SILICON TUBING TP RED

TP RED

Silicon Tubing with Reinforcement (Fabric) and Exterior Cover

Description / Construction

TP RED is a **peroxide-cured** silicon tubing **with an inner reinforcement** layer and a translucent or colored exterior cover for high-temperature usages. This reinforcement provides a high pressure resistance.
The table “Specifications” (see reverse page) provides an overview regarding feasible dimensions as well as technical data and reinforcement types. Standard color is red – other colors may be available upon request. **A minimum order of 100 m** applies for dimensions that are not kept as bulk stock.

Based on the nominal sizes, the following reinforcement materials (fabric) are being used. Polyester monofilaments (PES Mono up to +160 °C), Polyester yarn (up to +160 °C) and glass silk yarn (up to +180 °C). In addition, an reinforcement made of Aramid fibers (up to +180 °C) can also be provided upon request. The suitability of the reinforcement is primarily dependent on the temperature and/or movement. Glass silk demonstrates a lower dynamic load capacity than Polyester, whereas the tensile strength of glass silk and Polyester is virtually identical. However, breakage by movement faster occurs with glass silk than with Polyester, but, on the other hand, it is recommended for higher temperature exposure. In total, Aramid fibers demonstrate the best properties.

Properties of Pressure Tubing Reinforcements

Reinforcement	Designation Presentation	Textile	Temperature Resistance
PES-MF	Polyester multifilament (PET)	Garn	Up to 160 °C
PES-Mono	Polyester monofilament (PET)	Monofil	Up to 160 °C
Glass silk	E-glass	Yarn	Up to180 °C
Aramid	Aramid fiber	Yarn	Up to 180 °C

All TP RED tubing is

- Tasteless and odorless
- Free from plasticizers
- Physiologically and toxicologically harmless
- Excellent resistance to weather, aging and light..

Primary application of TP RED tubing applies to the beverage and food industry, packaging industry (filling plants), machine and plant construction as well as electric industry (cooling systems).

Chemical Resistance

TP RED tubing is suitable for the transfer of almost all food materials, pharmaceutical media, weak acids or alkaline solutions, polar solvents, many alcohols, phenol, ozone and oxygen. Higher molecular weight non-polar hydrocarbons may cause swelling. Permanent steam exposure accelerates the aging process. A compatibility list as well as information regarding “steam and silicon” can be found at www.tecnoplast.de.

Temperature Resistance

TP RED tubing can be used in a temperature range of -60 °C to +180 °C (depending on the reinforcement). For further information please refer to the table “Properties of Pressure Tubing Reinforcements”.

Specifications

Nominal sizes of ID 3-50 mm are available. TP RED tubing is available in 60-75 Shore hardness (product-depending). Routine production is based on materials that meet the following requirements (applicable only to interior tubing if colored exterior cover is used):

- BfR XV Silicone
- FDA 21 CFR 177.2600
- USP Class VI

For technical properties please refer to the table on the reverse page. Typical mean values are provided there.

Information regarding utilization and storage conditions can be found at www.tecnoplast.de.

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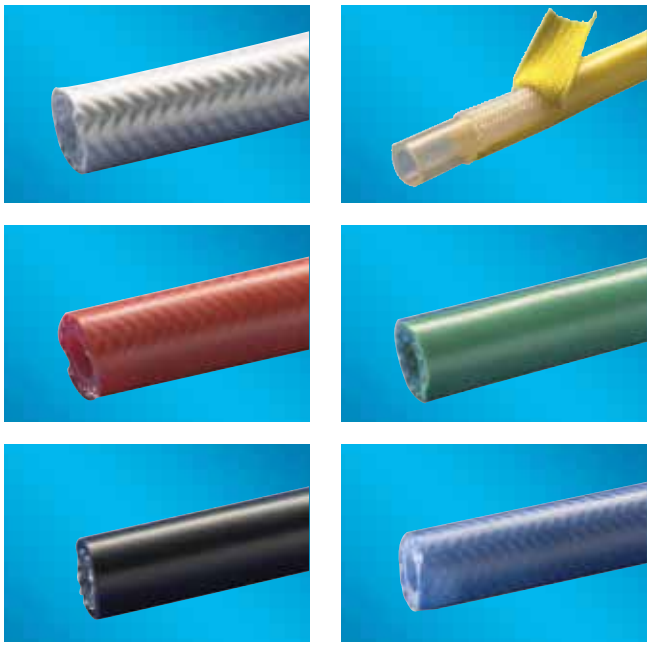
Technical Properties	
Elongation at break:	300% without cracks
Tear force:	Approx. 1600 N
Regression:	Virtually completely
Heat conductivity:	0.27 Watt (m x k)
Temperature rigidity:	Polyester: up to +160 °C Glass silk: up to +180 °C
Flash point:	Approx. 500°C
Creepage rigidity: Dielectricity constant:	Gruppe T 5 3.2/20 °C/800 Hz 2.9/180 °C/800 Hz
Shore hardness:	60 to 75 +/- 5 Shore A
Silicon base material	Transparent interior tubing: Food contact requirements: FDA/BfR conformity + USP Class VI
Reinforcement:	Polyester, glass silk (GLS), Aramid



Specifications

Nominal size	Outer diameter	Berst pressure*	Berst pressure*	Berst pressure*	Bending radius	PES-Mono	GLS
ID x wall thickness	mm	20°C/bar	95°C/bar	130°C/bar	mm		
4.0 x 2.5 mm	9.0	65	51	33	40	+	-
5.0 x 2.5 mm	10.0	55	41	30	45	+	-
6.0 x 3.0 mm	12.0	60	37	26	50	+	-
8.0 x 3.2 mm	14.4	45	31	23	60	+	-
9.5 x 3.7 mm	16.9	40	28	20	70	+	-
10.0 x 4.0 mm	18.0	40	28	20	70	+	-
12.0 x 3.5 mm	19.0	33	21	13	75	+	-
12.5 x 4.0 mm	20.5	38	28	21	80	+	-
14.0 x 4.5 mm	23.0	36	27	21	85	+	-
19.0 x 5.8 mm	30.6	30	22	16	150	-	+
22.0 x 5.8 mm	33.6	29	21	15	170	-	+
25.0 x 6.0 mm	37.0	28	21	20	185	-	+
29.0 x 7.0 mm	43.0	28	21	20	200	-	+
50.0 x 7.0 mm	64.0	15	8	5	350	-	+

* The bursting pressure depends on operating parameters and a sufficient connecting technique. All data are provided as guiding values only.

** The safety factor of 1:4 applies to the ratio of operating pressure to bursting pressure.

Packaging: perforated PE bag

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