



## Application

Silicone rubber is resistant to extreme temperature conditions, as for high (up to 180 °C, briefly even to 250 °C), so also for low (-60 °C) temperature. It has a high point (temperature) of inflammability, it is halogen-free, releases no corrosive gases at combustion, and around the conductor is formed additional insulation of silicone-oxide ashes. Due to a higher electrical resistance, tinned copper is also more suitable for higher temperatures (up to 220 °C) than bare copper. Such composition of these cables makes them applicable in extreme temperature environment, for inst. in steel production, aircraft industry, shipbuilding, cement plants and glass and ceramics factories, in electric power plants etc. They are also suitable for wiring of lighting, heating elements, burners, furnaces, saunas, solariums etc. To retain its mechanical properties at temperatures higher than 90 °C, silicone rubber needs to be properly ventilated or laid outdoor or in tubes. Glass fibers increase mechanical resistance of cable.

## Standards

DIN VDE 0250 part 1

HRN HD 22.15 S1

## Construction

Conductor:tinned copper conductor, fine wired stranded, class 5 acc. to IEC 60228 / HD 383 / DIN VDE 0295

Insulation:silicone rubber, concentrically stranded cores, colour marked acc. to DIN VDE 0293-308 / HD 308 S2, for 3 and more cores: with yellow-green protective core

Sheath:silicone rubber

Braid:glass fiber grid

Core colour marking:acc. to HD 308 S2 / VDE 0293-308

## Technical data

Temperature range:

operating temp.: -60 °C up to +180 °C

short-term peak temp.: 220 °C

Nominal voltage:  $U_0/U = 300/500$  V

Test voltage: 2000 V

Breakdown voltage: 5000 V

Behaviour in fire: IEC 60332-1

Halogen-free: IEC 60754-1

Corrosiveness of combustion gases: not corrosive acc. to IEC 60754-2

Specific el. resistance of insulation:  $> 200 \text{ M } \Omega \times \text{ km}$

Maximal tensile strength:

under normal conditions: 5 N/mm<sup>2</sup>

after ageing (240h / 200°C): 4 N/mm<sup>2</sup>

Minimal inner bending radius: 10D

Permitted current load: at ambient temp. up to +145 °C acc. to DIN VDE 0100

## DIMENSIONS

Dimensions – number of cores x conductor cross-section	Construction of individual conductor	External diameter	Insulation thickness	Sheath thickness	Conductor resistance at 20 °C	Cu weight	Cable weight	Packing*
	nominal		nominal	nominal	max.		approx.	
N x mm <sup>2</sup>	n x mm		mm	mm	Ω/km	kg/km	kg/km	
2 x 0,75	24 x 0,20	6,9 - 7,2	2,4	0,8	26,7	14,4	72	CUT
3 x 0,75	24 x 0,20	7,2 - 7,6	2,4	0,8	26,7	21,6	86	CUT
4 x 0,75	24 x 0,20	8,2 - 8,6	2,4	1	26,7	28,8	112	CUT
5 x 0,75	24 x 0,20	9,0 - 9,3	2,4	1	26,7	36	132	CUT
7 x 0,75	24 x 0,20	9,7 - 10,0	2,4	1	26,7	50,4	160	CUT
2 x 1	32 x 0,20	7,2 - 7,4	2,5	0,8	20,0	19,2	80	CUT
3 x 1	32 x 0,20	7,7 - 8,2	2,5	1	20,0	28,8	103	CUT
4 x 1	32 x 0,20	8,5 - 8,9	2,5	1	20,0	38,4	124	CUT
5 x 1	32 x 0,20	9,2 - 9,6	2,5	1	20,0	48	148	CUT
7 x 1	32 x 0,20	10,2 - 10,3	2,5	1	20,0	67,2	182	CUT
2 x 1,5	30 x 0,25	8,3 - 8,4	2,8	1	13,7	28,8	107	CUT
3 x 1,5	30 x 0,25	8,4 - 8,8	2,8	1	13,7	43,2	127	CUT
4 x 1,5	30 x 0,25	9,2 - 9,6	2,8	1	13,7	57,6	157	CUT
5 x 1,5	30 x 0,25	10,1 - 10,4	2,8	1	13,7	72	188	CUT
7 x 1,5	30 x 0,25	10,9 - 11,2	2,8	1	13,7	100,8	233	CUT
12 x 1,5	30 x 0,25	15,4		1,5	13,7	172,8	433	CUT
14 x 1,5	30 x 0,25	16,2		1,5	13,7	201,6	486	CUT
18 x 1,5	30 x 0,25	17,8		1,5	13,7	259,2	601	CUT
24 x 1,5	30 x 0,25	21,2		1,8	13,7	345,6	838	CUT
2 x 2,5	50 x 0,25	9,6 - 10	3,4	1,2	8,21	48	158	CUT
3 x 2,5	50 x 0,25	10,1 - 10,5	3,4	1,2	8,21	72	192	CUT
4 x 2,5	50 x 0,25	11,0 - 11,4	3,4	1,2	8,21	96	236	CUT
5 x 2,5	50 x 0,25	12,0 - 12,4	3,4	1,2	8,21	120	283	CUT
7 x 2,5	50 x 0,25	13,5	3,4	1,2	8,21	168	355	CUT
3 x 4	56 x 0,30	11,8 - 12,3	4,1	1,2	5,09	115,2	276	CUT
4 x 4	56 x 0,30	13,5 - 14	4,1	1,5	5,09	153,6	364	CUT
3 x 6	84 x 0,30	14,4 - 15	5,1	1,5	3,39	172,8	418	CUT
4 x 6	84 x 0,30	16,0 - 16,4	5,1	1,5	3,39	230,4	518	CUT

\*) Packing: CUT = cable in different lengths on drum or reel, possible cutting at required length