



AdvantaFlex TPE (thermoplastic elastomer) tubing addresses the need for a flexible, translucent, sterilizable, moldable, heat sealable, and weldable biopharmaceutical tubing for fluid processing. AdvantaFlex maintains its physical properties following sterilization processes, resists kinking, remains translucent for visible product flow, and does not become gummy.



TPE
www.advantapure.com

KEY FEATURES

- Sterile weldable and heat sealable
- Available as leak-proof molded connections and tubing
- Made from FDA-approved ingredients
- Certified free of silicone oils and animal-derived ingredients
- Sterilizable by autoclave or gamma radiation
- Available with validated sterility assurance of 10^{-6} via gamma irradiation per ISO 11137 method VDmax 25
- Meets various ISO and USP standards, including Class VI
- Meets European Pharmacopoeia 3.2.2.1 standards
- REACH, RoHS and California Proposition 65 compliant
- Excellent low absorption and adsorption characteristics as compared to silicone
- Low permeability as compared to silicone
- Smooth interior for excellent flow and performance
- Translucent for fluid flow visibility
- Excellent tubing component for Single-Use systems
- Sizes from 1/8" (.125) through 1" (1.000) I.D.
- Custom sizes, lengths and packaging available
- Supplied double bagged
- Sealed in polybags at manufacture for cleanliness
- Documented quality control; lot traceable with identification on polybags
- Single resin validation — no need to graft to other tubing materials like silicone for media filling and sampling that involves peristaltic pumps; helps eliminate operator errors
- "Extractables" test portfolio available upon request
- AdvantaFlex has a Master File with the U.S. Food and Drug Administration (#28810)



MOLDED ASSEMBLIES
& CONNECTIONS
AVAILABLE



SPECIFICATIONS

Product Number	I.D.		Wall (Ref.)		O.D.		Working Pressure at 70°F (21.1°C)		Standard Lengths Coiled (ft.)	Standard Lengths on Spools (ft.)
	(in.)	(mm.)	(in.)	(mm.)	(in.)	(mm.)	(PSI)	(Bar)		
APAF-BP-0125-0250	.125	3.18	.062	1.57	.250	6.35	30	2.1	50, 100	500
APAF-BP-0188-0313	.188	4.76	.062	1.57	.313	7.94	23	1.6	50, 100	-
APAF-BP-0188-0375	.188	4.76	.094	2.38	.375	9.52	32	2.2	50, 100	350
APAF-BP-0250-0375	.250	6.35	.063	1.59	.375	9.52	20	1.4	50, 100	-
APAF-BP-0250-0438	.250	6.35	.094	2.38	.438	11.11	23	1.6	50, 100	300
APAF-BP-0250-0500	.250	6.35	.125	3.18	.500	12.70	30	2.1	50, 100	-
APAF-BP-0313-0438	.313	7.94	.062	1.57	.438	11.11	21	1.4	50, 100	300
APAF-BP-0313-0500	.313	7.94	.094	2.38	.500	12.70	24	1.6	50, 100	-
APAF-BP-0375-0500	.375	9.52	.062	1.57	.500	12.70	18	1.3	50, 100	-
APAF-BP-0375-0563	.375	9.52	.094	2.39	.563	14.30	23	1.6	50	-
APAF-BP-0375-0625	.375	9.52	.125	3.18	.625	15.88	24	1.6	50, 100	150
APAF-BP-0500-0750	.500	12.70	.125	3.18	.750	19.05	22	1.5	50, 100	100
APAF-BP-0625-0875	.625	15.88	.125	3.18	.875	22.23	18	1.3	50, 100	-
APAF-BP-0750-1000	.750	19.05	.125	3.18	1.000	25.40	17	1.2	50, 100	75
APAF-BP-0750-1125	.750	19.05	.188	4.76	1.125	28.58	18	1.3	50, 100	50
APAF-BP-1000-1375	1.000	25.40	.188	4.76	1.375	34.93	18	1.3	25	-

Sold by standard lengths only. Add length suffix code to product number when ordering—see the Coil Length Legend at right for length suffix codes. Example: a 50 foot coil of .125 inch I.D. x .250 inch O.D. tubing is product number APAF-BP-0125-0250L. Add length and “S” to denote “spool” for products with lengths available on spools. Example: a 500 foot spool of .125 inch I.D. x .250 inch O.D. tubing is product number APAF-BP-0125-0250-500S. Working pressures are calculated from burst testing using a 3:1 safety factor. Coils and spools are supplied double bagged in heat-sealed polybags and bulk packed. Contact your AdvantaPure Sales Representative for other packaging options.

Coil Length Legend:

- P = 25 feet
- L = 50 feet
- K = 100 feet

TUBE

PHYSICAL PROPERTIES

APPLICATIONS

- Sterile filling
- Vaccine production
- Pharmaceutical sampling and delivery systems
- Single-Use systems
- Bioreactor processes
- Cell media, harvesting, and fermentation
- Pharmaceutical production and processing
- High purity water transfer
- Filtration

Specific Gravity	.89
Hardness, Shore A ±5	65
Ultimate Tensile Strength, PSI	1000
Ultimate Elongation, %	550
Tensile Modulus @ 100%, PSI	410
Tear Strength, Die B, PPI	240
Compression Set, % per ASTM D-395B	25
Maximum Operating Temperature, °F	275
Brittle Temperature, °F	-88

Values listed are typical for the material used in manufacture, except where noted, and are meant only as a guide to aid in design. Field testing should be performed to find the actual values for your application.

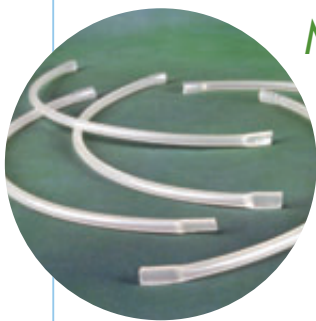
MOLDED ASSEMBLIES & CONNECTIONS

- Build Single-Use tubing assemblies from AdvantaFlex®
- Eliminate the need to splice silicone tubing sections into a process line
- Reduce the number of barbed fittings and cable ties needed *and* their potential for contamination, leaks and a wasted batch of product
- Molded connections provide a smooth inner surface for even, unrestricted flow
- Choose from T's, Y's, crosses, reducers, mini and standard Tri-Clamps®, and BioClosure® container closures and inserts such as GL45's
- Available with validated sterility assurance of 10⁻⁶ via gamma irradiation per ISO 11137 method VDmax 25



MORE ADVANTAFLEX OPTIONS

- **Sealed Tubing Ends** for Single-Use applications make it easy to maintain your sterile, closed system
- Weld to bags or container closures for sampling and storage applications
- Ideal for reducing operational costs, improving production efficiencies and decreasing cross contamination risks



- Single-Use **Sterile Bottle Assemblies** provide a ready to use, cost effective solution for aseptic sampling, cell growth and filling applications
- Robust molded closure design features a continuous flow path that reduces the risk of barbed fitting leaks and contamination



- **Molded Tubing Ends** are ideal for aseptic transfer and processing
- AdvantaFlex tubing is overmolded with a USP Class VI polypropylene mini Tri-Clamp to form a smooth fluid path
- The ends reduce leaks and cross contamination risks
- Available from stock in several tubing sizes and lengths



- **Bioreactor Tubing Kits** are built-to-order and clean room packaged
- Offer faster turnaround time, increasing your processing capacity
- Assembled from various components — tubing, filters, connectors — for convenience and efficiency



TPE



WELDING & SEALING ADVANTAFLEX



■ Excellent weldability and sealability allows leak-free, sterile connections for filling, sampling and storage applications. AdvantaFlex is compatible with all portable welding and heat-sealing equipment.



TPF

Purity in Fluid Flow Systems®



Made in U.S.A.

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