

FLUROSILICONE LINED SILICONE HOSE WITH POLYESTER REINFORCEMENT.

**This Data Sheet Covers
the Following Hose Types:** FE45, FE60, FE90, FE120
FE135, FRE45, FRE90, FSHL,
FXFL, FSR, FSCH, FSHH,
FSTP & FE180

Silflex Limited

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General Use

This type of hose is generally used in applications where the medium flowing through the hose is likely to degrade the standard silicone. Examples of this are Fuel Oils, Diesel Fuel, etc..

Working Temperature Range: -40°C to +180°C.

Construction

A lining of Black Fluorosilicone, covered with plies of Silicone, reinforced with Polyester Fabric. The number of plies will vary depending on the working pressure, bore size, and required wall thickness. See Page 2.

Materials Specifications

Fluorosilicone Rubber Compound

Colour	Black
Hardness (IHRD)	60 ± 5
Specific Gravity (g/cm ³)	1.59 ± 0.05
Tensile Strength (Mpa)	5
Elongation at Break (%)	210
Tear Strength (KN/m)	23

Silicone Rubber Compound

Colour	Various
Hardness (IHRD)	65 ± 5
Specific Gravity (g/cm ³)	1.18 ± 0.05
Tensile Strength (Mpa)	8.6
Elongation at Break (%)	308
Tear Strength (KN/m)	13

The above physical properties refer to a test sheet press cured for 5mins at 115°C, and post cured for 4 hrs @ 200°C. Tested to the relevant BS903 standard.

Fluid Resistance Figures (Fluorosilicone Lining)

Immersion Medium	Immersion Conditions	Hardness Change (Pts)	Tensile Change (%)	Elongation Change (%)	Volume Change (%)
ASTM No1 Oil	70 Hours @ 150°C	-5	-1	-5	Nil
ASTM No3 Oil	70 Hours @ 150°C	-5	-20	-10	+5
Diesel Fuel	7 Days 50°C	-7	-22	-7	+5
Petrol	24 Hours @ 24°C	-12	-39	-30	+21

The values shown above have been arrived at through the use of immersion tests in accordance with ASTM D 471. Service conditions, however, are usually less severe than immersion tests, as the rubber may only be splashed or partly exposed to the particular medium. Figures for other media are available on request.

Knitted Polyester Fabric

Description	Fine Mesh
Yarn Type	100% Polyester
Finish	Scour & Set
Bursting Strength (Fabric) (7" Internal Dia. Ring)	33psi
Extensibility at Burst	60%
Thickness	0.022" (0.56mm)

Spring Steel Wire Helix (where applicable)

Constructed from galvanised spring steel wire (to BS5216 HS3) at a spacing of 2-3 tpi, and buried between the plies.



WORKING PRESSURE GUIDELINES FOR FLUOROSILICONE LINED SILICONE HOSE WITH POLYESTER REINFORCEMENT.

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I.D.		Number Of Plies	Typical Wall Thickness (mm)	Burst pressure		Recommended Max. Working Pressure @ 4:1 safety Factor	
(mm)	(")			(Psi)	(Bar)	(Psi)	(Bar)
6.5mm	1/4"	3	4.1mm	1111	76.6	278	19.2
8mm	5/16"	3	4.1mm	931	64.2	233	16.1
9.5mm	3/8"	3	4.1mm	803	55.4	201	13.9
11mm	7/16"	3	4.1mm	709	48.9	177	12.2
12.7mm	1/2"	3	4.1mm	615	42.4	154	10.6
16mm	5/8"	3	4.1mm	515	35.5	129	8.9
18mm		3	4.1mm	464	32.0	116	8.0
19mm	3/4"	3	4.1mm	444	30.6	111	7.7
20mm		3	4.1mm	425	29.3	106	7.3
22mm	7/8"	3	4.1mm	392	27.0	98	6.8
25mm	1"	3	4.1mm	351	24.2	88	6.1
28mm	1 1/8"	3	4.1mm	319	22.0	80	5.5
30mm	1 3/16"	3	4.1mm	300	20.7	75	5.2
32mm	1 1/4"	3	4.1mm	284	19.6	71	4.9
35mm	1 3/8"	3	4.1mm	262	18.1	66	4.5
38mm	1 1/2"	3	4.1mm	245	16.9	61	4.2
41mm	1 5/8"	3	4.1mm	229	15.8	57	4.0
45mm	1 3/4"	3	4.1mm	212	14.6	53	3.7
48mm	1 7/8"	3	4.1mm	200	13.8	50	3.5
51mm	2"	4	5.1mm	242	16.7	61	4.2
54mm	2 1/8"	4	5.1mm	232	16.0	58	4.0
57mm	2 1/4"	4	5.1mm	222	15.3	56	3.8
60mm	2 3/8"	4	5.1mm	213	14.7	53	3.7
63mm	2 1/2"	4	5.1mm	204	14.1	51	3.5
65mm	2 9/16"	4	5.1mm	200	13.8	50	3.5
68mm	2 11/16"	4	5.1mm	193	13.3	48	3.3
70mm	2 3/4"	4	5.1mm	189	13.0	47	3.3
76mm	3"	4	5.1mm	177	12.2	44	3.1
80mm	3 1/8"	4	5.1mm	170	11.7	43	2.9
83mm	3 1/4"	4	5.1mm	165	11.4	41	2.9
89mm	3 1/2"	5	6.1mm	212	14.6	53	3.7
102mm	4"	5	6.1mm	191	13.2	48	3.3

This data applies to all standard **Fluoro-Lined** hoses in the Samco Sport range.

