

CORROLINE

For Chemical Fluids Transfer Applications

INTRODUCTION

Corroline hose was designed and developed to provide customers with a universal chemical hose product which combined all the requirements they had requested for chemical plant applications, particularly the need for improved flexibility.

Corroline hose not only supersedes but also improves upon the wide variety of alternative Chemical Hose products currently available.

CONSTRUCTION

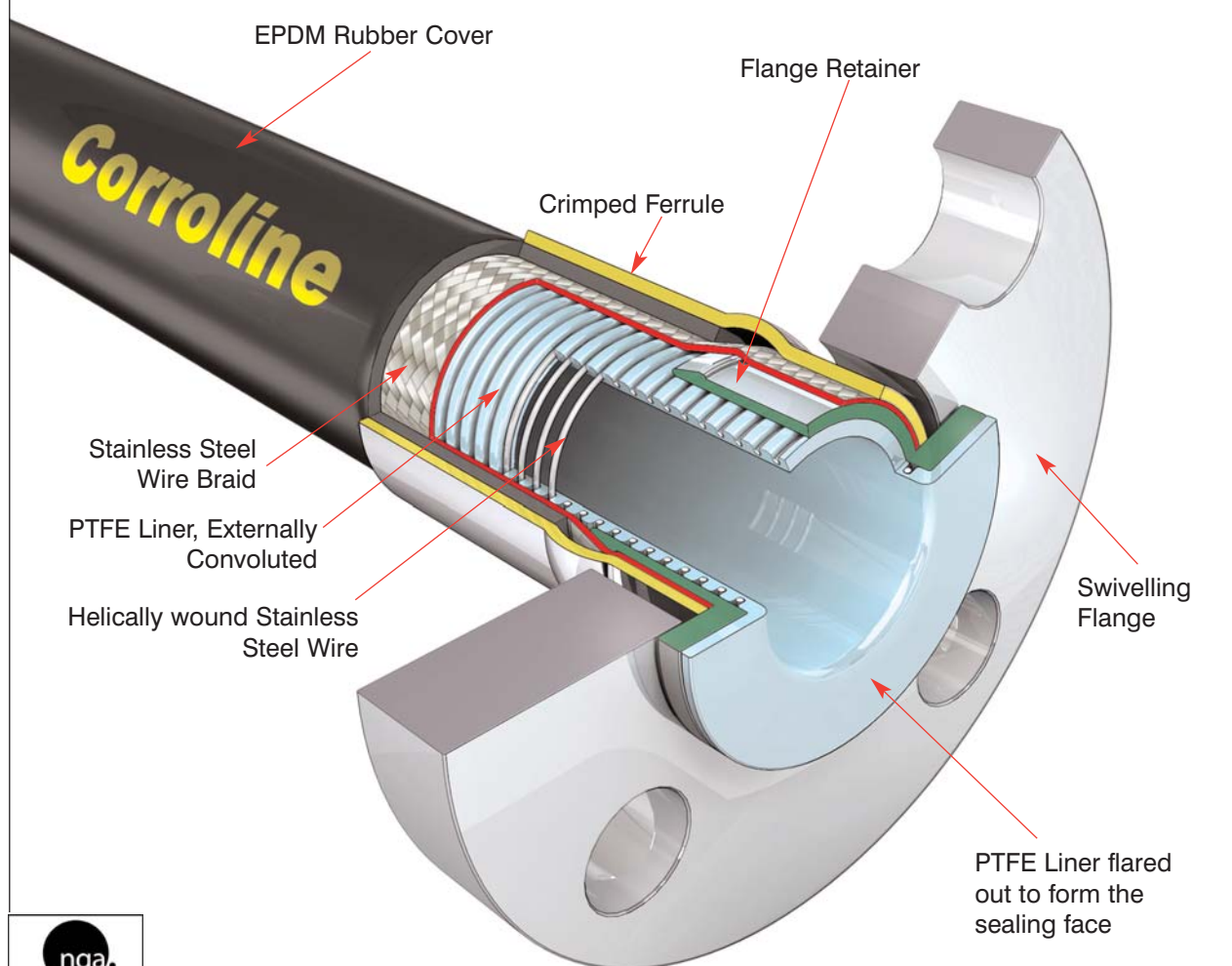
Corroline is built around a patented PTFE hose liner design, which is smooth bore inside but convoluted outside to generate excellent flexibility combined with "hoop strength".

A stainless helical wire and stainless steel wire braid reinforcement add to the kink resistance, crush resistance and the resistance of the hose to both pressure and vacuum.

This reinforced PTFE construction is therefore strong enough to withstand full vacuum and kinking without the need for either internal convolutions or the need to bond the liner to an outer cover, making it an ideal hose liner design, and a significant improvement upon standard products currently available.

Finally, an outer cover of abrasion resistant, black antistatic EPDM rubber is extruded on to the braid, with a super-smooth surface finish to aid external cleaning. A yellow, "CORROLINE" stripe is printed on to the cover. Other texts and coloured stripes are also available to special order.

CORROLINE GP HOSE, FITTING WITH AN INTEGRAL PTFE LINED FLANGE FITTINGS



DESIGNATION

The Corroline hose construction options are designated as follows:

Corroline GP = Natural (general purpose) PTFE tube liner, stainless steel wire braid antistatic black EPDM rubber outer cover.

Corroline AS = *Antistatic PTFE tube liner, stainless steel wire braid antistatic black EPDM rubber outer cover.

EXTERNAL PROTECTION SYSTEMS: If required, additional external protection systems can be applied to special order. These include:

- Double Rubber Cover hose end protection cuffs.
- Ceramic Fibre and Silicone Rubber Fire Sleeve.
- HDPE spiral-wrap for abrasion protection.
- Helically wound, heavy gauge Stainless Steel Wire outer protection coil.

SPECIFICATIONS

Hose Size		Bore Size		Outside Diameter		Minimum Bend Radius		Maximum Working Pressure		Burst Pressure		Weight Per Unit Length		Max cont. length	
in	mm	in	mm	in	mm	in	mm	Psi	Bar	Psi	Bar	lbs/ft	kgs/mt	Ft	Mtrs
1/2	12.7	0.530	13.5	0.842	21.4	2.36	60	700	48	2884	206	0.25	0.377	100	33
3/4	19	0.770	19.8	1.110	28.1	2.56	65	625	43	2509	173	0.39	0.583	100	33
1	25	1.030	26.1	1.445	36.7	3.94	100	600	41	2465	170	0.61	0.909	100	33
1 1/2	38	1.530	38.8	2.035	51.7	6.70	170	550	38	2291	158	1.14	1.698	55	17
2	50	2.030	51.5	2.560	65.7	8.270	210	400	28	1783	123	1.58	2.355	42	13

PRESSURE TESTING

Before despatch, all hose assemblies are hydrostatically pressure tested to 1.5 times the Maximum Working Pressure of either the hose or the end fitting, whichever has the lower M.W.P. A Test Certificate can be issued if required.

TEMPERATURE LIMITATIONS

In application, the EPDM cover limits the maximum service temperature to 285°F, 140°C (internal fluid) or 250°F, 120°C (external temperature).

VACUUM LIMITATIONS

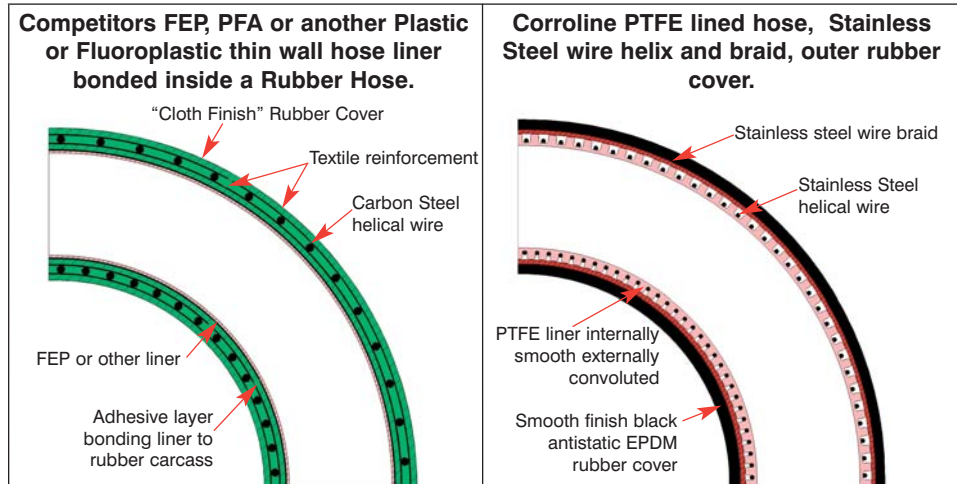
Useable at full vacuum up to 285°F, 140°C internal temperature.

***APPLICATIONS REQUIRING AN ANTISTATIC PTFE TUBE LINER** - Please review on the Aflex Hose website under "Products and Certification" → "Bioflex Hose" → "Hose Liners" → "AS, Antistatic PTFE Liner" (Corroline = Bioflex)

HOSE CONFIGURATIONS and LENGTH CALCULATIONS - Please review on the Aflex Hose website under "Products and Certification" → "Bioflex Hose" → "Hose Configurations & Length Calculations".

CONDITIONS OF SALE - Please review on the Aflex Hose website under "Conditions of Sale".

COMPARISON WITH THE EXISTING CHEMICAL HOSE PRODUCTS



Bore Profile	Smoothbore - Good flow rate - Easy clean	✓	Smoothbore - Good flow rate - Easy clean	✓
Liner Material	FEP or another Fluoroplastic liner, Good but not as good as PTFE	✗	PTFE Liner -Best for chemical resistance and temperature resistance	✓
	XLPE or UHMWPE - Fair chemical resistance	x		
Process Fluid Contamination Risk	High Risk - adhesive layer can leach in to contaminate the process fluid through pinholes in the liner, caused by static discharge, hose kinking etc.	x	No Risk - no adhesive layer - no non-FDA approved materials present in the hose construction	✓
Flexibility	Fair to Poor - Stiff, large minimum bend radius	x	Good - More flexible, reduced minimum bend radius	✓
*Flex Life ("Rolling U" Test)	Poor, typically from 50 to 10,000 cycles to failure	x	Excellent, 150,000+ cycles without failure	✓
Kink Resistance	Fair	✗	Good	✓
Helical Wire	Carbon Steel (can corrode)	x	304 Stainless Steel	✓
Cut Through or Puncture Resistance	Fair (Textile braid protection)	✗	Good (Stainless Steel Wire Braid Protection)	✓
Antistatic Liner Quality To FDA Requirements (<2.5% High Purity Black)	Often more than 2.5% Black, often unevenly dispersed, leading to carbon agglomerates which contaminate Process Fluid	x	Always less than 2.5% Black, very evenly dispersed and guaranteed agglomerate-free	✓

*The "Rolling U" test is shown on the Aflex Hose website "Aflex News" → "Bioflex and Corroflon compared with Competitor's Products".