

AdvantaSil™ APHP

HIGH PRESSURE SILICONE TUBING

Pharma & Biopharmaceutical Applications

PRODUCT DATASHEET



AdvantaSil™ APHP is a platinum-cured silicone specifically engineered to meet critical pharmaceutical and biopharmaceutical high-pressure applications. Designed for high-volume fluid transfer, APHP stands out as the preferred material due to its higher durometer, which provides superior pressure ratings compared to standard unreinforced tubing. Its translucence allows for visibility of fluid flow, making it an excellent choice for precise and efficient operations. APHP is rigorously validated, qualified, and released under the most stringent product validation protocols, ensuring the highest quality and reliability for high-pressure, high-volume fluid transfer applications.

KEY FEATURES & BENEFITS

- Translucent for fluid flow visibility while withstanding higher pressures
- 80A durometer for high pressure applications
- General temperature range -65°F to 400°F (-53.9°C to 204.4°C)
- Custom lengths, sizes, and packaging available
- Excellent for applications that require processing at higher flow rates
- Produced, assembled, and packaged in an ISO Class 7 cleanroom
- Wide range of sizes from 0.125" to 1.5" (3.18 mm to 38.1 mm) I.D.
- Manufactured with a focus on [sustainability](#)
- Comprehensive [validation package](#) to expedite qualification and validation

TYPICAL APPLICATIONS



High-pressure Pharma and Biopharma application



Sterile filling and single-use transfer



Bioreactor process lines



Biopharmaceutical production, sampling and delivery systems



Filtration



Cell culture operations



Buffer and media preparation



Harvest and fermentation



Chromatography



High-volume fluid transfer

TYPICAL PHYSICAL PROPERTIES

	ASTM Method	Value
Durometer, Shore A	D2240	80 +/- 5
Specific Gravity	D792	1.18
Ultimate Tensile Strength, psi (MPa)	D412	1250
Ultimate Elongation, %	D412	250
Tensile Modulus @100%, psi (MPa)	D412	900
Tear Strength, Die B, ppi (kN/M)	D624	170

STERILITY

Available with validated sterility assurance of 10^{-6} via gamma irradiation per ISO 11137 method VDmax 25. A full sterility validation guide is available upon request.

STERILIZATION METHODS

Autoclave	One-time cycle at 121°C, 30 min
Gamma Irradiation	Up to 50 kGy
X-Ray	Up to 50 kGy

CHEMICAL COMPATIBILITY

Acids, Dilute / Weak	Test Before Using
Acids, Strong / Concentrated	Test Before Using
Bases, Dilute / Weak	Acceptable
Bases, Strong / Concentrated	Test Before Using
Salts	Acceptable
High Purity Water	Test Before Using
Oil/Water Emulsion	Test Before Using
Alcohol	Test Before Using
Organic Solvent	Test Before Using

COMPLIANT OR TESTED TO

- USP <665> Extractables/Leachables
- USP <87> Cytotoxicity MEM Elution
- USP <88> Class VI
- USP <85> Bacterial Endotoxin
- European Pharmacopeia 3.1.9
- ISO 10993-5 (Cytotoxicity, In Vitro)
- RoHS Compliant
- ADCF Compliant

[Review the Regulatory Overview chart](#)

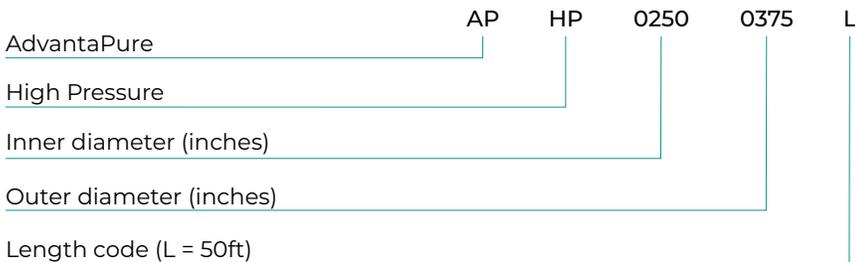
PRODUCT SPECIFICATIONS

Part Number	Catalog Number	I.D.		Wall		O.D.		Working Pressure 3:1 Safety Factor 70°F (21.1°C)		Bend Radius		Standard Available Lengths	
		in	mm	in	mm	in	mm	PSI	Bar	in	mm	ft	m
A7040521	APHP-0125-0250	0.125	3.18	0.063	1.60	0.250	6.35	58	4.0	0.375	9.5	50	15.24
A7040553	APHP-0250-0375	0.250	6.35	0.063	1.60	0.375	9.52	36	2.5	1	25	50	15.24
A7040852	APHP-0375-0625	0.375	9.52	0.125	3.18	0.625	15.88	56	3.9	1.2	30	50	15.24
A7041086	APHP-0500-0750	0.500	12.70	0.125	3.18	0.750	19.05	41	2.8	1.8	46	50	15.24
A7041463	APHP-0750-1000	0.750	19.05	0.125	3.18	1.000	25.40	34	2.3	2.1	53	50	15.24
A7041684	APHP-1000-1375	1.000	25.40	0.188	4.76	1.375	34.93	25	1.7	4.1	104	50	15.24
A7041834	APHP-1500-1875	1.500	38.10	0.188	4.76	1.875	47.60	27	1.9	6	152	10	3.05

NOTE: Not all standard part numbers are stocked items. For the up-to-date list of stocked sizes and lengths available, please contact your sales representative.

CATALOG NUMBER KEY

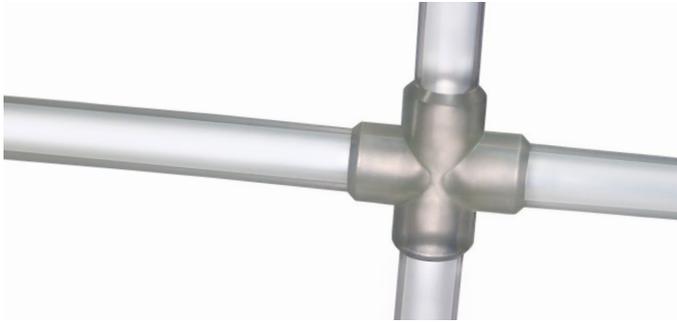
Sold by standard coil length of 50 ft, and 10 ft (for A7041834 only). Add length suffix to catalog number if this is being used to order. Example: 50 ft. of .250 in. I.D. x .375 in. O.D. tubing is catalog number APHP-0250-0375L.



Non-listed sizes and custom lengths are available by special order. Working pressures are calculated from burst testing using a 3:1 safety factor. Application testing is recommended. Coils and spools are supplied double-bagged in heat-sealed polybags and bulk packed. Contact your AdvantaPure sales representative for other packaging options.

Specific cutting techniques are strongly recommended for APHP. The tubing must be cut with a chevron style cutter at a 90-degree angle to the tubing.

NOTE: The data listed throughout this datasheet is meant only as a guide to aid in the design and is believed to be reliable; however, nothing stated shall constitute a guarantee or warranty for any application. Product field testing should be performed to find the actual values for a specific application.



Overmolding - Connections and Assemblies

All AdvantaSil APHP sizes can be integrated into our assemblies and manifolds. Choose from standard available wyes, tees, sanitary ends, crosses, and reducers, or opt for our custom overmolding design services to create custom pieces for your unique application.

NOTE: Overmolded junctions on APHP assemblies may not accommodate same pressures as tubing.



Tubing Kits

Built-to-order in an ISO Class 7 cleanroom, assembled with various components for convenience and efficiency.



Sterile Bottle Assemblies

Provide a ready-to-use, cost-effective solution for aseptic sampling, cell growth, and filling applications. The robust molded BioClosure™ is designed for storage and containment.

NOTE: Bottle assemblies on APHP assemblies may not accommodate same pressures as tubing.



Molded Tubing Ends

Ideal for aseptic transfer and processing, overmolded with multi-port sanitary clamp and ends to form a smooth fluid path.



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To learn more about AdvantaPure and what solutions we offer visit:
[AdvantaPure.com](https://www.AdvantaPure.com)

The AdvantaPure line of fluid transfer systems for the biopharma and pharmaceutical market are a line of the NewAge Industries family of products and services.

WARRANTY: Products of NewAge Industries, Inc.™ the parent company of the AdvantaPure™ division are warranted to be free from defects in material and workmanship. Any product found to carry such defects will be replaced without charge. This warranty is limited only to the replacement of AdvantaPure products, item for item, which after examination by AdvantaPure are deemed defective. The AdvantaPure division specifically disclaims any other liability. The data supplied is provided as a helpful guideline and is believed to be reliable; however, nothing stated shall constitute a guarantee, recommendation, or warranty for any application.

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