VENABIO®
TECHNOSIL

Polyester braided silicone tubing

MATERIAL

Platinum cured silicone with polyester braiding between the silicone layers.
Post-curated, decreasing greatly the number of volatile compounds in the final product.

Properties	Unit	Inspection Method	Value
Hardness	Shore A	ISO 868	70±5
Tensile strength	N/mm^2	ISO 37	≥7
Elongation	%	ISO 37	>250
Tear strength	kN/m	ISO 34-1	>20
Density	g/cm^3	ISO 2781	1,19±0,03

DESCRIPTION

It is especially recommended for the transport of liquid or semi-liquid fluids in the food, cosmetic, chemical, pharmaceutical and biotech industries. It offers an extremely broadfield of applications. The design ensures a balance between strength and lightness, making it easy to handle.

It can be used in high-pressure environments thanks to its excellent mechanical strength. Its translucent appearance allows visual monitoring of the product inside the hose throughout the process.
Silicone tubing serves as the foundational material for most single-use systems. Its outstanding overall performance — including resistance to temperature variations, moisture, ozone, and steam — combined with high biocompatibility, makes it the preferred choice for all stages of bioprocessing. This includes drug formulation, upstream processing, and all critical downstream steps, from separation to final fill.

PROPERTIES

- Manufactured in ISO14644-1 Class 7.
- Odorless, tasteless and completely non-toxic.
- Translucent and smooth inner and outer appearance.
- Operational temperature range from -60°C (-75°F) to +180°C (356°F), it may reach up to 200°C (392°F) during short periods of time.
- The standard manufacturing length is 50ft (15,24m). Other lengths can be available on request.
- It can be equipped with 316L stainless steel fittings on each end with a roughness value of less than 0.8 mm (0.375 Electropolished on request).
- Available with overmolding tri-clamps.
- Additionally, the tubing can be integrated into a single-use assembly.

Roll length
Available in 25ft and 50ft

Clean room
Manufactured in ISO14644-1 Class 7

Temperature
-60°C / +180°C
(-76°F / +356°F)

Radiostable
Gamma sterilization available

Laser etched
Traceable with reference, lot number and ID/OD

Double bag
Double bagged under vacuum

Animal free
Animal derived component free

STERILIZATION

- Dry heat[1]
- Autoclave
- CIP[1]
- SIP[1]
- Ethylene oxide[1]
- Hydrogen peroxide
- eBeam (25kGy)
- Gamma (25kGy)*

1: It is the responsibility of the end-user to assess the risk.
*Sterilization available prior shipment.

BIOCOMPATIBILITY*

- USP 88 Class VI
- USP 87
- ISO 10993-4,5, 10, 11 & 23
- BfR XV
- EP 3.1.9
- FDA Standards 21 CFR177.2600 Section (e) and (f)
- European Commission Regulation No. 10/2011 and Regulation No. 2016/1416, Regulation No. 2020/1245 and Regulation No. 1935/2004
- Extractables Studies according to USP 665
- Leachables
- RoHS (Restriction of Hazardous Substances) compliant.
- REACH (Registration, Evaluation, Authorization, and Restriction of Chemicals (EC 1907/2006)) compliant. None of the compounds used are listed as Substances of Very High Concern (SVHC).

For complete validation package, please contact your sales representative.

ADDITIONAL INFORMATION

The following list includes some of the many statements regarding substances that are neither present in the raw materials nor added in the manufacturing process:

- Animal derivate compounds free (ADCF)
- GMO
- Phthalates
- BPA
- Melamine
- Latex
- Other common allergens
- Asbestos
- Nitrosamines
- PFAS

TECHNICAL SPECIFICATIONS

Inner Diameter (mm, inches)		**Outer Diameter (mm, inches)**		**Bending Radius** ISO 10619-1		**Working Pressure** ISO 1402		**Bursting Pressure** ISO 1402	
mm	inch	mm	inch	mm	inch	bar at 20°C	psi at 68°F	bar at 20°C	psi at 68°F
3.2	1/8	9.5	3/8	24	15/16	16.0	232.1	48.0	696.2
4.8	13/64	11.1	7/16	32	1 17/64	14.3	207.9	43.0	623.7
6.35	1/4	12.7	1/2	40	1 37/64	12.5	181.8	37.6	545.4
7.93	5/16	14.3	9/16	45	1 25/32	10.9	158.1	32.7	747.3
9.52	3/8	15.9	5/8	55	2 11/64	9.5	137.8	28.5	413.5
12.7	1/2	22.2	7/8	70	2 3/4	6.8	99.1	20.5	297.4
15.87	5/8	25.4	1	85	3 11/32	5.0	73.0	15.1	219.1
19.05	3/4	28.6	1 1/8	95	3 3/4	4.7	68.1	14.1	204.4
22.22	7/8	31.8	1 1/4	110	4 21/74	4.4	64.3	13.3	192.9
25.4	1	34.9	1 3/8	135	5 5/16	4.2	61.4	12.7	184.2
31.75	1 1/4	41.25	1 5/8	160	6 19/64	3.7	53.2	11.0	159.5

USE PRECAUTIONS

- Respect the bending radius and work pressure established values.
- Mind the chemical compatibility of the fluid with the silicone.
- This type of hose is not recommended for operating under negative pressure.
- This product is not recommended for the transport of abrasive particles.
- Under extreme operating conditions or when materials with low compatibility with silicone are used, the inner surface of the hose may degrade. It is recommended to regularly inspect the internal surface for signs of cracking or swelling and replace the hose if necessary.
- The hose cover should also be inspected along its entire length for signs of hardening, abrasion, cuts, kinking, or crushing.

CONTACT

venair
Fluid solutions. Solid performance.