

# Bioflex® Ultra

PTFE hose for biotechnology and pharmaceutical fluid transfer

## FEATURES AND BENEFITS

- Natural or anti-static patented PTFE liner
- Very flexible, yet kink resistant
- Smooth bore for uninterrupted fluid flow and ease of cleaning
- High temperature and pressure capability
- Chemical resistant
- PTFE lined and non-lined end fittings with laser etched ferrule for ultimate traceability
- Range of braid, cover and external protection options available



## TECHNICAL SPECIFICATION

Size range	
Hose bore size range	3/8" (9.5mm) up to 3" (80mm)
Hose lengths	
up to 2" (50mm)	up to 30m (100ft)
up to 2 1/2" (65mm)	up to 18m (60ft)
up to 3" (80mm)	up to 15m (50ft)
Temperature limits	
Stainless steel braided (SS grade) hose	-73C (-100F) up to +260C (+500F)
EPDM rubber covered (RC or BK grade) hose	-40C (-40F) up to +150C (+302F)
Silicone rubber covered (SI grade) hose	-73C (-100F) up to +204C (+400F)
Polypropylene braided (PB grade) hose	-30C (-22F) up to +100C (+212F)
Working pressure ratings (SS and RC grade)	
3/8" (9.5mm)	80bar (1,160psi)
up to	
3" (80mm)	15bar (218psi)
Vacuum limitations	
For all sizes and grades (except Tube Only)	Vacuum resistant to -0.9bar up to +200C (+392F)
Tube only grade (TO grade)	Vacuum resistant to -0.9bar up to +100C (+212F)
Approvals (both natural and anti-static)	
USP Class VI, ISO 9001:2015, ISO 14001:2015, OHSAS 18001:2015, EN16643:2016, ATEX, FDA (materials), 3-A 62-02, 3.1 Traceability, (EU) 10/2011, Grade BK anti-static and fireproof to BS5173 section 103.13 part 6.2 and 6.3	

## OPTIONS AND ACCESSORIES

Liner options	
Liner available in;	General purpose (GP) natural PTFE or Anti-static PTFE (AS)
End fitting options	
Non-lined, or PTFE lined and flared design for;	Sanitary Triclamp, hygienic SMS, DIN 11851, I-line, ANSI 150, DIN and JIS swivel flange, Cam and Groove and dip pipes.
Non-lined design for;	BSP, NPT and JIC Threaded Fittings, RJT Fittings, DIN11864
3-A Sanitary fittings	Fittings accredited to 3-A sanitary standards are identified within the full Bioflex Ultra brochure
Braid, cover, external protection and labelling options	
Braid design options	Stainless steel wire (SS grade) or polypropylene yarn braid (PB grade)
External cover options	Blue (RC grade) or black (BK grade) EPDM rubber cover, or clear platinum cured silicone rubber cover (SI grade)
External protection options	Safeguard, scuff rings, or protection coil
Labelling options	
Standard labelling	Laser etched ferrule for ultimate traceability
Streamline tagging	Fully encapsulated hygienic labelling system
Colour coding	Coloured PTFE spiral strip wound on to the hose - left loose or encapsulated under transparent heat-shrunk polyolefin sleeve

## PERFORMANCE DATA

Nominal hose bore size		Actual bore size		Bioflex Ultra grade (braid and cover)	Helical wire	**Maximum working pressure of hose		Burst pressure		Minimum bend radius	
in	mm	in	mm			bar	psi	bar	psi	in	mm
3/8	9.5	0.382	9.7	TO	-	5	72	20	290	1 3/8	35
				SS	-	80	1,160	500	7,200	3/4	19
				RC/BK/SI	-	80	1,160	500	7,200	3/4	19
1/2	15	0.516	13.1	TO	√	5	72	20	290	2 3/8	60
				SS	√	70	1,015	400	5,800	1 1/2	38
				PB	√	35	500	140	2,000	1 1/2	38
				RC/BK/SI	√	70	1,015	400	5,800	1 1/2	38
5/8	16	0.638	16.2	TO	√	5	72	20	2,90	2 1/2	64
				SS	√	65	940	380	5,500	1 3/4	45
				PB	√	33	480	130	1,900	1 3/4	45
				RC/BK/SI	√	65	940	380	5,500	1 3/4	45
3/4	20	0.760	19.3	TO	√	5	72	20	290	3	75
				SS	√	60	870	300	4,350	2	50
				PB	√	30	440	120	1,750	2	50
				RC/BK/SI	√	60	870	300	4,350	2	50
* 7/8	22	0.870	22.1	TO	√	4	60	16	230	3 1/2	90
				SS	√	55	800	220	3,200	2 1/8	55
				PB	√	27.5	400	110	1,600	2 1/8	55
				RC/BK/SI	√	55	800	220	3,200	2 1/8	55
1	25	1.016	25.7	TO	√	4	60	16	230	4 3/4	110
				SS	√	50	720	200	2,900	2 3/4	70
				PB	√	25	360	100	1,450	2 3/4	70
				RC/BK/SI	√	50	720	200	2,900	2 3/4	70
1 1/4	32	1.268	32.2	TO	√	3	43	12	175	5 1/2	140
				SS	√	45	650	180	2,600	4	100
				PB	√	23	330	90	1,300	4	100
				RC/BK/SI	√	45	650	180	2,600	4	100
* 1 3/8	35	1.370	34.8	TO	√	2	29	8	116	6 1/2	160
				SS	√	40	580	160	2,320	4	100
				PB	√	20	290	80	1,160	4	100
				RC/BK/SI	√	40	580	160	2,320	4	100
1 1/2	40	1.516	38.5	TO	√	2	29	8	116	7	180
				SS	√	40	580	160	2,320	5 1/2	140
				PB	√	20	290	80	1,160	5 1/2	140
				RC/BK/SI	√	40	580	160	2,320	5 1/2	140
* 1 7/8	48	1.866	47.4	TO	√	2	29	8	116	11	280
				SS	√	35	500	140	2,000	6 5/8	170
				PB	√	18	250	72	1,040	6 5/8	170
				RC/BK/SI	√	35	500	140	2,000	6 5/8	170
2	50	2.012	51.1	TO	√	2	29	8	116	12	300
				SS	√	30	430	120	1,750	8	200
				PB	√	15	215	60	870	8	200
				RC/BK/SI	√	30	430	120	1,750	8	200
2 1/2	65	2.508	63.7	SS	√	20	290	80	1160	11 7/8	300
				PB	√	12	174	48	696	11 7/8	300
				RC/BK/SI	√	20	290	80	1,160	11 7/8	300
3	80	3.024	76.8	SS	√	15	218	60	870	13 3/4	350
				PB	√	10	145	40	580	13 3/4	350
				RC/BK/SI	√	15	218	60	870	13 3/4	350

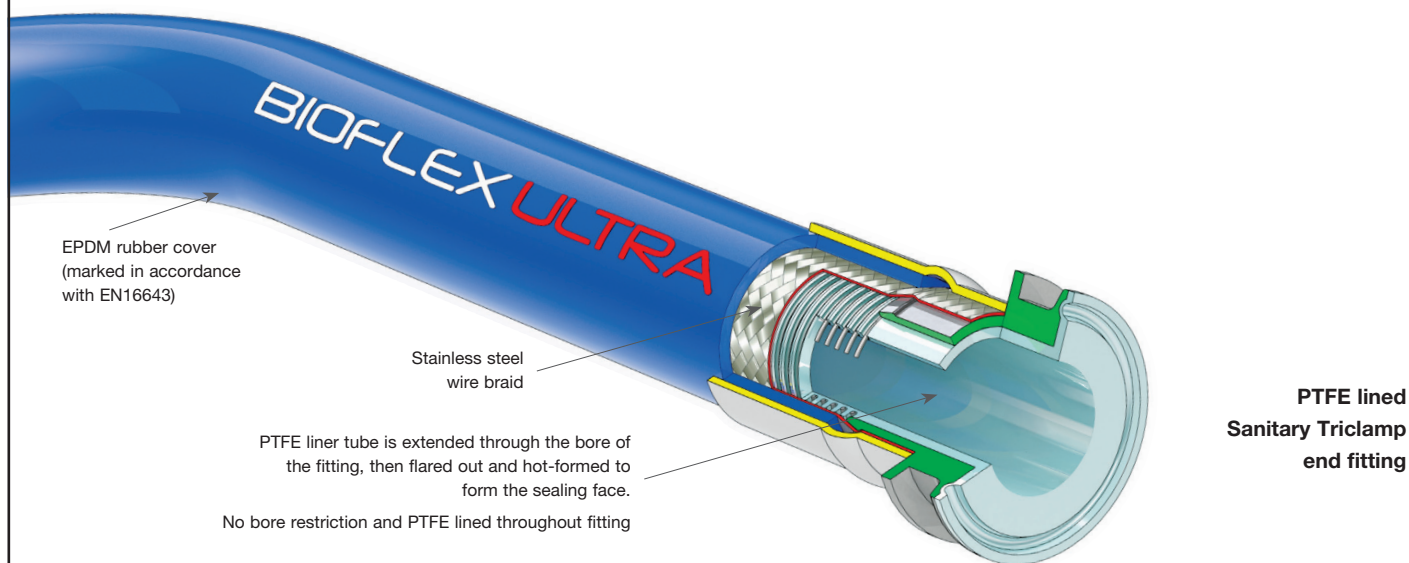
\*The 3/8", 1 3/8" and 1 7/8" hose sizes are only suitable for use with PTFE lined sanitary clamp (or tricllover) end fittings and PTFE lined I-Line end fittings.

\*\* The maximum working pressure (MWP) of a hose assembly is limited to the lowest of the MWP's of either of the two end fittings, or of the hose itself as listed above. The MWP of the hose reduces as the operating temperature increases, consult Aflex Hose for guidance.

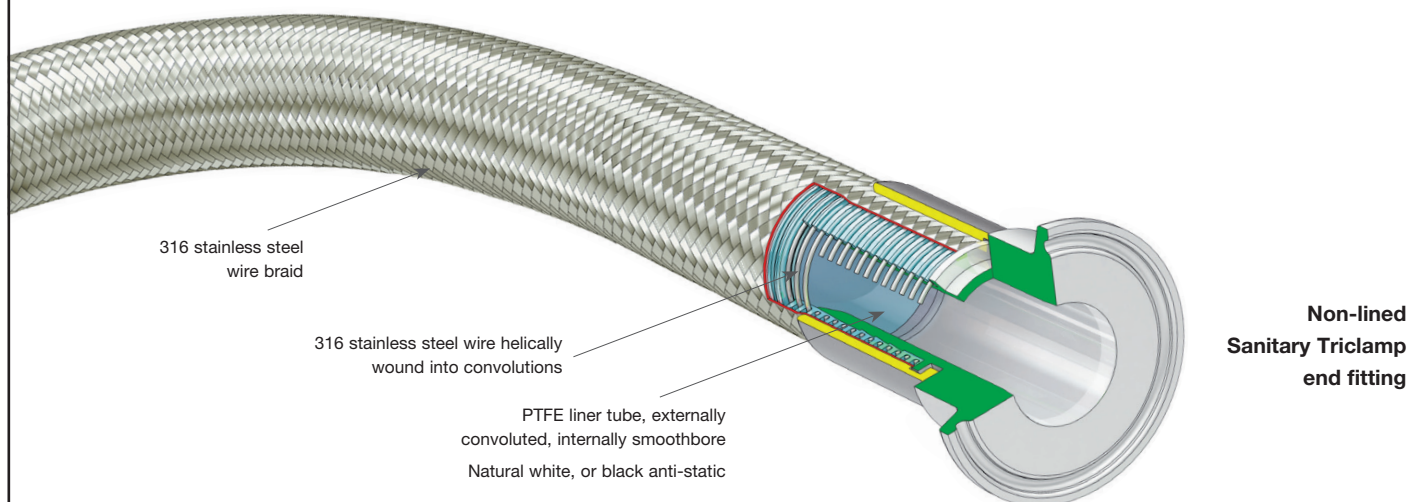
Note: 2 1/2" & 3" tube only (TO grade) cannot be ordered as an assembly.

## MATERIALS OF CONSTRUCTION

### Bioflex Ultra SS,RC - Rubber covered PTFE hose assembly



### Bioflex Ultra SS - Wire braided PTFE hose assembly



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