDF	WP	WN	BN
1/8"	X0-2	PVDF	WP	WN	BN
5/32"	X0-2.5	PVDF	WP	WN	BN
3/16"	X0-3	PVDF	WP	WN	BN
1/4"	X0-4	PVDF	WP	WN	BN

## Elbows - Equal

RoHS Compliant

### Elbows



Barb Size	Part Number	PVDF	WP	WN	BN
1/16"	L0-1	PVDF	WP	WN	BN
3/32"	L0-1.5	PVDF	WP	WN	BN
1/8"	L0-2	PVDF	WP	WN	BN
5/32"	L0-2.5	PVDF	WP	WN	BN
3/16"	L0-3	PVDF	WP	WN	BN

Gray Kynar® PVDF

White Polypropylene WP

White Nylon WN

Black Nylon BN

Continued →

**Elbows - Equal**  
RoHS Compliant (continued)



Barb Size	Part Number	PVDF	WP	WN	BN
1/4"	L0-4	PVDF	WP	WN	BN
5/16"	L0-5	PVDF	WP	WN	BN
3/8"	L0-6	PVDF	WP	WN	BN
1/2"	L0-8	PVDF	WP	WN	BN
5/8"	L0-10	PVDF	WP	WN	BN
3/4"	L0-12	PVDF	WP	WN	BN
1"	L0-16	PVDF	WP	WN	BN

**Elbows - Miniature Reduction**  
RoHS Compliant



Barb Sizes	Part Number	PVDF	WP	WN	BN
3/32" • 1/16"	RL1.5-1	PVDF	WP	WN	BN
1/8" • 1/16"	RL2-1	PVDF	WP	WN	BN
1/8" • 3/32"	RL2-1.5	PVDF	WP	WN	BN

Barb Sizes	Part Number	PVDF	WP	WN	BN
5/32" • 1/16"	RL2.5-1	special order	special order	WN	BN
5/32" • 3/32"	RL2.5-1.5	special order	special order	WN	BN
5/32" • 1/8"	RL2.5-2	special order	special order	WN	BN
3/16" • 1/16"	RL3-1	special order	special order	WN	BN
3/16" • 3/32"	RL3-1.5	special order	special order	WN	BN
3/16" • 1/8"	RL3-2	special order	special order	WN	BN
3/16" • 5/32"	RL3-2.5	special order	special order	WN	BN
1/4" • 1/16"	RL4-1	special order	special order	WN	BN
1/4" • 3/32"	RL4-1.5	special order	special order	WN	BN
1/4" • 1/8"	RL4-2	special order	special order	WN	BN
1/4" • 5/32"	RL4-2.5	special order	special order	WN	BN
1/4" • 3/16"	RL4-3	special order	special order	WN	BN

Special Order - non-inventory items may be restricted to higher minimum quantity requirements

*PVDF and WP sold in units of 100 or 500 pieces*

Gray Kynar® PVDF	White Polypropylene WP	White Nylon WN	Black Nylon BN
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Industrial & Utility

**Elbows - Reduction**  
RoHS Compliant  
(Continued)

**Reduction Elbows**

*PVDF and WP sold in units of 100 or 500 pieces*



Barb Sizes	Part Number	PVDF	WP	WN	BN
5/16" • 1/4"	RL5-4	PVDF	WP	WN	BN
3/8" • 1/4"	RL6-4	PVDF	WP	WN	BN
1/2" • 1/4"	RL8-4	PVDF	WP	WN	BN
1/2" • 3/8"	RL8-6	PVDF	WP	WN	BN

**Elbows**  
Threaded Miniature  
RoHS Compliant

**Elbows-Threaded**

10-32 UNF • 10-32 Taper • 1/4-28 UNF • 1/16" NPT



Thread - Barb	Part Number	PVDF	WP	WN	BN
10-32 UNF • 1/16"	L1032-1	PVDF	WP	WN	BN
10-32 UNF • 3/32"	L1032-1.5	PVDF	WP	WN	BN
10-32 UNF • 1/8"	L1032-2	PVDF	WP	WN	BN
10-32 Taper • 1/16"	L1032T-1	PVDF	WP	WN	BN
10-32 Taper • 3/32"	L1032T-1.5	PVDF	WP	WN	BN
10-32 Taper • 1/8"	L1032T-2	PVDF	WP	WN	BN
1/4-28 UNF • 1/16"	L1428-1	PVDF	WP	WN	BN
1/4-28 UNF • 3/32"	L1428-1.5	PVDF	WP	WN	BN
1/4-28 UNF • 1/8"	L1428-2	PVDF	WP	WN	BN
1/4-28 UNF • 5/32"	L1428-2.5	PVDF	WP	WN	BN
1/4-28 UNF • 3/16"	L1428-3	PVDF	WP	WN	BN
1/16" NPT • 1/16"	L1-1	PVDF	WP	WN	BN
1/16" NPT • 3/32"	L1-1.5	PVDF	WP	WN	BN
1/16" NPT • 1/8"	L1-2	PVDF	WP	WN	BN
1/16" NPT • 5/32"	L1-2.5	PVDF	WP	WN	BN
1/16" NPT • 3/16"	L1-3	PVDF	WP	WN	BN
1/16" NPT • 1/4"	L1-4	PVDF	WP	WN	BN

**Elbows - Metric Threaded Miniature**  
RoHS Compliant

**5 mm • 6 mm Metric Threads**

Thread - Barb	Part Number	PVDF	WP	WN	BN
5 mm • 1/16"	L5M-1	special order	special order	WN	BN
5 mm • 3/32"	L5M-1.5	special order	special order	WN	BN
5 mm • 1/8"	L5M-2	special order	special order	WN	BN
5 mm • 5/32"	L5M-2.5	special order	special order	WN	BN
6 mm • 1/16"	L6M-1	special order	special order	WN	BN
6 mm • 3/32"	L6M-1.5	special order	special order	WN	BN
6 mm • 1/8"	L6M-2	special order	special order	WN	BN
6 mm • 5/32"	L6M-2.5	special order	special order	WN	BN
6 mm • 3/16"	L6M-3	special order	special order	WN	BN

**Elbows - Threaded**  
 1/8" to 1" NPT  
 RoHS Compliant

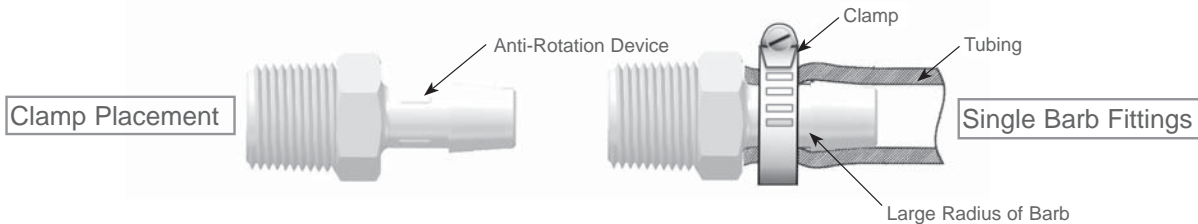
*Elbows-Threaded*



PVDF and WP sold in units of 100 or 500 pieces

Thread - Barb	Part Number	PVDF	WP	WN	BN
1/8" NPT • 1/16"	L2-1	PVDF	WP	WN	BN
1/8" NPT • 3/32"	L2-1.5	PVDF	WP	WN	BN
1/8" NPT • 1/8"	L2-2	PVDF	WP	WN	BN
1/8" NPT • 5/32"	L2-2.5	PVDF	WP	WN	BN
1/8" NPT • 3/16"	L2-3	PVDF	WP	WN	BN
1/8" NPT • 1/4"	L2-4	PVDF	WP	WN	BN
1/8" NPT • 5/16"	L2-5	PVDF	WP	WN	BN
1/8" NPT • 3/8"	L2-6	PVDF	WP	WN	BN
1/4" NPT • 1/8"	L4-2	PVDF	WP	WN	BN
1/4" NPT • 5/32"	L4-2.5	PVDF	WP	WN	BN
1/4" NPT • 3/16"	L4-3	PVDF	WP	WN	BN
1/4" NPT • 1/4"	L4-4	PVDF	WP	WN	BN
1/4" NPT • 5/16"	L4-5	PVDF	WP	WN	BN
1/4" NPT • 3/8"	L4-6	PVDF	WP	WN	BN
1/4" NPT • 1/2"	L4-8	PVDF	WP	WN	BN
3/8" NPT • 1/4"	L6-4	PVDF	WP	WN	BN
3/8" NPT • 5/16"	L6-5	PVDF	WP	WN	BN
3/8" NPT • 3/8"	L6-6	PVDF	WP	WN	BN
3/8" NPT • 1/2"	L6-8	PVDF	WP	WN	BN
1/2" NPT • 1/4"	L8-4	PVDF	WP	WN	BN
1/2" NPT • 3/8"	L8-6	PVDF	WP	WN	BN
1/2" NPT • 1/2"	L8-8	PVDF	WP	WN	BN
1/2" NPT • 5/8"	L8-10	PVDF	WP	WN	BN
1/2" NPT • 3/4"	L8-12	PVDF	WP	WN	BN
3/4" NPT • 1/4"	L12-4	PVDF	WP	WN	BN
3/4" NPT • 3/8"	L12-6	PVDF	WP	WN	BN
3/4" NPT • 1/2"	L12-8	PVDF	WP	WN	BN
3/4" NPT • 5/8"	L12-10	PVDF	WP	WN	BN
3/4" NPT • 3/4"	L12-12	PVDF	WP	WN	BN
3/4" NPT • 1"	L12-16	PVDF	WP	WN	BN
1" NPT • 3/4"	L16-12	PVDF	WP	WN	BN
1" NPT • 1"	L16-16	PVDF	WP	WN	BN

Industrial & Utility



**Torque Spec. for Plastic Threads:** finger tight plus 1/2 to 1 turn with a wrench

## Female Junctions

10-32F UNF  
RoHS Compliant

### Female Junctions



Female Thread - Style	Part Number	PVDF	WP	WN	BN
10-32F UNF • Straight	1032F-C	n/a	n/a	n/a	BN
10-32F UNF • Elbow	1032F-E	n/a	n/a	n/a	BN
10-32F UNF • Tee	L1032F-T	n/a	n/a	n/a	BN
10-32F UNF • Cross	L1428F-X	n/a	n/a	n/a	BN

Also available in Natural Polypropylene and Natural Nylon - see Natural Materials Section

## Garden Hose Adapter

RoHS Compliant

### Garden Hose



Thread • Barb	Part Number	PVDF	WP	WN	BN
3/4" GH • 1/4"	A12GH-4	n/a	n/a	WN	BN
3/4" GH • 3/8"	A12GH-6	n/a	n/a	WN	BN
3/4" GH • 1/2"	A12GH-8	n/a	n/a	WN	BN
3/4" GH • 5/8"	A12GH-10	n/a	n/a	WN	BN
3/4" GH • 3/4"	A12GH-12	n/a	n/a	WN	BN
3/4" GH • 1"	A12GH-16	n/a	n/a	WN	BN

## Nipples - UNF & NPT

RoHS Compliant

### Pipe Nipples



Thread Size	Part Number	PVDF	WP	WN	BN
10-32 UNF	N1032	PVDF	WP	WN	BN
1032 Taper	N1032T	PVDF	WP	WN	BN
1/8" NPT	N2	PVDF	WP	WN	BN
1/4" NPT	N4	PVDF	WP	WN	BN
3/8" NPT	N6	PVDF	WP	WN	BN
1/2" NPT	N8	PVDF	WP	WN	BN
3/4" NPT	N12	PVDF	WP	WN	BN
1" NPT	N16	PVDF	WP	WN	BN

Gray Kynar® PVDF

White Polypropylene WP

White Nylon WN

Black Nylon BN

**Nipples**

Reduction & Conversion  
RoHS Compliant

**Conversion Nipples**

PVDF and WP sold in units of 100 or 500 pieces



Thread • Thread	Part Number	PVDF	WP	WN	BN
1/16" NPT • 1/4-28 UNF	RN1-1428	PVDF	WP	WN	BN
1/8" NPT • 1/16" NPT	RN2-1	PVDF	WP	WN	BN
1/4" NPT • 1/8" NPT	RN4-2	PVDF	WP	WN	BN
3/8" NPT • 1/8" NPT	RN6-2	PVDF	WP	WN	BN
3/8" NPT • 1/4" NPT	RN6-4	PVDF	WP	WN	BN
1/2" NPT • 1/8" NPT	RN8-2	PVDF	WP	WN	BN
1/2" NPT • 1/4" NPT	RN8-4	PVDF	WP	WN	BN
1/2" NPT • 3/8" NPT	RN8-6	PVDF	WP	WN	BN
1" NPT • 3/4" NPT	RN16-12	PVDF	WP	WN	BN

**Insert Plugs**

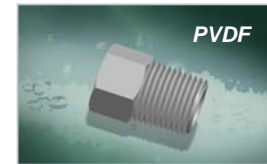
**Plugs - Insert**  
RoHS Compliant



Barb Size	Part Number	PVDF	WP	WN	BN
1/16"	P0-1	PVDF	WP	WN	BN
3/32"	P0-1.5	PVDF	WP	WN	BN
1/8"	P0-2	PVDF	WP	WN	BN
5/32"	P0-2.5	PVDF	WP	WN	BN
3/16"	P0-3	PVDF	WP	WN	BN
1/4"	P0-4	PVDF	WP	WN	BN
3/8"	P0-6	PVDF	WP	WN	BN
1/2"	P0-8	PVDF	WP	WN	BN

**Plugs-Threaded**

**Plugs - Threaded**  
NPT & UNF  
RoHS Compliant



Thread Size	Part Number	PVDF	WP	WN	BN
5 mm (metric)	P5M	PVDF	WP	WN	BN
6 mm (metric)	P6M	PVDF	WP	WN	BN
10-32 UNF	P1032	PVDF	WP	WN	BN
10-32 Taper	P1032T	PVDF	WP	WN	BN
1/4-28 UNF	P1428	PVDF	WP	WN	BN
1/16" NPT	P1	PVDF	WP	WN	BN
1/8" NPT	P2	PVDF	WP	WN	BN
1/4" NPT	P4	PVDF	WP	WN	BN
3/8" NPT	P6	PVDF	WP	WN	BN
1/2" NPT	P8	PVDF	WP	WN	BN
3/4" NPT	P12	PVDF	WP	WN	BN
1" NPT	P16	PVDF	WP	WN	BN



## Tees

**Tees - Equal Barb**  
RoHS Compliant

*PVDF and WP sold in units of 100 or 500 pieces*



Barb Size	Part Number	PVDF	WP	WN	BN
1/16"	T0-1	PVDF	WP	WN	BN
3/32"	T0-1.5	PVDF	WP	WN	BN
1/8"	T0-2	PVDF	WP	WN	BN
5/32"	T0-2.5	PVDF	WP	WN	BN
3/16"	T0-3	PVDF	WP	WN	BN
1/4"	T0-4	PVDF	WP	WN	BN
5/16"	T0-5	PVDF	WP	WN	BN
3/8"	T0-6	PVDF	WP	WN	BN
1/2"	T0-8	PVDF	WP	WN	BN
5/8"	T0-10	PVDF	WP	WN	BN
3/4"	T0-12	PVDF	WP	WN	BN
1"	T0-16	PVDF	WP	WN	BN

**Tees - Miniature Asymmetric**  
RoHS Compliant

## Asymmetric Tees



Barbs (A) - Barb (B)	Part Number	PVDF	WP	WN	BN
3/32" • 1/16"	LRT1.5-1	PVDF	WP	WN	BN
1/8" • 1/16"	LRT2-1	PVDF	WP	WN	BN
1/8" • 3/32"	LRT2-1.5	PVDF	WP	WN	BN
5/32" • 1/16"	LRT2.5-1	special order	special order	WN	BN
5/32" • 3/32"	LRT2.5-1.5	special order	special order	WN	BN
5/32" • 1/8"	LRT2.5-2	special order	special order	WN	BN
3/16" • 1/16"	LRT3-1	special order	special order	WN	BN
3/16" • 3/32"	LRT3-1.5	special order	special order	WN	BN
3/16" • 1/8"	LRT3-2	special order	special order	WN	BN
3/16" • 5/32"	LRT3-2.5	special order	special order	WN	BN
1/4" • 1/16"	LRT4-1	special order	special order	WN	BN
1/4" • 3/32"	LRT4-1.5	special order	special order	WN	BN
1/4" • 1/8"	LRT4-2	special order	special order	WN	BN
1/4" • 5/32"	LRT4-2.5	special order	special order	WN	BN
1/4" • 3/16"	LRT4-3	special order	special order	WN	BN

Special Order - non-inventory items may be restricted to higher minimum quantity requirements

Gray Kynar® PVDF	White Polypropylene WP	White Nylon WN	Black Nylon BN
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Ph. 970.667.2728 • [eldonjames.com](http://eldonjames.com) • fax 970.667.3204

**Tees-Reduction**

**Tees - Miniature Reduction**  
RoHS Compliant

*PVDF and WP sold in units of 100 or 500 pieces*



(2) Run - (1) Leg	Part Number	PVDF	WP	WN	BN
1/16" • 3/32"	RT1-1.5	PVDF	WP	WN	BN
1/16" • 1/8"	RT1-2	PVDF	WP	WN	BN
1/16" • 5/32"	RT1-2.5	special order	special order	WN	BN
3/32" • 1/16"	RT1.5-1	PVDF	WP	WN	BN
3/32" • 1/8"	RT1.5-2	PVDF	WP	WN	BN
3/32" • 5/32"	RT1.5-2.5	special order	special order	WN	BN
3/32" • 3/16"	RT1.5-3	special order	special order	WN	BN
1/8" • 1/16"	RT2-1	PVDF	WP	WN	BN
1/8" • 3/32"	RT2-1.5	PVDF	WP	WN	BN
1/8" • 5/32"	RT2-2.5	special order	special order	WN	BN
1/8" • 3/16"	RT2-3	special order	special order	WN	BN
1/8" • 1/4"	RT2-4	special order	special order	WN	BN
5/32" • 1/16"	RT2.5-1	special order	special order	WN	BN
5/32" • 3/32"	RT2.5-1.5	special order	special order	WN	BN
5/32" • 1/8"	RT2.5-2	special order	special order	WN	BN
5/32" • 3/16"	RT2.5-3	special order	special order	WN	BN
5/32" • 1/4"	RT2.5-4	special order	special order	WN	BN
5/32" • 3/8"	RT2.5-6	PVDF	WP	WN	BN
3/16" • 1/16"	RT3-1	special order	special order	WN	BN
3/16" • 3/32"	RT3-1.5	special order	special order	WN	BN
3/16" • 1/8"	RT3-2	special order	special order	WN	BN
3/16" • 5/32"	RT3-2.5	special order	special order	WN	BN
3/16" • 1/4"	RT3-4	special order	special order	WN	BN
1/4" • 1/16"	RT4-1	special order	special order	WN	BN
1/4" • 3/32"	RT4-1.5	PVDF	WP	WN	BN
1/4" • 1/8"	RT4-2	PVDF	WP	WN	BN
1/4" • 5/32"	RT4-2.5	special order	special order	WN	BN
1/4" • 3/16"	RT4-3	PVDF	WP	WN	BN

Industrial & Utility

**Tees-Reduction**

**Tees - Reduction**  
Standard Size  
RoHS Compliant



(2) Run - (1) Leg	Part Number	PVDF	WP	WN	BN
1/4" • 3/8"	RT4-6	PVDF	WP	WN	BN
1/4" • 5/8"	RT4-10	PVDF	WP	WN	BN
3/8" • 5/32"	RT6-2.5	PVDF	WP	WN	BN
3/8" • 1/4"	RT6-4	PVDF	WP	WN	BN

**Tees - Reduction**  
Standard (continued)  
RoHS Compliant

*Tees-Reduction*



(2) Run - (1) Leg	Part Number	PVDF	WP	WN	BN
1/2" • 1/4"	RT8-4	PVDF	WP	WN	BN
1/2" • 5/16"	RT8-5	PVDF	WP	WN	BN
1/2" • 3/8"	RT8-6	PVDF	WP	WN	BN
5/8" • 5/16"	RT10-5	PVDF	WP	WN	BN
5/8" • 3/8"	RT10-6	PVDF	WP	WN	BN
3/4" • 3/8"	RT12-6	PVDF	WP	WN	BN
3/4" • 1/2"	RT12-8	PVDF	WP	WN	BN
3/4" • 5/8"	RT12-10	PVDF	WP	WN	BN
1" • 5/8"	RT16-10	PVDF	WP	WN	BN

**Tees - Threaded Miniature**  
RoHS Compliant

*Tees-Threaded*

10-32 UNF • 10-32 Taper • 1/4-28 UNF • 1/16" NPT



Thread - Barbs	Part Number	PVDF	WP	WN	BN
10-32 UNF • 1/16"	T1032-1	PVDF	WP	WN	BN
10-32 UNF • 3/32"	T1032-1.5	PVDF	WP	WN	BN
10-32 UNF • 1/8"	T1032-2	PVDF	WP	WN	BN
10-32 UNF • 5/32"	T1032-2.5	PVDF	WP	WN	BN
10-32 Taper • 1/16"	T1032T-1	PVDF	WP	WN	BN
10-32 Taper • 3/32"	T1032T-1.5	PVDF	WP	WN	BN
10-32 Taper • 1/8"	T1032T-2	PVDF	WP	WN	BN
10-32 Taper • 5/32"	T1032T-2.5	PVDF	WP	WN	BN
1/4-28 UNF • 1/16"	T1428-1	PVDF	WP	WN	BN
1/4-28 UNF • 3/32"	T1428-1.5	PVDF	WP	WN	BN
1/4-28 UNF • 1/8"	T1428-2	PVDF	WP	WN	BN
1/4-28 UNF • 5/32"	T1428-2.5	PVDF	WP	WN	BN
1/4-28 UNF • 3/16"	T1428-3	PVDF	WP	WN	BN
1/16" NPT • 1/16"	T1-1	PVDF	WP	WN	BN
1/16" NPT • 3/32"	T1-1.5	PVDF	WP	WN	BN
1/16" NPT • 1/8"	T1-2	PVDF	WP	WN	BN
1/16" NPT • 5/32"	T1-2.5	PVDF	WP	WN	BN
1/16" NPT • 3/16"	T1-3	PVDF	WP	WN	BN

*PVDF and WP sold in units of 100 or 500 pieces*

Gray Kynar® PVDF

White Polypropylene WP

White Nylon WN

Black Nylon BN

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**Tees - Metric**  
 Threaded Miniature  
 RoHS Compliant



**5 mm • 6 mm Metric Threads**

Thread - Barbs	Part Number	PVDF	WP	WN	BN
5 mm • 1/16"	T5M-1	special order	special order	WN	BN
5 mm • 3/32"	T5M-1.5	special order	special order	WN	BN
5 mm • 1/8"	T5M-2	special order	special order	WN	BN
5 mm • 5/32"	T5M-2.5	special order	special order	WN	BN
6 mm • 1/16"	T6M-1	special order	special order	WN	BN
6 mm • 3/32"	T6M-1.5	special order	special order	WN	BN
6 mm • 1/8"	T6M-2	special order	special order	WN	BN
6 mm • 5/32"	T6M-2.5	special order	special order	WN	BN
6 mm • 3/16"	T6M-3	special order	special order	WN	BN

**Tees - Threaded**  
 1/8" to 1" NPT  
 RoHS Compliant



Thread - Barbs	Part Number	PVDF	WP	WN	BN
1/8" NPT • 1/16"	T2-1	PVDF	WP	WN	BN
1/8" NPT • 3/32"	T2-1.5	PVDF	WP	WN	BN
1/8" NPT • 1/8"	T2-2	PVDF	WP	WN	BN
1/8" NPT • 5/32"	T2-2.5	PVDF	WP	WN	BN
1/8" NPT • 3/16"	T2-3	PVDF	WP	WN	BN
1/8" NPT • 1/4"	T2-4	PVDF	WP	WN	BN
1/8" NPT • 5/16"	T2-5	PVDF	WP	WN	BN
1/8" NPT • 3/8"	T2-6	PVDF	WP	WN	BN
1/4" NPT • 1/8"	T4-2	PVDF	WP	WN	BN
1/4" NPT • 5/32"	T4-2.5	PVDF	WP	WN	BN
1/4" NPT • 3/16"	T4-3	PVDF	WP	WN	BN
1/4" NPT • 1/4"	T4-4	PVDF	WP	WN	BN
1/4" NPT • 5/16"	T4-5	PVDF	WP	WN	BN
1/4" NPT • 3/8"	T4-6	PVDF	WP	WN	BN
1/4" NPT • 1/2"	T4-8	PVDF	WP	WN	BN
3/8" NPT • 1/4"	T6-4	PVDF	WP	WN	BN
3/8" NPT • 5/16"	T6-5	PVDF	WP	WN	BN
3/8" NPT • 3/8"	T6-6	PVDF	WP	WN	BN
3/8" NPT • 1/2"	T6-8	PVDF	WP	WN	BN
1/2" NPT • 1/4"	T8-4	PVDF	WP	WN	BN
1/2" NPT • 3/8"	T8-6	PVDF	WP	WN	BN
1/2" NPT • 1/2"	T8-8	PVDF	WP	WN	BN
1/2" NPT • 5/8"	T8-10	PVDF	WP	WN	BN
1/2" NPT • 3/4"	T8-12	PVDF	WP	WN	BN

Industrial & Utility

**Tees - Threaded**  
 1/8" to 1" NPT (continued)  
 RoHS Compliant

**Tees-Threaded**



Thread - Barbs	Part Number	PVDF	WP	WN	BN
3/4" NPT • 1/4"	T12-4	PVDF	WP	WN	BN
3/4" NPT • 3/8"	T12-6	PVDF	WP	WN	BN
3/4" NPT • 1/2"	T12-8	PVDF	WP	WN	BN
3/4" NPT • 5/8"	T12-10	PVDF	WP	WN	BN
3/4" NPT • 3/4"	T12-12	PVDF	WP	WN	BN
3/4" NPT • 1"	T12-16	PVDF	WP	WN	BN
1" NPT • 3/4"	T16-12	PVDF	WP	WN	BN
1" NPT • 1"	T16-16	PVDF	WP	WN	BN

**Y-Connectors**  
 RoHS Compliant

**Y Connectors**



*PVDF and WP sold in units of 100 or 500 pieces*

Size	Part Number	PVDF	WP	WN	BN
1/16"	Y0-1	PVDF	WP	WN	BN
3/32"	Y0-1.5	PVDF	WP	WN	BN
1/8"	Y0-2	PVDF	WP	WN	BN
5/32"	Y0-2.5	PVDF	WP	WN	BN
3/16"	Y0-3	PVDF	WP	WN	BN
1/4"	Y0-4	PVDF	WP	WN	BN
3/8"	Y0-6	PVDF	WP	WN	BN
1/2"	Y0-8	PVDF	WP	WN	BN
5/8"	Y0-10	PVDF	WP	WN	BN

Y sizes for up to 1" hose ID - see page 37

**Y Reduction**



(2) Barbs - (1) Barb	Part Number	PVDF	WP	WN	BN
1/4" • 3/8"	RY4-6	PVDF	WP	WN	BN



Clamping Solutions - See Pages: 63-65



Eldon James stocks one of the largest assortments of clamp sizes in the USA. In addition, a variety of special purpose sizes and styles are available by special order.

Industrial & Utility

**Adapters**  
BSPT RoHS Compliant

*Adapters*



 British Threaded - BSPT Fittings

Thread - Barb	Part Number	PVDF	WP	WN	BN
1/8" BSPT • 1/8"	A2B-2	PVDF	WP	WN	BN
1/8" BSPT • 5/32"	A2B-2.5	PVDF	WP	WN	BN
1/8" BSPT • 1/4"	A2B-4	PVDF	WP	WN	BN
1/8" BSPT • 5/16"	A2B-5	PVDF	WP	WN	BN
1/8" BSPT • 3/8"	A2B-6	PVDF	WP	WN	BN
1/4" BSPT • 1/8"	A4B-2	PVDF	WP	WN	BN
1/4" BSPT • 5/32"	A4B-2.5	PVDF	WP	WN	BN
1/4" BSPT • 3/16"	A4B-3	PVDF	WP	WN	BN
1/4" BSPT • 1/4"	A4B-4	PVDF	WP	WN	BN
1/4" BSPT • 5/16"	A4B-5	PVDF	WP	WN	BN
1/4" BSPT • 3/8"	A4B-6	PVDF	WP	WN	BN
1/4" BSPT • 1/2"	A4B-8	PVDF	WP	WN	BN
3/8" BSPT • 1/4"	A6B-4	PVDF	WP	WN	BN
3/8" BSPT • 5/16"	A6B-5	PVDF	WP	WN	BN
3/8" BSPT • 3/8"	A6B-6	PVDF	WP	WN	BN
3/8" BSPT • 1/2"	A6B-8	PVDF	WP	WN	BN

Industrial & Utility 

*Plugs*

**Plugs**  
BSPT RoHS Compliant



 British Threaded - BSPT Fittings

Thread Size	Part Number	PVDF	WP	WN	BN
1/8" BSPT	P2B	PVDF	WP	WN	BN
1/4" BSPT	P4B	PVDF	WP	WN	BN
3/8" BSPT	P6B	PVDF	WP	WN	BN

Size	Threads / Inch	Approximate Thread Pitch	Length of Useful Threads
1/8" BSPT	28	.0357 Inches	.250 Inches
1/4" BSPT	19	.0526 Inches	.380 Inches
3/8" BSPT	19	.0526 Inches	.390 Inches

**BSPT - British Standard Pipe Thread Tapered**

BSPT threads are based on the Whitworth thread form, which is designed to provide a pressure-tight fit through mating of the threads. This is accomplished by cutting the threads on a taper. Because they are tapered, the thread can only screw into the companion female thread a certain distance before it jams. The standard specifies this distance as a length based on hand-tight engagement; however, a convenient rule-of-thumb for plastic threads is: finger-tight plus 1/2 to 1 turn with a wrench. Do not over-tighten plastic threads - stress on the fitting can result in its failure.



**Elbows - Threaded**  
BSPT RoHS Compliant

*Elbows*



 British Threaded - BSPT Fittings

Thread - Barb	Part Number	PVDF	WP	WN	BN
1/8" BSPT • 1/8"	L2B-2	PVDF	WP	WN	BN
1/8" BSPT • 5/32"	L2B-2.5	PVDF	WP	WN	BN
1/8" BSPT • 1/4"	L2B-4	PVDF	WP	WN	BN
1/8" BSPT • 5/16"	L2B-5	PVDF	WP	WN	BN
1/8" BSPT • 3/8"	L2B-6	PVDF	WP	WN	BN
1/4" BSPT • 1/8"	L4B-2	PVDF	WP	WN	BN
1/4" BSPT • 5/32"	L4B-2.5	PVDF	WP	WN	BN
1/4" BSPT • 3/16"	L4B-3	PVDF	WP	WN	BN
1/4" BSPT • 1/4"	L4B-4	PVDF	WP	WN	BN
1/4" BSPT • 5/16"	L4B-5	PVDF	WP	WN	BN
1/4" BSPT • 3/8"	L4B-6	PVDF	WP	WN	BN
1/4" BSPT • 1/2"	L4B-8	PVDF	WP	WN	BN
3/8" BSPT • 1/4"	L6B-4	PVDF	WP	WN	BN
3/8" BSPT • 5/16"	L6B-5	PVDF	WP	WN	BN
3/8" BSPT • 3/8"	L6B-6	PVDF	WP	WN	BN
3/8" BSPT • 1/2"	L6B-8	PVDF	WP	WN	BN

**Tees - Threaded**  
BSPT RoHS Compliant

*Tees*



 British Threaded - BSPT Fittings

Thread - Barbs	Part Number	PVDF	WP	WN	BN
1/8" BSPT • 5/32"	T2B-2.5	PVDF	WP	WN	BN
1/8" BSPT • 1/4"	T2B-4	PVDF	WP	WN	BN
1/8" BSPT • 3/8"	T2B-6	PVDF	WP	WN	BN
1/4" BSPT • 5/32"	T4B-2.5	PVDF	WP	WN	BN
1/4" BSPT • 3/16"	T4B-3	PVDF	WP	WN	BN
1/4" BSPT • 1/4"	T4B-4	PVDF	WP	WN	BN
1/4" BSPT • 5/16"	T4B-5	PVDF	WP	WN	BN
1/4" BSPT • 3/8"	T4B-6	PVDF	WP	WN	BN
1/4" BSPT • 1/2"	T4B-8	PVDF	WP	WN	BN
3/8" BSPT • 1/4"	T6B-4	PVDF	WP	WN	BN
3/8" BSPT • 5/16"	T6B-5	PVDF	WP	WN	BN
3/8" BSPT • 3/8"	T6B-6	PVDF	WP	WN	BN
3/8" BSPT • 1/2"	T6B-8	PVDF	WP	WN	BN

*Notes:*

Eldon James



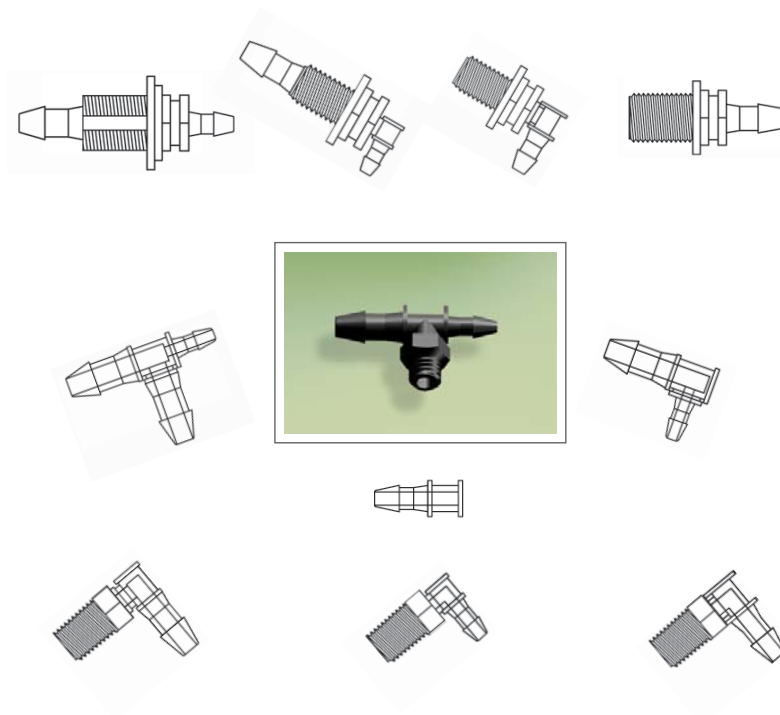
# Miniature Fittings Guide



Miniature  
Fittings Guide



## *MINIATURE FITTINGS*

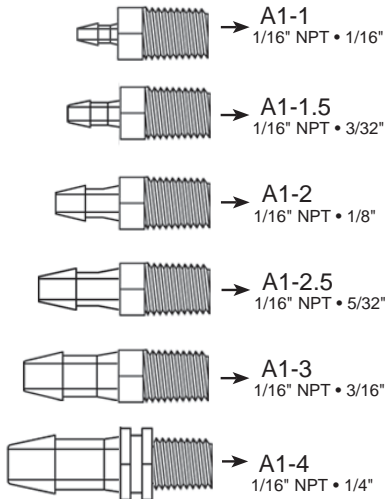


## *QUICK REFERENCE*

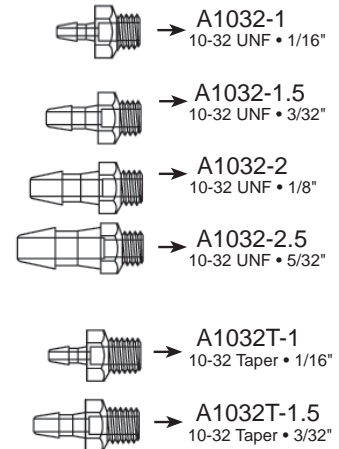
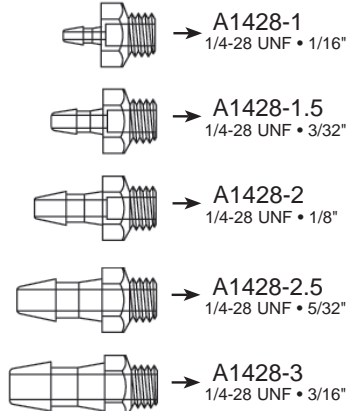


*Selection Guide to Miniature Fittings*

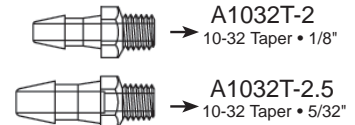
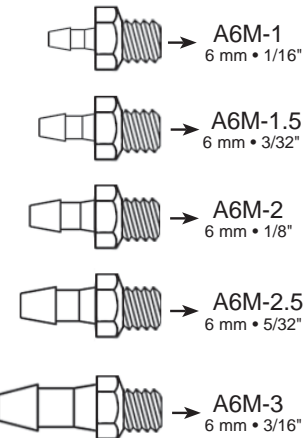
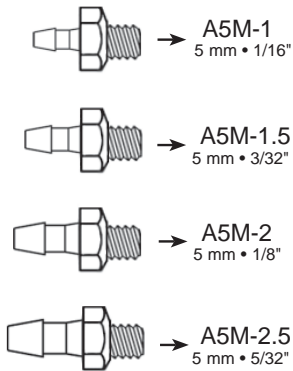
## Eldon James Miniature Fittings Quick Reference Guide



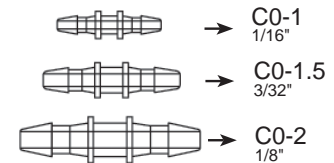
### Adapters



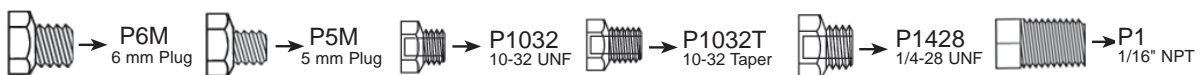
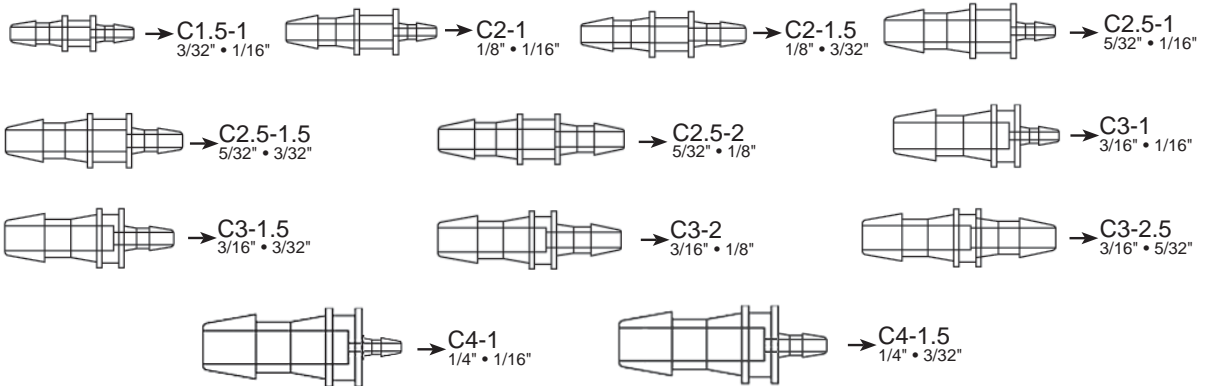
### Metric Adapters



### Equal Barb Couplers

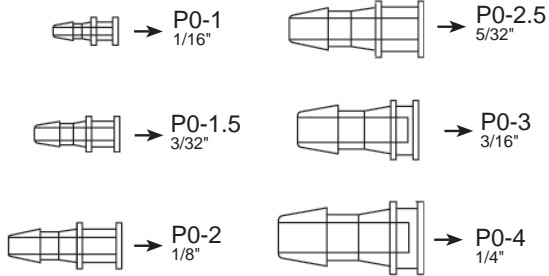


### Reduction Couplers

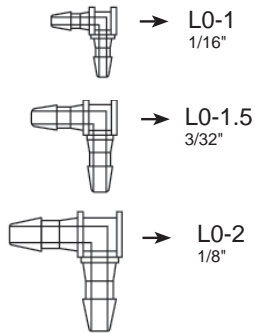




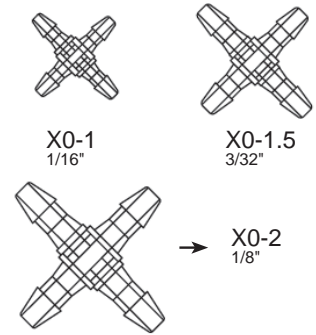
**Insert Plugs**



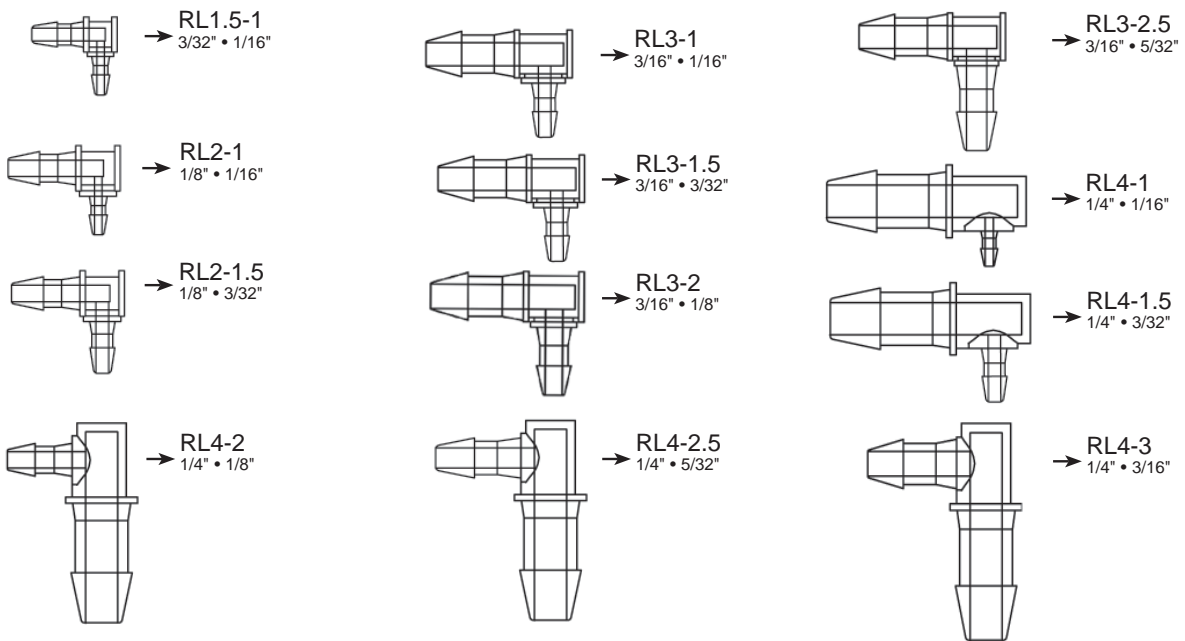
**Equal Elbows**



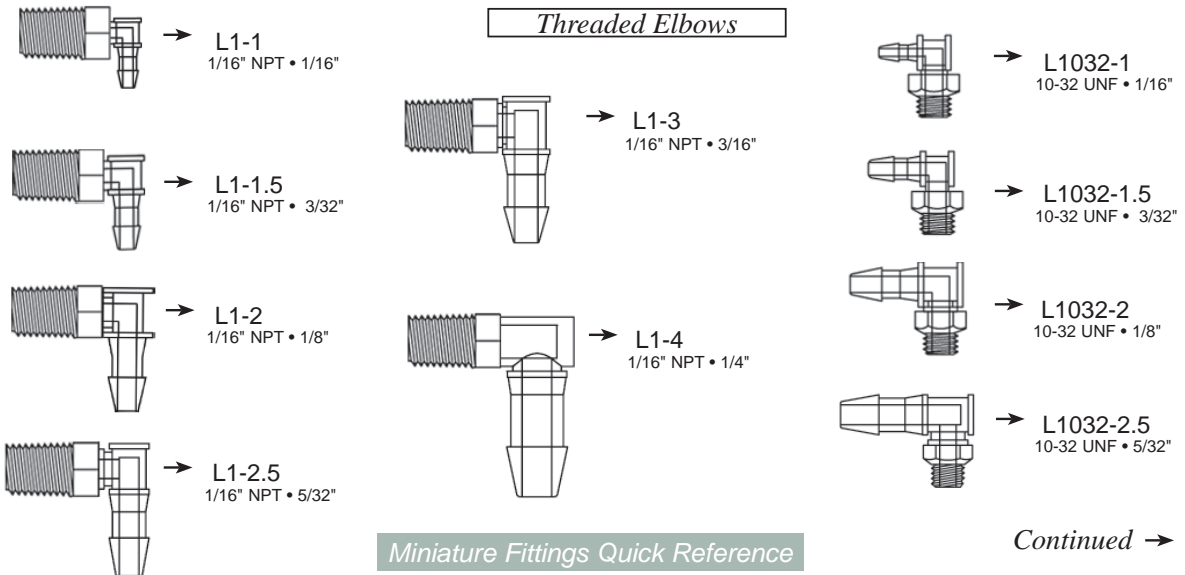
**Crosses**



**Reduction Elbows**

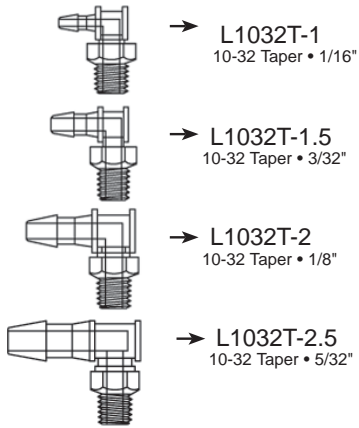


**Threaded Elbows**

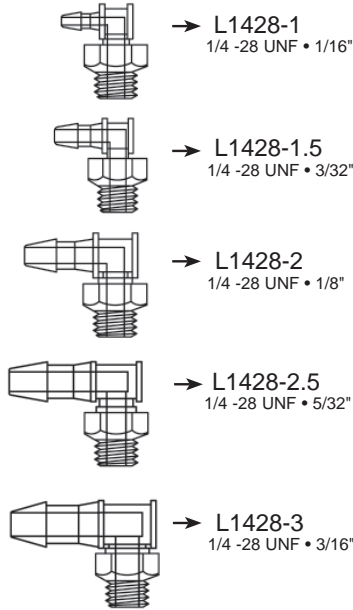
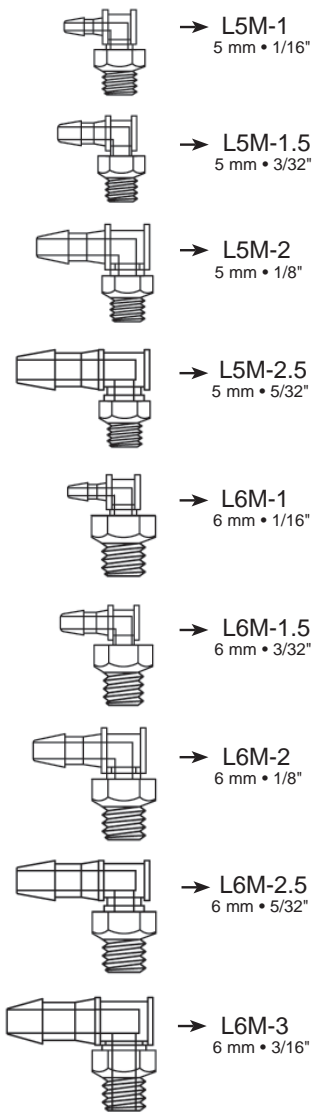


*Miniature Fittings Quick Reference*

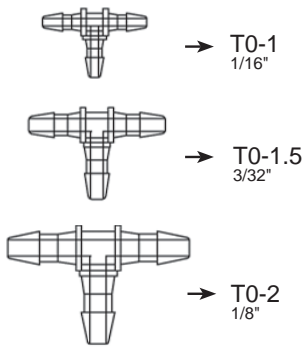
*Threaded Elbows*



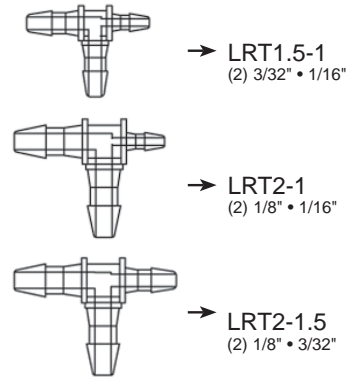
*Metric Threaded Elbows*



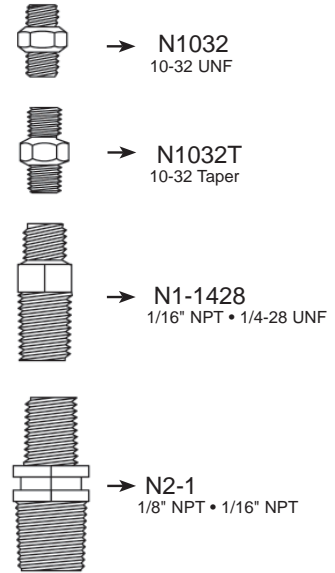
*Equal Barb Tees*



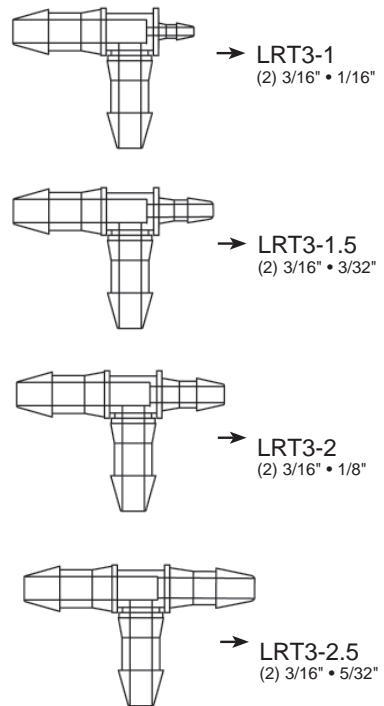
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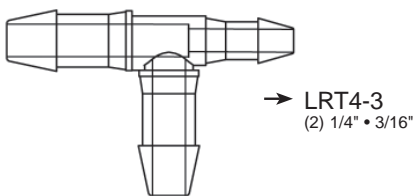
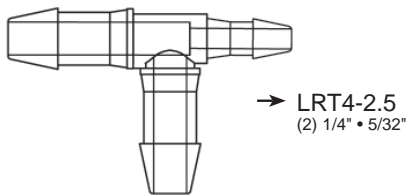
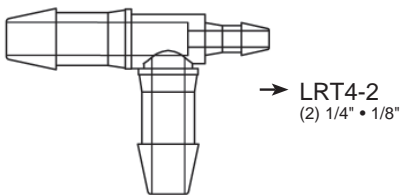
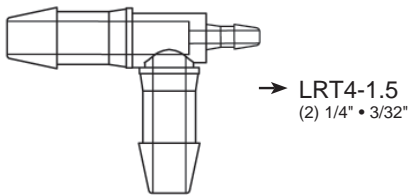
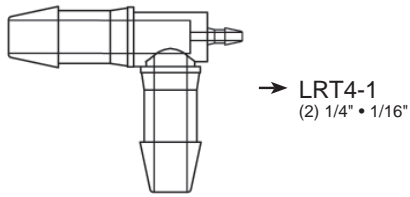
*Nipples*



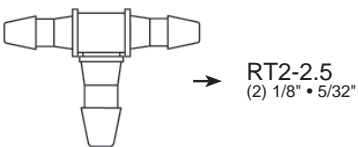
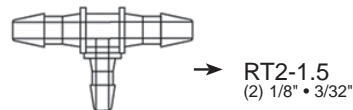
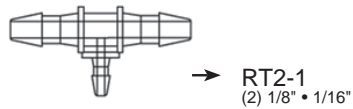
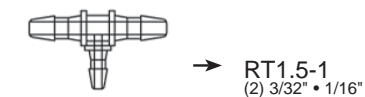
*Asymmetric Tees Cont.*



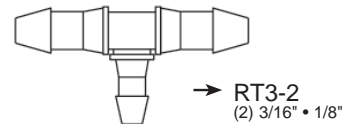
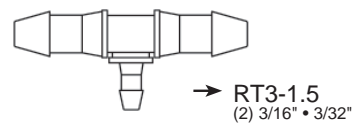
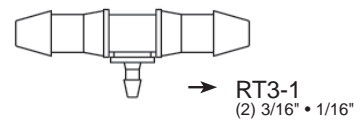
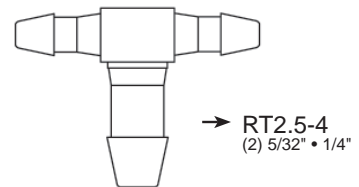
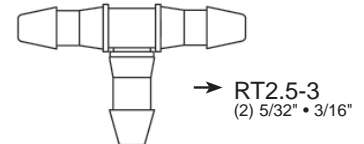
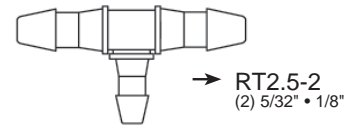
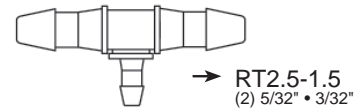
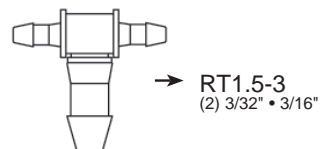
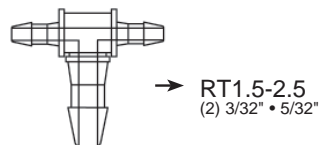
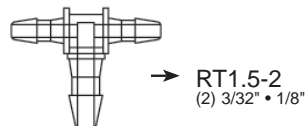
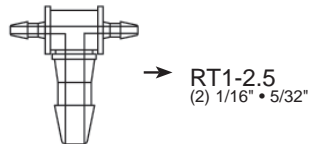
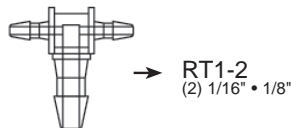
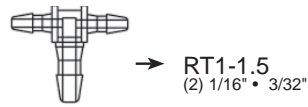
**Asymmetric Tees Cont.**



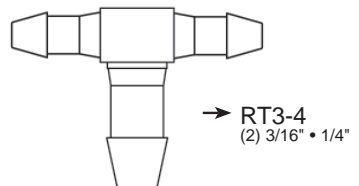
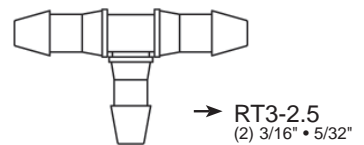
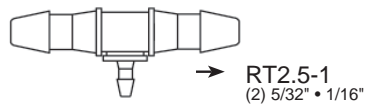
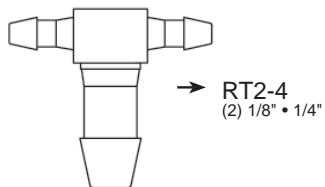
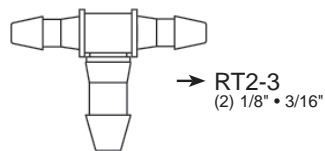
**Tee Reductions**



**Tee Reductions**



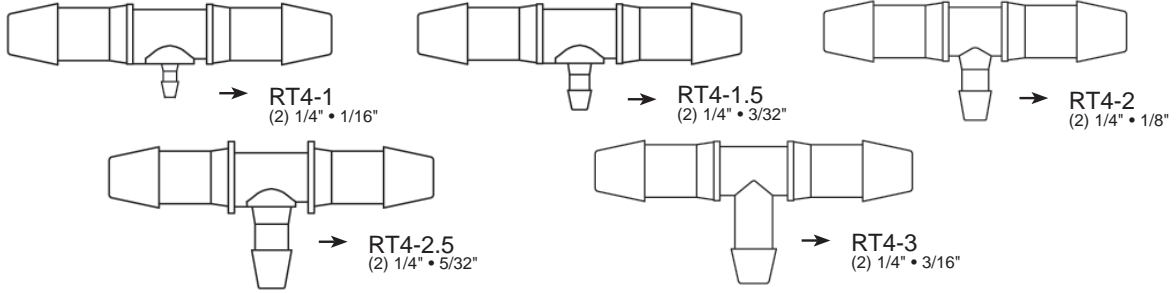
**Tee Reductions**



Continued →

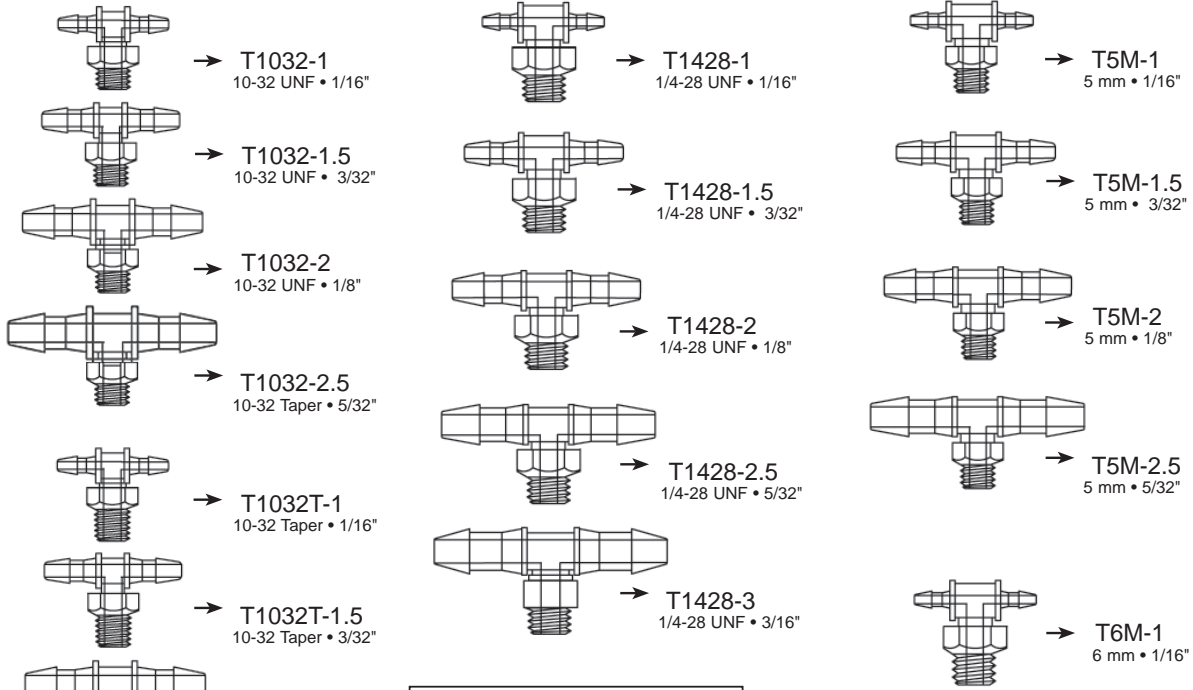
**Miniature Fittings Quick Reference**

**More Tee Reductions**

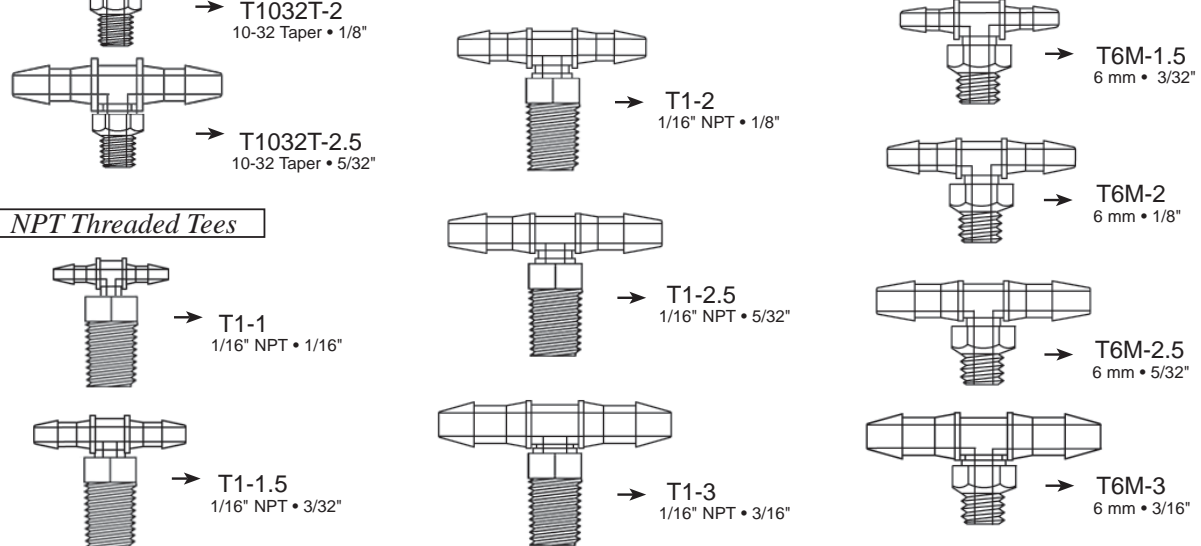


**UNF & Taper Threaded Tees**


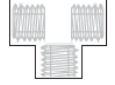
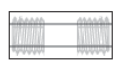
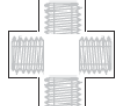
**Metric Threaded Tees**



**NPT Threaded Tees Cont.**






**NPT Threaded Tees**

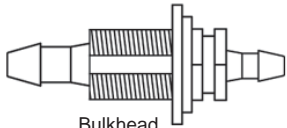
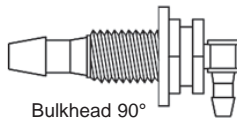
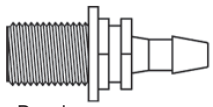
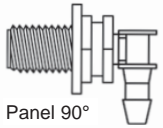
<p><b>Female Elbow</b></p>  <p><b>1032F-L</b> 10-32 UNF Female</p>	<p><b>Female Tee</b></p>  <p><b>1032F-T</b> 10-32 UNF Female</p>	<p><b>Junction</b></p>  <p><b>1032F-C</b> 10-32 UNF Female</p>	<p><b>Female Cross</b></p>  <p><b>1032F-X</b> 10-32 UNF Female</p>
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*Threaded Junctions*

*Y-connectors*


 <p>→ Y0-1 1/16"</p>	 <p>→ Y0-1.5 3/32"</p>	 <p>→ Y0-2 1/8"</p>
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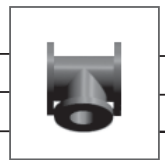

*Bulkhead & Panel Mount*

 <p>Bulkhead</p>	 <p>Bulkhead 90°</p>	 <p>Panel</p>	 <p>Panel 90°</p>
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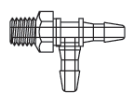
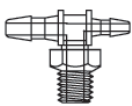
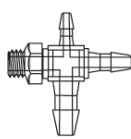
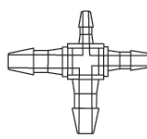
*For a complete range of Bulkhead & Panel Mount sizes - see catalog pages 19-24, 74-77 and 92-98*

*Custom Configurations*



<p><b>Thread</b></p> <p><b>1032</b> 10-32 UNF</p> <p><b>1032T</b> 10-32 Tapered</p> <p><b>1428</b> 1/4-28 UNF</p>		<p><b>Barb 2</b></p> <p><b>1</b> 1/16"</p> <p><b>1.5</b> 3/32"</p> <p><b>2</b> 1/8"</p>
<p><b>Barb 1</b></p> <p><b>1</b> 1/16"</p> <p><b>1.5</b> 3/32"</p> <p><b>2</b> 1/8"</p>		<p>Illustrated: Branched Tee Custom Options</p>

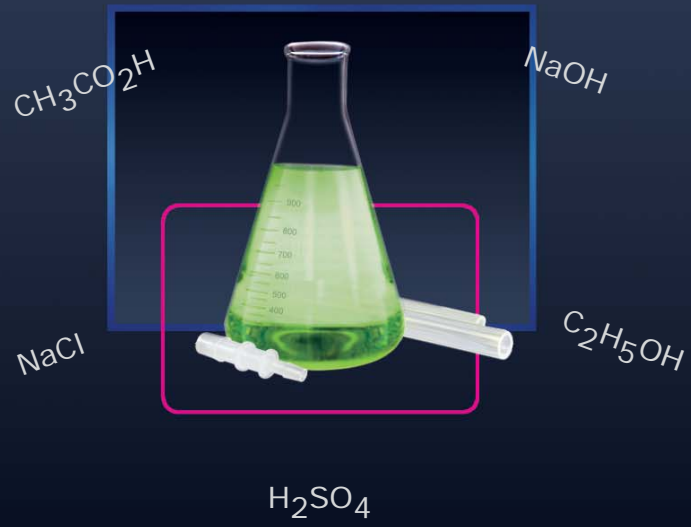
*Please call or visit [eldonjames.com](http://eldonjames.com) for more information about custom fittings availability.*

			
Branched Tee	Asymmetric Threaded Tee	Asymmetric Threaded Cross	Asymmetric Cross

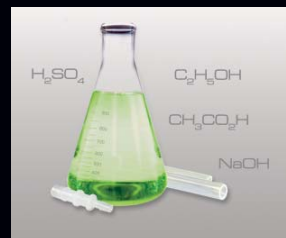
*Notes:*

Eldon James





Technical  
Chemical Resistance  
Terms of Sale



Technical



# Chemical Resistance



+ = Tensile Strength @ Yield and Elongation @ Break Unchanged to 60 °C (140 °F)  
 - = No Data Available

A Excellent (no effect)  
 B Good (minor effect)  
 C Fair (moderate effect)  
 D Poor (severe effect)  
 (1) Satisfactory to 22 °C 72 °F  
 (2) Satisfactory to 48 °C 120 °F

Chemical	HDPE	LDPE	NYLON	POLYCARBONATE	POLYPROPYLENE	KYNAR	ACETAL-DELRIN	316L STAINLESS
Acetaldehyde	C	C	A	C1	A1	D	A	A
Acetamide	A	A	A	D	A1	C	A	A
Acetate Solvent	A	A	A	-	B1	A	-	A
<b>Acetic Acid:</b>								
80%	A	D	D	B1	A	C	D	B
20%	A	A	D	A1	A	A	C	A
Glacial	A	D	B	B1	A1	A1	D	A
Vapors	-	-	D	-	-	A	-	D
Acetone	D	B1	A	D	A	D	A	A
Acetylene	-	D	A	D	A1	A	A	A
Acrylonitrile	A	A	A1	D	A1	A1	-	A1
<b>Alcohols:</b>								
Benzyl	B	D	B1	-	A	A	A	B
Ethyl	A	B	A1	B2	A	-	A1	A
Isopropyl	A	A2	D	A2	A2	-	A	B
Methyl	A	A1	B1	B1	A2	A	A	A
Propyl	-	A2	D	-	A	A2	A	A
Allyl Chloride	A	-	-	-	A	A	-	A
Aluminum Fluoride	A	A2	A1	-	A	A	C	D
Aluminum Hydroxide	A	A2	A1	B1	A	A	A	C1
Aluminum Nitrate	-	A2	A1	A1	A2	A2	B1	A
Aluminum Sulfate	A	A2	A2	A	A	A	B1	B2
Alums	-	A	A	-	A	-	-	A
Amines	B	C1	D	D	B2	-	D	A
Ammonia 10%	A	C1	A	D	A2	A	D	A
Ammonia Anhydrous	A	B2	A1	D	A	A	D	A2
Ammonia Liquid	A	C1	B1	D	A2	A	D	A2
Ammonium Acetate	A	A	A	-	A	-	-	A
Ammonium Bifluoride	-	A2	-	-	A	A	D	B1
Ammonium Carbonate	B	B2	A1	-	A	A	D	B
Ammonium Chloride	A	A2	B	A2	A	A	B	B2
Ammonium Hydroxide	A	A1	A	D	A	A	C	A1

Please read disclaimer at end of section



+ = Tensile Strength @ Yield and Elongation @ Break Unchanged to 60 °C (140 °F)  
 - = No Data Available

Chemical	HDPE	LDPE	NYLON	POLYCARBONATE	POLYPROPYLENE	KYNAR	ACETAL-DELRIM	316L STAINLESS
Ammonium Nitrate	A	A1	A1	-	A	A	A2	A
Ammonium Persulfate	A	A2	D	-	A	A1	D	B
<b>Ammonium Phosphate:</b>								
Dibasic	-	A2	C1	A2	A	A	B2	C
Monobasic	-	A	B	-	A	-	B	C
Tribasic	-	C	B	-	A	-	B	B
Ammonium Sulfate	A	A1	A1	A2	A	A	B1	B
Ammonium Thiosulfate	-	A	-	-	-	-	B	A
Amyl Alcohol	A	B2	A1	B1	B1	A	A	A
Aqua Regia 80% HCL-20% HNO <sub>3</sub>	D	B1	D	D	B1	A2	D	D
Asphalt	-	A1	A	D	B1	A	B2	A
Barium Hydroxide	-	B2	A1	D	B	A	D	B
Barium Sulfate	B	B2	A1	D	B1	A	B2	B1
Barium Sulfide	A	B2	A1	-	B	A	A	B2
Beer	A	A2	A1	A2	A1	A	A1	A
Benzaldehyde	B	A1	A1	D	D	A2	A	B
Benzene	D	D	A1	D	D	A2	A1	B
Benzene Sulfonic Acid	A	A1	D	D	D	-	-	B
Benzoic Acid	A	A1	D	B1	B1	A	B	B
Benzyl Chloride	-	-	A2	-	C1	-	A	B1
Bleach	-	-	A	-	D	A	D	A
Borax (Sodium Borate)	A	A2	A	-	B	A	B	A
Boric Acid	A	A2	B	-	A	A	A	A1
Bromine	D	D	D	C1	D	A	D	D
Butadiene	D	D	C1	D	C	A	A	A1
Butane	-	C1	A2	D	A1	A	A	A2
Butanol (Butyl Alcohol)	-	B2	B1	B1	A1	A	A	A1
Butyl Amine	-	C1	A2	D	B1	A1	C1	A
Butyl Ether	-	-	A2	-	D	A1	D	A1
Butylene	-	B1	B1	D	-	A	A	A
Butyric Acid	D	D	C1	D	B1	A	A	B2
Calcium Carbonate	+	B1	A	C2	A	A	A	B

Please read disclaimer on page 128



+ = Tensile Strength @ Yield and Elongation @ Break Unchanged to 60 °C (140 °F)  
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Chemical	HDPE	LDPE	NYLON	POLYCARBONATE	POLYPROPYLENE	KYNAR	ACETAL-DELTRIN	316L STAINLESS
Calcium Chloride 30% in water	A	B2	A1	-	A2	A	D	B2
Calcium Hydroxide 10%	A	+	A	-	A	A	A	B
Calcium Hydroxide (saturated)	A	-	A	-	A	A	-	B
Calcium Hypochlorite 30%	A	+	-	-	A	A	-	B
Calcium Nitrate	B	A1	A1	A2	A2	A2	D	B2
Calcium Oxide	+	B1	B	-	A	A	A	A
Calcium Sulfate	+	B1	D	A2	A	A	D	B
Carbolic Acid (Phenol)	-	D	D	D	B	A1	D	B
Carbon Dioxide (dry)	+	A1	A1	-	A2	A	A	A1
Carbon Monoxide	+	A2	A1	-	A	B	A	A
Carbonated Water	-	A	A	-	B	-	A	A
Carbonic Acid	B	B2	A1	A1	A	A	B1	A
Chlorine Water	C	B1	C1	-	D	B	D	C
Chlorine, Anhydrous Liquid	C	D	D	C	D	A1	A1	C
Chlorine (dry)	B	D	D	-	D	A	D	B
Chloroacetic Acid	A	D	D	D	C1	A1	D	A1
Chlorobenzene (mono)	D	C1	D	D	C1	A1	D	B
Chlorobromomethane	-	A	C	-	A	-	-	-
Chlorosulfonic Acid	D	D	D	C1	D	D	D	B2
Citric Acid	A	D	A1	A1	A	A	B1	A2
Citric Oils	B	-	-	-	A	-	B	A
Clorox® (bleach)	-	-	A	-	D	A	-	-
Coffee	+	+	A	-	A	-	A	A
Copper Chloride	+	+	D	-	A	A	A	D
Copper Sulfate 5%	A	A2	D	A1	A	A	D	B
Cresols	D	C1	D	D	D	A2	D	A
Cyclohexane	D	B1	A	B	D	A	A1	A
Cyclohexanone	B	D	A	D	D	D	A	A2
Detergents	A	+	A1	A1	A	A	A1	A1
Dextrin	A	+	-	-	A	A	-	B
Diacetone Alcohol	A	A	A1	D	A1	D	-	B
Dichloroethane	C	C1	A1	D	D	A	A1	B


Please read disclaimer on page 128



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A Excellent (no effect)  
 B Good (minor effect)  
 C Fair (moderate effect)  
 D Poor (severe effect)  
 (1) Satisfactory to 22 °C 72 °F  
 (2) Satisfactory to 48 °C 120 °F

Chemical	HDPE	LDPE	NYLON	POLYCARBONATE	POLYPROPYLENE	KVMR	ACETAL-DELTRIN	316L-STAINLESS
Diesel Fuel	D	C1	D	A2	A1	A	A	A1
Diethyl Ether	D	-	A1	D	A1	A1	-	B2
Diethylamine	D	D	A	D	A1	D	B	A
Disodium Phosphate	A	-	-	-	A	A	-	A
Ethane	+	-	D	-	D	A	A1	A1
Ethanol	A	B	A1	B2	A	A	A1	A
Ethanolamine	-	-	A	-	D	C1	D	A
Ether	D	D	A	-	D	B1	-	A
Ethyl Acetate	A	A	A2	D	A1	D	A	B
Ethyl Benzoate	B	C2	-	D	B1	D	-	-
Ethyl Chloride	C	C1	A1	D	D	A	A1	A
Ethyl Ether	D	D	A1	-	D	A2	A1	B
Ethylene Glycol	A	A2	A	B1	A	A	B	B
Ethylene Oxide	B	A	A1	C1	D	A	D	B
Fatty Acids	A	D	A1	B1	A	A	A	A
Ferric Chloride	D	A1	A	A2	A	A	D	D
Ferric Nitrate	+	A2	A1	A1	A	A	D	B
Ferric Sulfate	+	A2	A1	A1	A	A	D	A
Ferrous Sulfate	+	A2	D	A1	A	A	D	B
<b>Formaldehyde:</b>								
Formaldehyde 40%	A	D	A	A1	A	A	A2	A
Formaldehyde 100%	A	B	D	A2	C	A	A	A
Formic Acid	A	D	D	A1	A1	A	A2	A1
Fruit Juice	+	A	A	-	B	A	D	A
Fuel Oils	C	B	A1	B1	A	B	A	A
Furfural	A	D	B	D	D	B2	A	B
Gallic Acid	A	A	A	-	A	A1	-	B
Gasoline (high aromatic)	B	A	A	A	A	A	B	A
Gasoline (unleaded)	B	-	A2	A2	C1	A	A	A2
Glucose	A	A2	A	A1	A	A	A	A
Glue P.V.A.	A	A1	A1	-	-	-	A	A2
Glycerine	A	A1	A1	A2	A	A	A	A



**Eldon James**

**Chemical Resistance**

+ = Tensile Strength @ Yield and Elongation @ Break Unchanged to 60 °C (140 °F)  
 - = No Data Available

A Excellent (no effect)  
 B Good (minor effect)  
 C Fair (moderate effect)  
 D Poor (severe effect)

(1) Satisfactory to 22 °C 72 °F  
 (2) Satisfactory to 48 °C 120 °F

Chemical	HDPE	LDPE	NYLON	POLYCARBONATE	POLYPROPYLENE	KYNAR	ACETAL-DELRIN	316L-STAINLESS
Glycolic Acid < 70%	+	+	-	-	A	B	A	A
Heptane	B	B1	A	B	C2	A	A	A
Hexane	C	D	B	D	B1	A	A	A
Honey	+	+	A	A1	A	A	A	A
Hydraulic Oil (petroleum)	A	C	A1	-	D	A	B	A
Hydraulic Oil (synthetic)	A	A	A1	-	D	A	-	A
Hydrazine	D	+	-	D	C	A	B	A
Hydrochloric Acid 20%	A	A2	D	B1	B2	A	C	D
Hydrochloric Acid 100%	D	+	D	D	B1	A	D	D
<b>Hydrofluoric Acid</b>								
Hydrofluoric Acid < 50%	A	A1	D	D	A2	A	D	D
Hydrofluoric Acid 75%	B	C1	D	D	C1	A	D	D
Hydrofluoric Acid 100%	D	-	D	D	C1	A	D	B1
Hydrofluosilicic Acid 20%	B	B2	D	-	A	A	B	B1
Hydrofluosilicic Acid 100%	C	B1	D	-	A	A1	A	D
Hydrogen Gas	A	A2	A2	A2	A	A	-	A
<b>Hydrogen Peroxide</b>								
Hydrogen Peroxide 10%	A	A	C1	A2	A	A	D	B
Hydrogen Peroxide 30%	A	C2	D	A2	B1	A	D	B
Hydrogen Peroxide 50%	A	C2	D	A2	B1	A1	D	A2
Hydrogen Peroxide 100%	A	C2	D	A	B1	A1	D	A2
Hydrogen Sulfide (aqua)	A	A	C1	A	A1	A	C	A
Hydroquinone	-	A	D	-	A	-	A	B
Hydroxyacetic Acid 70%	-	A	-	-	-	A	A	-
Iodine	B	A1	A	-	C	A2	D	D
Iodine (in alcohol)	B	B	C	-	-	A	D	-
isooctane	B	B	A1	B1	A2	A2	-	A1
Isopropyl Acetate	B	B1	B1	D	B1	D	D	A
Jet Fuel (JP3, JP4, JP5)	D	D	C	A1	A1	B	A1	A
Kerosene	B	C1	A	D	B	A	A2	A
Ketones	D	C1	A2	D	C	C1	D	A
Lacquer Thinner	D	A	A1	B	D	-	D	A

Please read disclaimer on page 128





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 C Fair (moderate effect)  
 D Poor (severe effect)  
 (1) Satisfactory to 22 °C 72 °F  
 (2) Satisfactory to 48 °C 120 °F

Chemical	HDPE	LDPE	NYLON	POLYCARBONATE	POLYPROPYLENE	KYNAR	ACETAL-DELTRIN	316L STAINLESS
Lacquer	D	A	A1	D	D	D	D	A
Lactic Acid	A	A1	B	B	B	B1	B	B1
Latex	+	+	A1	-	A2	A	B	A2
Ligroin	-	A	D	-	A2	A	B	A
Lime	+	A	A1	-	-	A	B	A
Linoleic Acid	-	A	-	-	B1	A2	B	A
Lithium Hydroxide	D	-	-	D	-	-	-	B
Lubricants	B	D	A1	A1	A1	A	A	A2
Lye:								
KOH Potassium Hydroxide	B	A	C	D	A	A	A	A1
NaOH Sodium Hydroxide	B	D	A	D	A	D	C	B1
CaOH <sub>2</sub> Calcium Hydroxide	B	A2	A2	D	A2	A2	D	B
Magnesium Bisulfate	-	-	A1	A1	A2	-	-	A1
Magnesium Chloride	A	A1	A1	A2	A2	A	B1	D
Magnesium Hydroxide	B	A2	B1	A1	A	A	A	A1
Malic Acid	-	B2	A	-	A1	A	A	A2
Methane	-	-	A	-	A	A	A	A
Methanol (Methyl Alcohol)	A	A1	B1	B1	A2	A	A	A
Methyl Alcohol 10%	A	A1	B1	B1	A2	A	A	A
Methyl Cellosolve	-	-	C	D	B	A	D	B
Methyl Chloride	-	C1	B1	D	D	A	B	A
Methyl Ethyl Ketone (MEK)	D	D	A1	D	B2	D	C	A
Methyl Isobutyl Ketone	D	C	B2	D	A	D	-	B
Methyl Isopropyl Ketone	-	D	A	D	-	-	-	A
Methylamine	-	A1	-	-	A2	C	D	A
Methylene Chloride	D	D	C1	D	B1	B1	B	B
Milk	+	A	A	A	B	A2	A	A
Mineral Spirits	D	B	A	C	B	-	A	A
Monochloroacetic Acid	D	-	D	D	-	B1	D	A1
Monoethanolamine	-	C	A	-	B	C	D	A
Morpholine	+	-	A2	D	B2	B1	-	A1
Motor Oil	-	C1	A2	A	A1	B	B	A2

Please read disclaimer on page 128



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Chemical	HDPE	LDPE	NYLON	POLYCARBONATE	POLYPROPYLENE	KYMAR	ACETAL-DELRIN	316L STAINLESS
A Excellent (no effect) B Good (minor effect) C Fair (moderate effect) D Poor (severe effect) (1) Satisfactory to 22 °C 72 °F (2) Satisfactory to 48 °C 120 °F								
Naphtha	-	A1	A	B	B	A	A1	A
Natural Gas	-	A	-	-	A	-	B	A
<b>Nitric Acid</b>								
Nitric Acid (5-10%)	A	B	D	A	A	A1	D	A
Nitric Acid (20%)	B	C	D	B1	A2	A	D	A
Nitric Acid (50%)	D	B1	D	B	B	A1	D	A1
Nitrobenzene	D	C1	B1	D	B1	A1	C	B
Nitromethane	D	A	B1	D	B2	A2	A	A1
Nitrous Oxide	-	C	C	-	D	D	-	B
<b>Oils:</b>								
Citric	-	A	A	A	A	A	A	A
Corn	-	A	A	-	A2	A	A	A
Cottonseed	-	A	B	-	A	A	A	A
Crude Oil	D	-	A	-	A	A	A	A
Diesel Fuel (20, 30, 40, 50)	-	A	A	-	A1	A	D	A
Fuel (1, 2, 3, 5A, 5B, 6)	-	B	A	B	B	B	D	A
Silicone	A	A	A1	-	A	A	A	A
Turbine	-	C	A	-	B1	A	A	A
Oleic Acid	C	C2	A	-	B1	A	A	A
Oxalic Acid (cold)	A	A2	B2	-	A2	B	B	A
Ozone	A	C1	D	A1	B	A	C	A
Palmitic Acid	+	+	A	-	B1	A2	A	A1
Paraffin	B	B	A1	A1	A1	A	A	A
Pentane	-	D	A1	A	D	A	B	A
Perchloric Acid	D	B	D	-	C	A	C	C
Petroleum	D	C1	A1	-	B1	A	B	A1
Phenol (10%)	D	B	D	B1	B1	A	B	B
Phenol (Carbolic Acid)	D	D	D	D	B	A1	D	B
Phosphoric Acid (<40%)	A	A	B1	A	A2	B	D	C
Phosphoric Acid (>40%)	A	B1	B1	A	A2	B	D	D
<b>Plating Solutions</b>								
Copper Sulfate Bath R.T.	-	-	D	-	A	A	A	D

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Chemical	HDPE	LDPE	NYLON	POLYCARBONATE	POLYPROPYLENE	KVMR	ACETAL-DELRIN	316L STAINLESS
Gold Plating (Acid 75 °F)	-	-	A	-	A	-	-	C
Silver Plating (80°F-120 °F)	-	-	A	-	A	-	-	A
Potassium Bicarbonate	B	A	A1	-	A	B	-	B
Potassium Bromide	B	A	A1	A1	A	A	A	B
Potassium Chloride	A	A1	A1	A	A	A	A	A1
Potassium Dichromate	B	A	B1	A1	A	A	A	B1
Potassium Ferricyanide	+	A2	B1	-	A2	A2	B1	B1
Potassium Hydroxide	A	A	C1	D	A	A	A	A1
Potassium Iodide	B	B1	A1	-	A2	A2	-	A1
Potassium Nitrate	B	A	B1	A1	A	A	A	B
Potassium Permanganate	A	A	D	A2	A1	A	A	B
Propane (liquefied)	D	C1	A1	C1	A	A	A	A
Propylene Glycol	A	B2	A	B1	A2	-	B	B
Pyridine	D	B1	C1	D	A2	D	B	A
Quinine	+	+	-	-	-	-	-	-
Resorcinol	-	B2	D	B1	A2	-	-	-
Rosins	B	B1	A1	-	A2	-	B	A1
Salicylic Acid	+	B2	A1	A1	A1	A	D	B2
Sea Water	A	A2	A2	A2	A	A	A	C
Shellac (Orange)	-	A1	A1	-	A	-	A	A
Silicone	+	+	A1	A2	A	A	A	A
Silver Bromide	-	A	-	-	-	-	C	D
Silver Nitrate	A	A	A1	A2	A1	A	A	B
Soap Solutions	B	D	A1	A1	A	A1	A	A1
Sodium Acetate	A	A	B1	A1	A	A	B	B1
Sodium Benzoate	B	A2	B1	A2	A2	A2	-	-
Sodium Bicarbonate	A	A2	A	A2	A	A	A	A1
Sodium Bisulfate	B	A2	A1	A1	A	A	B	C
Sodium Bisulfite	B	A2	C1	A1	A	A	C	B1
Sodium Borate (Borax)	B	A2	A1	A1	A2	A	-	B
Sodium Bromide	+	A2	B1	-	-	A2	A	C
Sodium Carbonate	A	B2	B1	A2	A	A	A1	A

Please read disclaimer on page 128



+ = Tensile Strength @ Yield and Elongation @ Break Unchanged to 60 °C (140 °F)  
 - = No Data Available

Chemical	HDPE	LDPE	NYLON	POLYCARBONATE	POLYPROPYLENE	KYNAR	ACETAL-DELFIN	316L STAINLESS
Sodium Chlorate	+	B2	D	A1	A	A	A	B1
Sodium Chloride	A	A2	A1	A2	A	A	A1	B
Sodium Hydrosulfite	-	-	A	-	-	-	-	-
<b>Sodium Hydroxide</b>								
(20%)	C	B	A	A2	A	A	A	B2
(50%)	C	B	A	D	A	D	A	B1
(80%)	C	-	C	D	A	D	D	B1
Sodium Hypochlorite (100%)	C	B2	D	-	B	A	D	D
Sodium Hypochlorite (< 20%)	A	A	D	C	A	A	D	C
Sodium Nitrate	B	A2	A1	-	A	A	A	B1
Sodium Perborate	-	A1	B1	-	A	-	B	B
Sodium Polyphosphate	B	A	A1	-	A	A	B	B
Sodium Silicate	A	A2	A1	-	A	A	C	B
Sodium Sulfate	+	A2	A	A2	A	A	B	B1
Sodium Sulfite	B	B1	D	-	A2	A	-	A
Sodium Tetraborate	B	A2	A	-	-	-	B	A
Sodium Thiosulfate	+	A1	B	D	A2	A	C1	B
Stearic Acid	A	B1	A2	A1	A2	A	A	A
Stoddard Solvent	-	C2	A	A2	C	A	A	A
Styrene	-	-	A1	D	-	-	A	A
Sulfate (liquors)	A	A2	B1	-	A	A	D	B
Sulfur Dioxide	D	B1	C1	-	A1	A	B	A1
Sulfur Trioxide	-	-	D	-	C	-	-	C
Sulfur Hexafluoride	-	B	B	-	-	-	-	-
<b>Sulfuric Acid</b>								
Sulfuric Acid (< 10%)	A	A1	C1	A1	A2	A	D	B
Sulfuric Acid (10-75%)	A	A1	D	B1	A1	A	D	D
Sulfuric Acid (cold concentrated)	B	D	D	-	A2	A	-	B
Sulfuric Acid (hot concentrated)	B	D	D	D	D	C	-	C
Sulfurous Acid	B	B2	D	-	A	A	C	B
Tannic Acid	A	B2	C1	C	A	B	B	A
Tetrachloroethane	-	-	C1	-	C	A	C	A

Please read disclaimer on page 128



+ = Tensile Strength @ yield & Elongation @ Break Unchanged to 60 °C 140 °F  
 - = No Data Available

Chemical	HDPE	LDPE	NYLON	POLYCARBONATE	POLYPROPYLENE	KVMAR	ACETAL-DELFIN	316L STAINLESS
	Tetrahydrofuran	C	C1	A	D	C2	B1	A
Toluene (Toluol)	D	C1	A1	D	C1	A1	C1	A
Trichloroacetic Acid	C	A	C	D	A	B	-	C
Trichloroethylene	D	D	C1	-	C1	B	D	B
Tricresylphosphate	+	B1	A2	-	A1	D	C	B
Triethylamine	-	-	A1	-	D	A2	D	A
Trisodium Phosphate	A	A	A	-	A	A	A	B
Turpentine	B	D	B	D	D	A	A2	A
Urea	A	A	A	D	A	A	A	B
Vegetable Juice	-	-	A	-	-	-	A	A
Vinegar	A	A	A	A2	A	B	B	A
Water, Deionized	A	-	A1	-	A2	A2	-	A2
Water, Distilled	A	A2	A1	A2	A	A	B	A
Water, Fresh	A	A2	A1	A2	A	A	A2	A
Water, Salt	A	A2	A2	A2	A	A	A	B
Weed Killers	-	-	A	-	-	-	A	A
Whiskey & Wines	B	C	A1	A1	A	A	A	A
Zinc Sulfate	A	A2	A	A2	A	A	C	A

**Disclaimer and Safety Warning:** The data presented in this publication is for reference only. It was compiled from outside information provided by materials suppliers and feedstock resin manufacturers. Data is offered to our customers as a means of comparing the characteristics of a group of resins and materials in use by Eldon James at the time of publication. Specific conditions of use and a customer's application of our products are beyond our control; therefore, it is imperative that products be tested in each particular application to determine ultimate suitability. All information is provided without implied or expressed guarantee by Eldon James or its material suppliers. Eldon James assumes no liability with respect to the accuracy or completeness of the information contained herein and none of the information provided constitutes a recommendation or endorsement of any kind by the Eldon James Corporation.

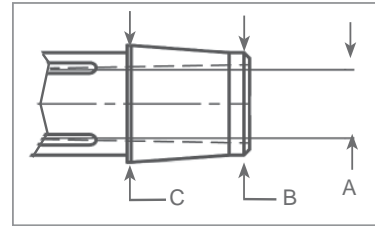
An expanded listing of technical information can be found on our Website @ [eldonjames.com](http://eldonjames.com) in the technical section



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## Thread Specifications and Barb Dimensions - Approximate

EJ Barb Size	Fits Hose ID	Dim. A	Dim. B	Dim. C
1	1/16"	.048"	.070"	.098"
1.5	3/32"	.068"	.100"	.135"
2	1/8"	.075"	.125"	.161"
2.5	5/32"	.097"	.160"	.207"
3	3/16"	.117"	.180"	.244"
4	1/4"	.140"	.250"	.300"
5	5/16"	.200"	.313"	.364"
6	3/8"	.250"	.375"	.450"
8	1/2"	.368"	.500"	.570"
10	5/8"	.470"	.625"	.712"
12	3/4"	.580"	.750"	.855"
16	1"	.800"	1.00"	1.100"



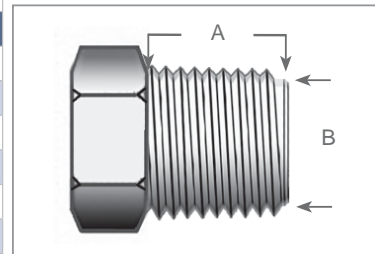
EJ Nominal Barb Dimensions  
Plastic Hose Barbs

## Thread Specifications

EJ Thread	Thread Length (A)	Thread Type	Threads Per Inch	Pitch Dia. Start/Ext. Thread (B)
<b>Unified National Fine (UNF) Threads</b>				
1032	1/4"	UNF	32	.1658
1032T	3/8"	UNF Taper	32	-
1/4-28	3/8"	UNF	28	.2208
<b>National Standard Taper Pipe Thread (NPT)</b>				
1	1/16"	NPT	27	0.27118
2	1/8"	NPT	27	0.36351
4	1/4"	NPT	18	0.47739
6	3/8"	NPT	18	0.61201
8	1/2"	NPT	14	0.75843
12	3/4"	NPT	14	0.96768
16	1"	NPT	11.5	1.21363
<b>British Standard Pipe Thread (BSPT)</b>				
2B	1/8"	BSPT	28	0.3601
4B	1/4"	BSPT	19	0.4506
6B	3/8"	BSPT	19	0.5886

### Thread Torque:

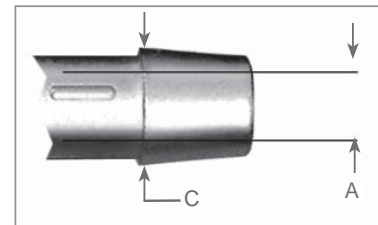
The general rule for plastic threads is - finger-tight plus 1/2 to 1 turn with a wrench.



\*Over-tightened plastic threads can put stress on the fitting and may cause it to fail.

## Stainless Steel Barb Dimensions

Use with Hose ID	EJ Barb #	Thru Hole ID A	Barb Diameter C	Barb Dia. Metric
3/32"	1.5	.066"	.152"	3.86 mm
1/8"	2	.082"	.180"	4.57 mm
5/32"	2.5	.100"	.215"	5.46 mm
3/16"	3	.127"	.260"	6.60 mm
1/4"	4	.167"	.314"	7.98 mm
5/16"	5	.217"	.372"	9.45 mm
3/8"	6	.312"	.498"	12.65 mm
1/2"	8	.400"	.619"	15.72 mm
5/8"	10	.495"	.743"	18.87 mm
3/4"	12	.667"	.956"	24.28 mm



Stainless Steel Barbs



Chemical resistance charts at back of catalog

# Terms and Conditions of Sale



## Specific Terms and Conditions

Visa, MasterCard and American Express credit cards are accepted. Credit accounts may be established on a Net 30 basis only, following submission and approval of Eldon James Terms and Conditions Agreement. The form is available online, or may be requested through Customer Service.

**Minimum Orders:** Order total must be at least \$150.00 USD.

**Accounts:** Orders are accepted on account for customers with an on-time payment history and no invoices more than 30 days outstanding. Delinquent accounts can result in denial of credit and accounts over 90 days past due are subject to action by a third party.

**Freight Policy:** All shipments are F.O.B. Denver, Colorado. Shipping charges are pre-paid and added to the invoice unless other arrangements are made by the customer prior to shipment. Standard shipping is by FedEx ground unless a UPS or other shipper account number is provided at the time the order is placed.

**Certificates:** Many Eldon James materials meet USP Class VI and FDA requirements. Certificates of Traceability and/or Certificates of Conformance are available. Requests for certificates must appear on the purchase order (a line item entry is preferable).

**Returned Goods:** Products are not returnable after 30 days. In order for Eldon James to maintain lot traceability integrity, the following categories of products are **non-returnable**: All Flexelene™ Tubing, all fittings with the letters NN, NK, PP, HDPE, PC, CVU & MN in the suffix, and all 'antimicrobial protected' products. It is impossible for us to guarantee lot and job traceability once these products have left our facility. 'Special orders' and custom manufactured products are non-returnable unless defective. Please call prior to placing an order if you have questions about returning specific products. We will gladly provide samples for determining fit and form functionality.

**Returns Procedure:** Contact customer service for a Return Authorization Request Form. RGA numbers must be clearly visible on the outside of the return carton. Returned product is subject to a 15% minimum restocking fee unless it is defective.

## Export Orders

**International:** It is generally easier and more economical to work with a distributor when making purchases outside of the USA. Distributors provide value-added customs and freight experience and will often stock parts based on a customer's needs.

**Special Payment Terms Conditions:** International shipments must be paid for in advance by wire transfer or credit card (authorization required prior to shipment). Please provide us with a Fed Ex or UPS account number. Shipments are easier to track if the freight account originates in the country where the shipment will be received.

**Customs:** Custom's fees vary considerably between countries and shipments may be delayed by several days for processing. Eldon James provides commercial invoices, NAFTA and other documents required for international shipments; however, customers are responsible for any charges assigned by customs that are added to their shipment. These charges are frequently added at the destination. Before placing an order, please check with your country's customs office for information regarding additional charges.

**Freight Forwarding:** Use of a freight forwarding service is recommended for all large shipments. Forwarding services can economize on shipping costs by grouping deliveries to common destinations. Freight forwarding companies also have experience with customs clearing and international shipping requirements.

Payment on Export Orders: Invoices may be paid by: 1) Visa, MasterCard or American Express credit cards - authorization required 2) Payment by check drawn from an account at a US bank (denominated in US dollars) 3) Wire transfers in US Dollars are also welcome - bank charges are the customer's responsibility. Please contact Eldon James Customer Service 001 (970) 667-2728, 8:00 a.m. to 5:00 p.m. MST for bank account and wire transfer information.

**Limitations of Warranty:** Eldon James Corp. warrants its products to be free from defects in materials and workmanship. The exclusive remedy for defective materials or workmanship is limited to replacement of defective products returned to the Eldon James Corp. within sixty days after the invoice shipping date. **NO WARRANTY OF MERCHANTABILITY OR FITNESS IS EXPRESSED OR IMPLIED.** There are no warranties which extend beyond the description on the face hereof. Eldon James Corp. is not liable for consequential or other damages, or for any expense incurred through the use of its products. Customers are encouraged to request free samples for testing and evaluation to determine suitability of the product for their particular application.



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