



INTRODUCTION

Pharmaline is a unique, smoothbore PTFE-Lined hose product, based on a patented PTFE hose liner tube design.

Pharmaline is designed to overcome the primary disadvantage of currently available similar products, namely **POOR FLEXIBILITY**.

Although excellent flexibility is often claimed for comparable products, the truth is that they are all considerably less flexible than Pharmaline, particularly in large bore sizes.

For example, the force required to bend a length of 1" bore Pharmaline hose to a 10" (250mm) Bend Radius in a U-shape is 77% less than that for its nearest rival product! - 1.8lb (0.82kg) instead of 7.8lb (3.56kg).

Pharmaline also has the smallest minimum bend radius.

APPLICATIONS

Pharmaline is designed for use in high purity Pharmaceutical, Biotech, Chemical and Foodstuffs application areas where ease of cleaning the hose is required, both internal and external.

It is also very suitable for use in other general industrial applications, particularly those where hot fluids or gases are being passed, and if there is any risk of burns due to accidental touching of the hose - for example, hot oil or steam transfer applications.

HOSE TYPES, DESIGNS & APPROVALS

Pharmaline GP has a PTFE hose liner tube, manufactured from PTFE material in accordance with FDA requirement 21 CFR 177.1550.

An antistatic PTFE option is also available, Pharmaline AS, in accordance with the FDA requirement 21 CFR 178.3297.

Both Pharmaline GP and Pharmaline AS have been tested and comply with USP Class 6, including the Elution (Cytotoxicity) test.

Both include grade 304 SS wire Braid, and a Platinum Cured white silicone rubber cover (Post-cured 4 hours at 200°C in accordance with requirements for USP Class 6).

Alternative versions are also available to special order with No Braid (NB), designated Pharmaline GP, NB (or AS, NB), for use in light duty, low pressure applications.

The World's Leading Manufacturer of PTFE Flexible Hose.

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SPECIFICATIONS FOR PHARMALINE GP AND AS

Hose Bore Size		Actual Hose Bore Size		O/D of Cover		Minimum Bend Radius		Maximum Working Pressure		Burst Pressure		Weight per Unit Length	
in	mm	in	mm	in	mm	in	mm	Psi	Bar	Psi	Bar	lb/ft	kg/mtr
1/4	6.4	0.270	6.8	0.460	11.6	3/4	19	2000	130	8000	520	0.11	0.17
3/8	9.5	3/8	9.5	0.610	15.5	1	25	1500	100	6000	400	0.14	0.22
1/2	12.7	1/2	12.7	0.770	19.5	1 1/2	38	1000	70	4000	280	0.25	0.37
3/4	19.0	3/4	19.0	1.070	27.3	2 1/2	63	900	60	3600	240	0.42	0.65
1	25.4	1	25.4	1.370	34.8	4	100	750	50	3000	200	0.57	0.88

ADVANTAGES OVER CONVENTIONAL HOSE DESIGNS

- Pharmaline can be used to replace silicone rubber hoses, particularly where the much better chemical resistance, and ease of cleaning of the PTFE hose liner is an advantage.
- Unlike silicone rubber hoses, Pharmaline can be steam sterilised any number of times, without degradation of the hose liner.
- Pharmaline can be used to replace conventional smoothbore PTFE lined hoses in applications where the much better flexibility of Pharmaline is an advantage.
- Pharmaline is smaller in O/D and lighter in weight than its nearest rival product because the construction does not include any glass fiber filler layers. The PTFE weight per unit length, however, is higher.

PROPERTIES

- **Pressure vs Temperature** - Pressure ratings are as listed up to 130°C (266°F), then reducing at 1% per 1°C (1.8°F) up to +200°C (400°F).
Temperature Range: -60°C (-80°F) to +200°C (+400°F).
- **Vacuum** - All sizes fully vacuum resistant.

FURTHER INFORMATION

Further technical information related to PTFE material, Antistatic specifications and testing and flow rates etc. is available in the Bioflex and Corroflon Product Information pages on the Aflex Hose website.

END FITTINGS

- Sanitary and Mini Sanitary Triclam (Triclover) Fittings in 316 SS, with an electropolished bore to <math><0.375\mu\text{m}</math> (<math><15\mu\text{in}</math>).



- I-Line Fittings.
- Compression Fittings (Style 31 and 32).
- BSPT and NPT Fixed Male Pipe Fittings.
- Flanges, Camlocks, DIN11851, RJT, SMS, RJP and others to special order.

IDENTIFICATION OPTIONS

- Silicone encapsulated colour coding, and/or text information to suit customer's requirements.
- 'Flotag' silicone encapsulated RFID Chip, programmed to suit customer requirements,
- Unique Serial Numbers and other information for each hose, stamped on Ferrules or SS tags, to give total traceability.

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