

Technical Data Sheet

Platinum Cured Silicone Pressure Hose



Material

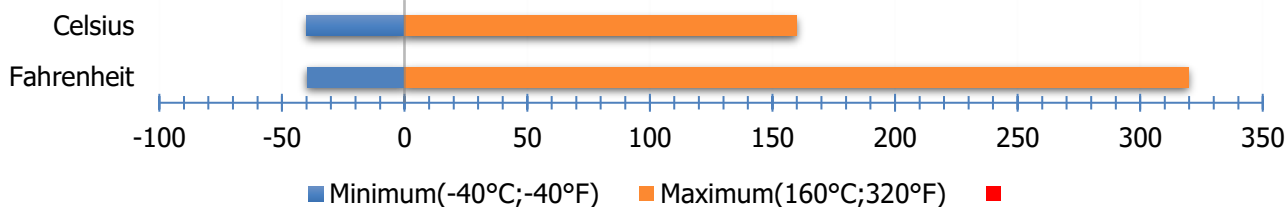
Platinum Cured Silicone
Pressure Hose



Available Grades

NGP60

Temperature Range



General Information

The unique combination of elastomer and textile processing technology under one roof puts Silex in a position to offer its customers a broad range of textile reinforced pressure hoses for many different high pressure or vacuum applications. The multi-stage production process combines an extruded silicone inner hose with a surrounding braid of the various different possible textiles and on request, a coloured silicone coating or LSR fixing. The sandwich structure guaranteed pressure resistances of up to more than 100 bar with multiple reinforcements, with an additional intermediate silicone ply. Standard reinforcements consist of polyester monofilament (PES mono), polyester multifilament (PES MF), fibre-glass twine and yarns and aramide fibres.

Together with the four standard reinforcements, stainless steel, copper or other metal wires can also be braided in, for example as heating or control leads.

Manufactured using a platinum cured silicone elastomer which is compositionally compliant with FDA 21 CFR 177.2600 and USP Class VI standards.

Environmental Resistance

Silicone rubber products have an excellent resistance to:

- Ozone
- Oxidation
- Ultraviolet light
- Corona discharge
- Cosmic radiation
- Ionising radiation
- Weathering in general

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SILEX LTD

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E-Mail: sales@silex.co.uk, Website: www.silex.co.uk, Registered company number: 1951973. Place of registration: England & Wales.

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Availability Format

A specific selection of sizes with inner diameters from 12.7mm (1/2 inch) to 102mm (4 inch) is available ex-stock. These hoses are sold in 4m lengths.

Typical Applications

Silicone pressure hoses are used in the following areas:

- Medical technology (e.g. dialysis machines)
- Plant construction (e.g. coolant pipes)
- Machine construction (e.g. suction and filling hoses)
- Industrial kitchen technology (e.g. hot water and steam cooking hoses)
- Food industry (e.g. transport lined comforting with food product requirements)
- Emergency supply systems (e.g. temperature-adjusted respiration hoses)
- Bio-technology (e.g. permeable fermentation pipes)
- Wastewater technology (e.g. gassing hoses)
- Aerospace engineering (e.g. temperature-resistant compressed air pipes)
- Communications engineering (e.g. protection hoses for cold light carriers)

Properties of Pressure Hose Reinforcements (Part 1)

Reinforcement	PES-MF	PES-Mono	Glassfibre	Aramide
Description	Polyester-multifilament	Polyester-monofilament	E-Glass	Aramide fibre
Textile Form	Yarn	Monofil	Twine	Yarn
Temperature Resistance	Up to 160°C	Up to 160°C	Up to 180°C	Up to 180°C
Optimised	Up to 160°C	Up to 160°C	Up to 240°C	Up to 240°C
Dimensions	Up to NW 19	Up to NW 25	Up to NW 50	Up to NW 50

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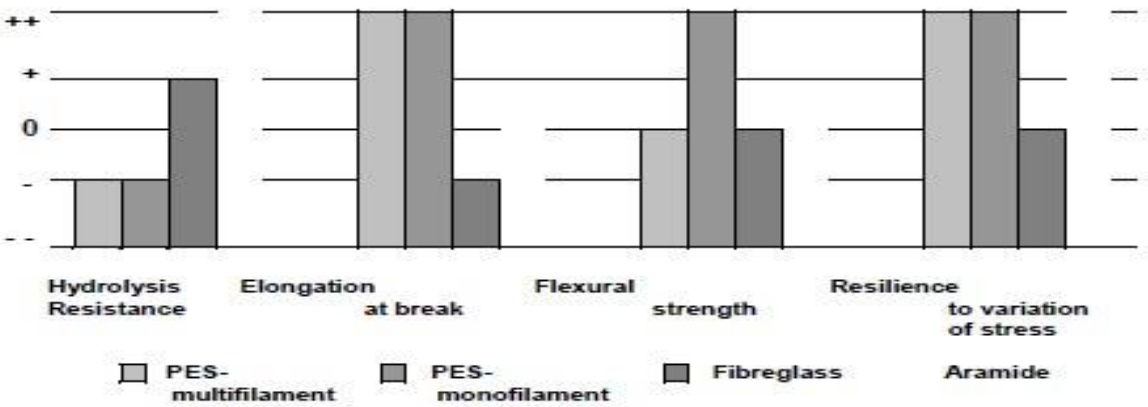
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Properties of pressure hose reinforcements (Part 2)



Properties of Pressure Hose

These hoses can be equipped with an electrically conductive inner, outer or intermediate ply in the co-extrusion procedure for discharging static electricity.

With its various braiding machines, Silex is capable of producing almost any designs and structures in terms of braiding angle, number of braids or identifying threads. Wide meshed braiding is used with highly transparent silicone compounds for easy recognition of the flow media. For applications in the fittings and sanitary sector, Silex produces silicone hoses with closed, tight-meshed braids, with a stainless wire surface.

Silex uses a low friction coating surface treatment for better handling of the flexible silicone pressure hoses, resulting in a considerable increase in the surface life of such hose systems under the dynamic loads of everyday use. Thanks to the wide range of different variations and versions, Silex's development engineers can produce optimised pressure hose constructions and material combinations specially adapted to each specifications application, tested for suitability in the Technical Centre.

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Additional Information

Dimensions, Bend Radius and Pressure Resistance of Standard Pressure Hoses:

Nominal Width			Outer Diameter	Wall Thickness	Bending Radius	Bursting pressure at 20°C **		Vacuum Suitability
NW	± Tol.	NW	Standard *	Standard *	Standard *	Standard single reinforcement	Optimised double aramide reinforcement	Standard single reinforcement absolute pressure
(mm)	(mm)	(inch)				(bar)	(bar)	(bar)
3	0.2	1/8	8	2.5	30	60	>100	150
6	0.3	¼	12	3	50	40	>100	150
8	0.3	5/16	15	3.5	60	40	>80	150
9.5	0.3	3/8	17	3.75	70	35	>80	150
12.5	0.3	½	21	4.25	80	30	>80	150
16	0.3	5/8	25	4.5	100	30	>80	200
19	0.4	¾	31	6	150	25	>80	200
25	0.5	1	37	6	185	15	>70	250
32	0.5	1 ¼	45	6.5	220	10	>50	300
38	1.0	1 ½	51	6.5	260	10	-	400
50	1.0	2	64	7	350	6	-	600

* Individual optimisation on request.

** and a suitable fitting technology.

Accreditations

This is a material certification that confirms the above product types have been manufactured to & complies with or exceeds the following regulations:

- * FDA Regulations CFR 177.2600
- * France Journal Officiel Brochure 1227
- * German BGVV XVA & LIIA
- * Italy Gazzetta Ufficiale - 1973 USDA standards
- * ISO 10993 Sections 5, -6, -10, -11
- * USP Class VI
- * European Pharmacopoeia 3.1.9

NOTE: It is the responsibility of the user to determine that the finished product, including fittings, complies with the provisions of FDA 21 CFR 177.2600 and USP Class VI.

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