



# Flexible hose & Fittings



Sanitary  
flow  
equipment

# APST Unreinforced Silicone Tubing

## TRANSLUCENT, PLATINUM-CURED

Low-volatile grade, platinum-cured silicone tubing is clean-room produced for critical pharmaceutical, biomedical, cosmetic, and food applications. APST has undergone extensive physical, chemical, and biological testing and meets USP Class VI, FDA CFR 177.2600, ISO 10993, European Pharmacopoeia 3.1.9, and 3A standards.

APST Unreinforced Silicone Tubing is not intended for implantation, continuous steam applications, or elevated pressure levels.

## Available Assembly

- HOSE BARB ONLY



# APSH Braid-Reinforced Silicone Hose

## PLATINUM-CURED

Designed for fitting flexible silicone hoses straight from the client without the need for special lengths. Offering both benefits of cost as well as simplicity of use, the connectors and clamping ring nuts can be reused again and again simply by re-heading or renewing the flexible hose when necessary. To clamp the flexible hose, apply pressure to the plastic external collar over the thread of the internal stainless steel connector.

PLASTIC RE-FLEX connections are not suitable for attaching to hose with a diameter or thickness other than those listed in the table. APSH with plastic re-usable collar is not intended to be used for temperature  $>60^{\circ}\text{C}$  and pressure  $>6$  bar.



## Available Assembly

- PLASTIC REUSABLE
- STAINLESS STEEL REUSABLE
- SS RADIAL CRIMPED



# TTSP-TTSD SILICONE HOSES Series

Suction and delivery hose suitable for pharmaceutical, cosmetic and food products. Phthalates free tube, tested in compliance with 1907/2006/CE (REACH). Tested in compliance with USP XXXII class VI, not cytotoxic according to ISO 10993 Section 5:2009. Not intended for use as an implant material. Not suitable for blood or human fluids.



## POSSIBLE CONFIGURATIONS

### HOSE WITHOUT CONNECTION



### REUSABLE CONNECTION



### CRIMPED CONNECTION



TUSIL is not intended for implantation and is not be used for continuous steam applications.

## HOSE KEY FEATURES

### TUBE

silicone, white, phthalates free, tested in compliance with 1907/2006/CE (REACH). Meets FDA CFR 21 PART 177.2600, USP XXXII class VI requirements, European Pharmacopoeia 3.1.9 Ed. VII 2011, ISO 10993 Sections 5,10,11:2009, BfR Recommendation XV & XXI Cat. 2, European Reglement 1935/2004/CE, DM 21/03/1973 e seguenti, Japan Ministry of Health and Welfare Notice No.370,1959, No.201,2006, 3A Sanitary Standard Class II

### REINFORCEMENT

high temperature resistant plies, with (TTCF...SP) or without (TTCF...SD) stainless steel wire helix

### COVER

smooth, silicone, white, heat, ageing, ozone and abrasion resistant, glossy cover

### STERILIZATION

Please ask for guidelines for cleaning and sanitizing

### MARKING

Transfer tape SILPURE

## HOSE TECHNICAL CHARACTERISTICS

### TEMPERATURE RANGE

-60°C / +200°C (-76°F / +392°F) The operating temperature of the hose is directly dependent upon the specific fluid been conveyed and the length of time the fluid is in contact with the hose

### VACUUM

675 mmHg (26,6 inHg)

### NORM

ISO 1307 for dimensional tolerances

## HOSE SPECIFICATIONS

### without wire helix

### with wire helix

CODE	I.D. DN - BS	O.D. mm ...SD	Burst P. (bar) *	Work P. (bar) *	min. Bend rad. (mm)	O.D. mm ...SP	Burst P. (bar) *	Work P. (bar) *	min. Bend rad. (mm)
TTCF013.0...	1/2"	21	45	15	60	23	45	15	60
TTCF019.0...	3/4"	29	39	13	80	29	39	13	80
TTCF025.0...	1"	35	30	10	100	35	30	10	100
TTCF038.0...	1 1/2"	48	21	7	155	49	21	7	155
TTCF051.0...	2"	61	18	6	210	62	18	6	210
TTCF063.5...	2 1/2"	73,5	15	5	260	76,5	15	5	260
TTCF076.0...	3"	86	12	4	310	89	12	4	310

(\* ) NOTE: Data refer to ambient temperature (20°C) and static conditions; we recommend a reduction of 20% working pressure for every 100°C of temperature increase. Other diameters, wall thickness and pressure only on specific request.



# RADIAL SANITARY FITTINGS

## crimp and reusable

Sanitary clamp fittings are secured to the hose by a collar with a 360° circumferential crimp / nut.

**COMPRESSION SEAL** This 360° seal and the particular internal chamfer design assures cleanliness and prevents contamination or material buildup at the point where the fittings insert meets the hose.

**SURFACE FINISH** the internal surface finish meets or exceed the Pharmacopoeia standards.

**OPERATING CONDITIONS** Design Pressure up to 6 bar tested at ambient temperature, except case where the pressure is limited by the hose.

**MARKING** Crimp ferrules may be permanently marked for full traceability or operating parameter.

### Available documentations on request:

- 3.1 certificate according to 10204
- Surface Roughness certificate
- FDA certificate
- Electrical Continuity

## STAINLESS STEEL FITTINGS STYLES

### CRIMP CONNECTION



### REUSABLE CONNECTION (only TTCF...SD)



#### SANITARY CLAMP

Sanitary clamp fitting in size from 1/2" up to 3" I.D. available on stock according to standard pharma specifications.



#### CLAMP ADAPTOR

Sanitary adaptors that facilitate connections between a variety of fittings and hoses



#### OTHER CONNECTIONS ON REQUEST

Butt weld fittings maintain full flow through the I.D., male and female NPT or GAS pipe thread fittings are internally finished to sanitary quality and incorporate the internal chamfer feature.



*Aerrex offers a complete line of stainless steel fittings including hose assemblies. All Aerrex fittings are constructed from 316L stainless steel, have a standard surface finish of Ra<0,5 micron, and are secured to the hose by a collar with a 360° circumferential crimp. Each hose crimp design has been performance tested by our QC. As an option, a pressure test certificate can be provided for the hose assemblies. A low impact radial crimp technique ensures smooth hose to fittings transition thereby minimizing bacteria traps and product hold-up. Hose assemblies can be sanitized with short-term CIP/SIP cycles.*

#### Various hose fittings style available:

- Sanitary clamp fractional
- Sanitary clamp
- Clamp adaptor and elbows
- Butt weld fittings
- Male or female pipe thread

Flexible	Size Valve	Inlet Connection	Size Connection	Lenght mm	Outlet Connection	Size Connection	Finish	Material			
RCS	-	025	L	A	J	-2500-	L	A	J	-13	A

Kind of Flexible	
RCS	n.2 wrapped + wire
RCR	n.2 wrapped
RCG	PTFE substrate
RCH	n.1 wrapped
on request	

Size Hose	015	020	025	040	050	065	080
	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"
Size Connection	G	H	J	M	N	O	P
	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"

Surface Finish	
13	≤ 0,5 µm
53	≤ 0,5 µm + Electropolish
other on request	

Connection Shape	
L	Linear / Stright
C	90° Bend / Elbow
other on request	

In/Out Connection	Clamp		Buttweld
	ASME / BS	A	
DIN (*)	C	F	
ISO (*)	H	I	
SMS (*)	J	K	
(*) and other on request			

Lenght
specify total length requested head to head connection in millimeter

Materials	
A	AISI 316L-1.4404
B	1.4435
C	C22 Hastelloy
D	C276 Hastelloy
on request	

# PTFE SIL HOSES Series

Suction and delivery hose for food, cosmetic and pharmaceutical products, chemicals and solvents, except , for chlorine trifluoride, chlorine and fluorine gas, oxygen difluoride, phosgene and molten alkalis (for ex. sodium). Hose resistant to high temperatures, used as connection between pipes and fixed equipments. Designed for the chemical industry, foodstuff, pharmaceutical and cosmetic industry, where a flexible connection is required. The hose is produced with high quality elastomers, with excellent chemical and mechanical properties. Phthalates free tube, tested in compliance with 1907/2006/CE (REACH). Tested in compliance with USP XXXVI class VI, not cytotoxic according to ISO 10993 Section 5:2009. Not intended for use as an implant material. Not suitable for blood or human fluids.

PTFE SIL is not intended for implantation and is not be used for continuous steam applications.



## HOSE KEY FEATURES

### TUBE

PTFE (polytetrafluorethylene) white, phthalates free, tested in compliance with 1907/2006/CE (REACH).

PTFE is a polymer with excellent resistance to high temperature, mechanical stress and to oxidation. It complies with FDA 21 CFR177.1550 standards, USP XXXVI class VI, ISO 10993 Sections 5,10,11:2009, EUROPEAN REGLEMENT 1935/2004/CE AND 10/2011/CE, 3A Sanitary Standard Class II.

### REINFORCEMENT

Synthetic plies, stainless steel wire helices, on request a/s wires to discharge static electricity

### COVER

Smooth, silicone, white. Meets FDA CFR 21 PART 177.2600, BfR

Recommendation XV, European Reglement 1935/2004/CE. Heat, abrasion, ageing and ozone resistant, glossy cover

### STERILIZATION

Please ask for guidelines for cleaning and sanitizing

### MARKING

Transfer tape TUFLON PTFE SIL

## HOSE TECHNICAL CHARACTERISTICS

### TEMPERATURE RANGE

-40°C | +150°C ( -40°F | +302°F ) The operating temperature of the hose is directly dependent upon the specific fluid been conveyed and the length of time the fluid is in contact with the hose

### VACUUM

675 mmHg (26,6 inHg)

### NORM

ISO 1307 for dimensional tolerances

**TUFLON PTFE SIL**

## HOSE SPECIFICATIONS

CODE	I.D. (mm)	I.D. (in)	O.D. (mm)	O.D. (in)	Work P. (bar) *	Work P. (PSI) *	Burst P. (bar) *	Burst P. (PSI) *	Weight (Kg/mt)	Weight (lb/ft)	min. Bend rad. (mm)	min. Bend rad. (in)
0500	12,7	0,50	24	0,94	10	150	40	600	0,47	0,31	45	1,77
0750	19,05	0,75	30	1,18	10	150	40	600	0,61	0,41	70	2,76
1000	25,4	1,00	36	1,42	10	150	40	600	0,76	0,51	90	3,54
1500	38,1	1,50	50	1,97	7	105	28	420	1,26	0,84	170	5,51
2000	50,4	2,00	62	2,44	7	105	28	420	1,60	1,07	180	7,09
2500	63,5	2,50	79,5	3,13	6	90	24	360	2,69	1,80	320	12,60

(\*NOTE: Data refer to ambient temperature (20°C) and static conditions; we recommend a reduction of 20% working pressure for every 100°C of temperature increase. Other diameters, wall thickness and pressure only on specific request.





ASEPTIC SAMPLING VALVES



SANITARY SAMPLING VALVES



SANITARY SAMPLING BOTTLE



TANK BOTTOM ASEPTIC VALVE



SPRING CHECK VALVES



HIGH PURITY BALL VALVES



BUTTERFLY VALVES



DTS HEAT EXCHANGERS



SIGHT GLASS-FLOW INDICATOR



CLAMP FITTINGS



TANK CONNECTIONS



SILICONE HOSE & FITTINGS



MAGNETIC MIXER



ITT DIAPHRAGM VALVES



WASHING DEVICES



Sanitary flow equipment

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