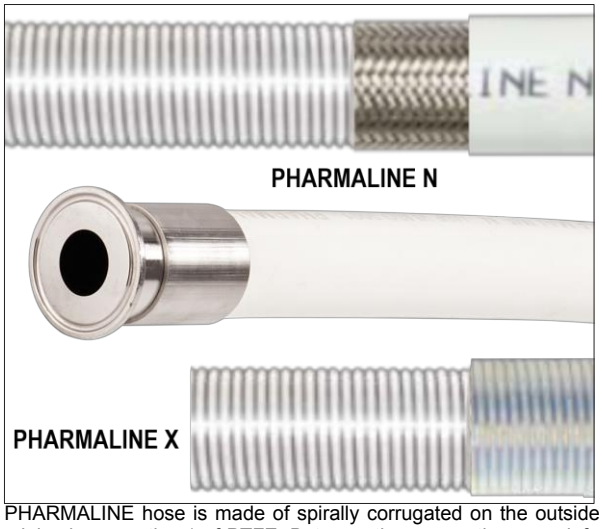
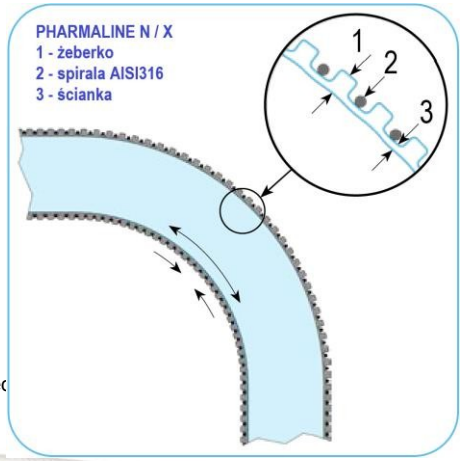


PHARMALINE N / PHARMALINE X

Smooth inside, silicone-coated reinforced Teflon hose - for hygienic applications (1/4" - 3")

Hose material: inside smooth, outside corrugated PTFE (Teflon)
Reinforcement: AISI 316 steel spiral (1/2 "to 3")
AISI 316 braided steel (PHARMALINE N)
Coating: silicone vulcanised with platinum:
- white (PHARMALINE N)
- transparent (PHARMALINE X)
Operating temp: -73°C to +204°C
(temperature-dependent operating pressure)

PHARMALINE hose is made of spirally corrugated on the outside and smooth on the inside (with minimal corrugations) of PTFE. Between the corrugations, a reinforcing spiral of AISI 316 stainless steel wire is laid (except for the smallest diameters of 1/4" and 3/8"). The PHARMALINE N version has a pressure reinforcement in the form of an AISI stainless steel braid 316. Designed for lighter applications and lower pressures, the PHARMALINE X version has no reinforcing braid. PHARMALINE N and PHARMALINE X are externally coated with a layer of **platinum-vulcanised silicone** to ensure the external cleanliness of the hose. The PHARMALINE hose is a lighter version of the BIOFLEX hose, designed primarily for all applications requiring **high internal and external cleanliness**, i.e. the pharmaceutical, biotechnology and high purity chemical industries. Its unique patented design ensures that the hose is highly flexible and supple, resistant to kinking and cyclic bending, while retaining all the advantages associated with a smooth internal surface (ease of cleaning and undisturbed flow). Valid PHARMALINE offers significantly greater **ease of cleaning and resistance to repeated steam sterilisation** compared to classic silicone hoses. Unlike BIOFLEX hose, PHARMALINE hose is not made with ends flaring integral with the hose with a PTFE layer. Instead, a wide range of stainless steel **hygienic endings** are available (with a hose tail for easy self-cleaning of the interior), including especially the TRICLOVER hygienic endings. The silicone-coated PHARMALINE N and PHARMALINE X hoses are *soakable*, i.e. they can be wette ensure complete external cleanliness in accordance with the requirements of the 3-A standard.





Tubes International supplies complete PHARMALINE N and PHARMALINE X hoses (hoses with fittings fitted) selected to individual customer requirements, manufactured by qualified personnel in accordance with the manufacturer's technology, pressure tested to 150% of working pressure, appropriately labelled and traceable.

PHARMALINE N (with braid and white silicone) - technical data

DN [inch].	DN [mm].	index (natural PTFE)	index (anti-static PTFE)	internal diameter [mm]	external diameter [mm]	working pressure* [bar]	Burst pressure* [bar]	vacuum [bar]	bend radius [mm]	mass [kg/m]	max. section length** [m]
1/4"	6	AF-PHGP-N-06	AF-PHGP-N-06AS	6,6	11,6	80	320		19	0,17	
3/8"	10	AF-PHGP-N-10	AF-PHGP-N-10AS	9,7	15,5	70	280		25	0,22	
1/2"	13	AF-PHGP-N-13	AF-PHGP-N-13AS	13,1	21,4	60	240		38	0,37	
5/8"	16	AF-PHGP-N-16	AF-PHGP-N-16AS	16,2	25,2	50	200		50	0,52	30
3/4"	20	AF-PHGP-N-20	AF-PHGP-N-20AS	19,3	28,5	45	180		63	0,65	
1"	25	AF-PHGP-N-25	AF-PHGP-N-25AS	25,7	37,0	40	160	0,9	100	0,85	
1.1/4"	32	AF-PHGP-N-32	AF-PHGP-N-32AS	32,2	44,6	35	140		130	1,30	
1.1/2"	38	AF-PHGP-N-38	AF-PHGP-N-38AS	38,5	51,7	30	120		170	1,70	
2"	50	AF-PHGP-N-50	AF-PHGP-N-50AS	51,1	65,6	28	112		210	2,36	25
2.1/2"	65	AF-PHGP-N-65	AF-PHGP-N-65AS	63,7	80,5	20	80		300	3,59	18
3"	80	AF-PHGP-N-80	AF-PHGP-N-80AS	76,8	92,8	15	60		350	4,40	15

Notes: * - working pressure dependent on temperature; ** - maximum length of section on special order, standard sections of various shorter lengths;