

PRODUCT DATA

AlphaSil

TECHNICAL BULLETIN

SILICONE RUBBER TUBING

AlphaSil offers a comprehensive range of tubing, with bore sizes from 0.5mm up to 180mm, meet the demands of practically any application.

Manufactured to BS 2848, typical applications are electrical sleeving, liquids and powder transfer in food processing and pharmaceutical industries, dielectric tubing, hot air ducting, heat insulation, heat cushioning and etc.

AlphaSil also offers a wide selection of Water Council and Food and Drug Administration (FDA paragraph 177, 2600, rubber articles intended for repeated use) approved material for use specifically within hygiene - critical applications, other approval are German regulatory food authority, the BGVV (XV grade - silicone) and also WRC Approval (approval no. is 9903529).

The **special features** of the tubing are going through platinum cure process which result in the following properties :

- non-yellowish
- excellent clarity
- shiny and smooth surface
- high level of tear strength
- no smell or taste
- no reactionary elements with chlorine
- less vulnerable to splitting or being damage
- no build up of peroxide solids

TEST	TEST METHOD	TYPICAL VALUES	UNIT
Density	DIN 53479 A	1.19	g/cm ³
Hardness	DIN 53505	60	Shore A
Tensile Strength	DIN 53504 (S1)	12	N/mm ²
Elongation to break	DIN 53504 (S1)	600	%
Tear Strength	DIN 53515 (C1)	18	N/mm
Compression Set	DIN 53517	11	%
Temperature Range	-60°C to +200°C (Continuous) +260°C (Intermittent)		
Dissipation Factor	VDE 0303	70x10 ⁻⁴	Tan δ
Dielectric Strength	VDE 0303	19	kV/mm
Dielectric Constant	DIN 53482 @ 25°C and 50Hz	3	N/A
Arc Resistance	VDE 0441	90	seconds

test	Test method	Typical values	unit
Surface Resistance	VDE 0303	5×10^{12}	$\Omega \cdot \text{cm}$
Volume Resistivity	VDE 0303	5×10^{15}	$\Omega \cdot \text{cm}$
Abrasion Resistance	DIN 53516	76	mm^3
Thermal Conductivity	DIN 52612	0.25	$\text{W} \cdot \text{m}^{-1} \cdot \text{K}^{-1}$
Coefficient of Expansion	DIN 52612	3×10^{-4}	K^{-1}
Weathering	DIN 50018 – SFW 2.0 S	Without changes	15 cycles
Flame Retardancy	UL 94 V 1	pass	
Oil Resistance	Hardness Change	-2	%
ASTM Oil 1	Tensile Strength	-10	%
	Elongation Change	+5	%
	Volume Change	+3.8	%

IN CONTACT WITH FOOD, AlphaSil also have the following approval from some of countries listed below:-

FEDERAL REPUBLIC OF GERMANY

- By VVXV ‘Silicones’ 182nd notice of official [Federal Gazette 30,211 (1989)] – Positive List
- German KTW recommendation (drinking water), official Federal Gazette 28, No. 12(1985) – Contact with potable water.

USA

- “Rubber Articles Intended for Repeated use in contact with food” FDA code of Federal Regulation, 177.2600.

UNITED KINGDOM

- BS 6920 (WRC Water Byelaws Scheme.)

FRANCE

- Decrets et Circulaires du Ministere de l’ Agriculture Brochure No. 1227,1980.