



HelixMark®



SILICONE TUBING FOR  
THE MEDTECH AND  
PHARMACEUTICAL INDUSTRY

All HelixMark products are manufactured in clean rooms in compliance with the requirements of the medtech and pharmaceutical industry.

The following criteria apply to all articles of this programme:

- Materials approved in accordance with USP Class VI, ISO 10993-1, FDA 21CFR 177-2600 and EP 3.1.9 or EP 3.1.9 without appearance of solution
- Exclusive utilisation of platinum-cured silicone
- Production and packaging in ISO Class 8 clean rooms
- Certified manufacturing in compliance with ISO 13485 quality standards
- Sterilisable in autoclaves, with ethylene oxide and by gamma irradiation
- Supplied with material certificate in every packaging unit
- Seamless batch traceability
- Double packed
- Off-the-shelf availability guarantees short delivery times
- Customer-specific solutions available outside the HelixMark standard product portfolio

## HELIXMARK® STANDARD TUBING

HelixMark Standard silicone tubing meets the needs of a broad spectrum of applications and are universally applicable for the transfer of fluids under standard requirements. The tubing is offered in two types of silicone (Dow Corning Silastic 50 Shore A und Wacker Elastosil 60 Shore A) and is individually packed in pre-cut lengths of 15 m.



INNER DIAMETER	OUTER DIAMETER	WALL THICKNESS	DOW CORNING SILASTIC® ISO FDA USP EP	WACKER ISO FDA USP (EP)
mm	mm	mm	REF	REF
0,31	0,64	0,17	45630101	45634140
0,51	0,94	0,22	45630102	49300528
0,64	1,19	0,28	45630103	45634142
0,76	1,65	0,45	45630104	45634143
1,02	2,16	0,57	45630105	45634144
1,47	1,96	0,25	45630106	49300529
1,58	2,41	0,42	45630107	45634146
1,58	3,18	0,80	45630108	45634147
1,98	3,18	0,60	45630109	49300530
2,64	4,88	1,12	45630110	45634149
3,35	4,65	0,65	45630111	45634150
3,18	6,35	1,59	45630121	45634151
4,76	7,94	1,59	45630122	45634152
4,76	9,53	2,39	45630123	45634153
6,35	9,53	1,59	45630124	45634154
6,35	11,13	2,39	45630125	45634155
6,35	12,70	3,18	45630126	45634156
7,94	12,70	2,38	45630127	45634157
9,53	12,70	1,59	45630128	45634158
9,53	14,30	2,39	45630129	45634159
9,53	15,88	3,18	45630130	45634160
12,70	17,48	2,39	45630131	49300531
12,70	19,05	3,18	45630132	45634162
15,88	22,23	3,18	45630133	45634163
15,88	23,83	3,98	45630134	49300532
19,05	25,41	3,18	N/A	45634165

#### TYPICAL PROPERTIES AFTER CURING

Specific gravity [g/cm <sup>3</sup> ]	1.16	1.16
Durometer hardness [Shore A points]	50	60
Tensile strength [MPa]	10.16	9.8
Tear strength [kN/m <sup>2</sup> ], Die B ASTM D624	45.9	38
Elongation [%]	903	700

\* Individual measured values may differ from mean values. These values are not to be considered as product specifications. Non-implantable, non-sterile.

The values stated are typical values. 15 m coils. Double bagged and packaged in boxes. Material certification and batch number included in every box.\*

Silastic® is a registered trademark of Dow Corning.

**SPECIFICATIONS**  
ISO: ISO 10993-1  
FDA: FDA 21CFR 177-2600  
USP: USP-CLASS VI  
EP: EP 3.1.9  
(EP): EP 3.1.9 without appearance of solution



# HELIXMARK® PERISTALTIC PUMP TUBING

HelixMark peristaltic pump tubing is designed and manufactured for use with peristaltic pumps and other applications with higher effective forces. A special production process designed to meet these requirements ensures that the products provide greater stability and capacity to withstand stresses. The range offers sizes suitable for use with all commonly used pump types. The tubing is individually packaged in pre-cut lengths of 7.5 m.



INNER DIAMETER	OUTER DIAMETER	WALL THICKNESS	FIT PUMP TUBE SIZE	ISO FDA USP (EP)
mm	mm	mm	REF	REF
0,51	3,71	1,60	#112	45635015
0,79	3,99	1,60	#13	45635023
0,99	1,60	0,31		45635027
1,50	2,52	0,51		45635037
1,60	4,80	1,60	#14	45635043
1,60	6,38	2,39	#119	45635045
2,01	3,02	0,51		45635051
2,52	3,53	0,51		45635063
3,00	4,01	0,51		45635070
3,18	6,38	1,60	#16	45635079
3,18	7,95	2,39	#120	45635082
4,01	5,44	0,72		45635093
4,78	7,98	1,60	#25	45635104
4,78	9,55	2,39	#15	45635108
4,78	9,86	2,54	#15TW	45635110
4,78	11,13	3,18	#123	45635112
6,35	9,55	1,60	#17	45635130
6,35	11,13	2,39	#24	45635133
6,35	11,43	2,54	#24TW	45635136
6,35	12,70	3,18	#26	45635139
6,35	13,21	3,43	#26TW	45635141
7,95	11,15	1,60	#18	45635160
7,95	12,73	2,39	#35/121	45635163
7,95	15,98	4,02	#185	45635166
9,53	14,30	2,39	#36/122	45635191
9,53	15,89	3,18	#73	45635194
9,53	16,38	3,43	#73TW	45635197
9,53	19,03	4,75	#70/190	45635200
12,01	20,03	4,01	#186	45635230
12,70	19,05	3,18	#82	45635243
12,70	19,56	3,43	#82TW	45635245
12,70	22,20	4,75	#88	45635248
15,88	22,23	3,18	#184	45635262
15,88	25,38	4,75	#189	45635270
16,00	24,03	4,02	#187	45635288
19,05	28,55	4,75	#191	45635310
25,40	34,90	4,75	#92	45635420
25,40	35,56	5,08	#92TW	45635428

The values stated are typical values. Typical hardness: 60 Shore A. TW = Thick Wall (stronger wall thickness, variance between identical pump numbers). 7.5 m coils. Double bagged and packaged in boxes. Material certification and batch number included in every box.\*

**SPECIFICATIONS**  
ISO: ISO 10993-1  
FDA: FDA 21CFR 177-2600  
USP: USP-CLASS VI  
EP: EP 3.1.9  
(EP): EP 3.1.9 without appearance of solution

\* Individual measured values may differ from mean values. These values are not to be considered as product specifications. Non-implantable, non-sterile.

# HELIXMARK® BRAIDED REINFORCED TUBING

HelixMark braided reinforced tubing is designed and manufactured especially for applications with higher pressures. Pressure-proof polyester braiding, firmly embedded between two layers of silicone, lends this tubing its particularly durability and resistance to pressure. The tubing is individually packaged in pre-cut lengths of 7.5 m.



INNER DIAMETER	OUTER DIAMETER	MIN BURST	ISO FDA USP EP
mm	mm	bar	REF
3,18	9,27	15,00	45636020
4,75	11,35	15,00	45636030
6,35	13,21	15,00	45636040
7,93	15,04	15,00	45636045
9,53	16,64	15,00	45636050
12,70	20,32	15,00	45636060
15,88	24,51	15,00	45636070
19,05	27,94	15,00	45636080
22,23	31,37	15,00	45636090
25,40	34,54	15,00	45636100

The values stated are typical values. Typical hardness: 65 Shore A. 7.5 m coils. Double bagged and packaged in boxes. Material certification and batch number included in every box.\*

**SPECIFICATIONS**  
ISO: ISO 10993-1  
FDA: FDA 21CFR 177-2600  
USP: USP-CLASS VI  
EP: EP 3.1.9  
(EP): EP 3.1.9 without appearance of solution

\* Individual measured values may differ from mean values. These values are not to be considered as product specifications. Non-implantable, non-sterile.

# HELIXMARK® COLOUR-STRIPED TUBING

HelixMark colour-striped tubing helps to maintain a clear overview in complex tubing systems and enables quick and easy identification of individual applications, sizes or functional configurations. The tubing is available with stripes in red, green and white, individually packaged in pre-cut lengths of 15 m.



INNER DIAMETER	OUTER DIAMETER	WALL THICKNESS	RED STRIPE ISO FDA USP (EP)	GREEN STRIPE ISO FDA USP (EP)	WHITE STRIPE ISO FDA USP (EP)
mm	mm	mm	REF	REF	REF
3,18	6,35	1,59	45630621	45630721	45630821
4,78	9,53	2,38	45630623	45630723	45630823
6,35	12,70	3,18	45630626	45630726	45630826
7,95	12,70	2,38	45630627	45630727	45630827
9,53	15,88	3,18	45630630	45630730	45630830
12,70	19,05	3,18	45630632	45630732	45630832

The values stated are typical values. Typical hardness: 60 Shore A. Please contact Customer Service for details of sizes and tolerances. Material certification and batch number included in every box.\*

**SPECIFICATIONS**  
ISO: ISO 10993-1  
FDA: FDA 21CFR 177-2600  
USP: USP-CLASS VI  
EP: EP 3.1.9  
(EP): EP 3.1.9 without appearance of solution

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# HELIXMARK® CLOSE TOLERANCE SILICONE TUBING

HelixMark close tolerance silicone tubing maintains particularly tight tolerances with regard to inner diameter and wall thickness and is subjected to stringent quality assurance measures in production. This ensures increased dosing precision in demanding applications. The tubing is individually packaged in pre-cut lengths of 15 m.

INNER DIAMETER	OUTER DIAMETER	WALL THICKNESS	ISO FDA USP EP
mm	mm	bar	REF
3,18	6,35	1,59	45631121
4,76	7,95	1,60	45631122
6,35	9,53	1,59	45631124
6,35	11,13	2,39	45631125
9,53	14,29	2,38	45631129
9,53	15,88	3,18	45631130
12,70	17,48	2,39	45631131
12,70	19,05	3,18	45631132
15,88	22,23	3,18	45631133

The values stated are typical values. Typical hardness: 50 Shore A. 15 m coils. Double bagged and packaged in boxes. Material certification and batch number included in every box.\*

**SPECIFICATIONS**  
ISO: ISO 10993-1  
FDA: FDA 21CFR 177-2600  
USP: USP-CLASS VI  
EP: EP 3.1.9  
(EP): EP 3.1.9 without appearance of solution



# HELIXMARK® PHARMAFOCUS TUBING

HelixMark PharmaFocus tubing is manufactured from a platinum-cured silicon that was developed especially to meet the needs of the pharmaceutical industry. The tubing is individually packaged in pre-cut lengths of 15 m.

INNER DIAMETER	OUTER DIAMETER	WALL THICKNESS	ISO FDA USP EP
mm	mm	mm	REF
3,18	6,35	1,59	45632521
4,78	7,95	1,59	45632522
4,78	9,53	2,38	45632523
6,35	11,13	2,39	45632525
6,35	12,71	3,18	45632526
7,95	12,71	2,38	45632527
9,53	15,88	3,18	45632530
12,71	19,06	3,18	45632532
15,88	22,23	3,18	45632533
19,06	25,41	3,18	45632535
25,41	38,12	6,36	45632536

The values stated are typical values. Typical hardness: 50 Shore A. 15 m coils. Double bagged and packaged in boxes. Material certification and batch number included in every box.\*

**SPECIFICATIONS**  
ISO: ISO 10993-1  
FDA: FDA 21CFR 177-2600  
USP: USP-CLASS VI  
EP: EP 3.1.9  
(EP): EP 3.1.9 without appearance of solution

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## HELIXMARK® CLAMP GASKETS

HelixMark clamp gaskets ensure reliable sealing of radial plug-in connectors. The gaskets are suitable for all commonly used diameters and sizes and are supplied in packages of 25.

TYPE	INNER DIAMETER	ISO FDA USP EP
mm	mm	REF
Mini	12,70	45639005
Mini	19,05	45639007
Standard	25,40	45639010
Standard	38,10	45639015
Standard	50,80	45639020
Standard	63,50	45639025
Standard	76,20	45639030
Standard	101,60	45639040
Standard	152,40	45639060

The values stated are typical values. Typical hardness: 80 Shore A. Packaged in boxes with 25 gaskets per resealable bag. Material certification and batch number included in every box.\*

**SPECIFICATIONS**  
 ISO: ISO 10993-1  
 FDA: FDA 21CFR 177-2600  
 USP: USP-CLASS VI  
 EP: EP 3.1.9  
 (EP): EP 3.1.9 without appearance of solution



## HELIXMARK® STOPPERS

HelixMark silicone stoppers enable reliable sealing of glass tubes, vials and flasks. The stoppers are suitable for all commonly used diameters and sizes and are supplied in packages of 12.

STOPPER SIZE	TOP DIAMETER	BOTTOM DIAMETER	HEIGHT	ISO FDA USP EP
mm	mm	mm	mm	REF
000	13	8	25	45639199
00	15	10	25	45639190
0	17	13	25	45639100
1	19	14	25	45639101
2	20	16	25	45639102
3	24	18	25	45639103
4	26	20	25	45639104
5	27	23	25	45639105
6	32	26	25	45639106
7	37	30	25	45639107
8	41	33	25	45639108
9	45	37	25	45639109
10	50	42	25	45639110
12	64	54	25	45639112

The values stated are typical values. Typical hardness: 50 Shore A. Packaged in boxes with 12 gaskets per resealable bag. Material certification and batch number included in every box.\*

**SPECIFICATIONS**  
 ISO: ISO 10993-1  
 FDA: FDA 21CFR 177-2600  
 USP: USP-CLASS VI  
 EP: EP 3.1.9  
 (EP): EP 3.1.9 without appearance of solution

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## HELIXMARK® CUSTOMER-SPECIFIC SERVICES

In addition to the products for the general needs of the med-tech and pharmaceutical industry shown in our catalogue, we also offer a wide range of options for customer-specific silicone tubing solutions. This allows the configuration of made-to-measure solutions to meet the customer's precise requirements.



### MULTI-LUMEN TUBING



### CUSTOMER-SPECIFIC COLOURS



### UV-LIGHT SHIELDING TUBING



### RADIOPAQUE TUBING



### PACKAGING ON SPOOLS



### HELIXMARK® STOPPERS WITH HOLES



### DOUBLE REINFORCED TUBING



### LASER PRINTING



### TUBING SYSTEMS



### ADDITIONAL SERVICES

- Profiles
- Precision cut-to-length
- Tip trimming
- Punching





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**Freudenberg Medical manufactures products exclusively for the medtech and pharmaceutical industry. This focus enables us to understand and rapidly and efficiently fulfil our customers' precise requirements. In this, our capabilities as a supplier and partner in the development of products and solutions are distinguished by exceptional flexibility and powers of innovation.**

We are your global partner for the design, development and production of innovative medical and combination products. Our portfolio comprises complex medical components and catheter solutions for minimally invasive surgery. We are a leading manufacturer not only in the field of precision-moulded components and tubing in silicone and thermoplastics, but also in coating technologies and the production of metal hypotubes.

Freudenberg Medical is a part of the Freudenberg Group, a technology group with a tradition reaching back over 165 years and a provider of innovative products for more than 30 market segments around the globe.

In our daily work, both our corporation and individual employees are committed to upholding the values for which we all stand:

- Value for customers
- Innovation
- Leadership
- People
- Responsibility
- Long term orientation

As a development partner, we ensure that every innovation project our customers entrust to us is realised and led to commercial success by our unique combination of technical expertise, a global network, financial stability and enormous flexibility.

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