



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, and steel braid increases also mechanical resistance and resistance to electromagnetic fields.

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

External braid: galvanized steel wire grid

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

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

Specific el. resistance of insulation: > 200 M Ω x km

Maximal tensile strength:

under normal conditions: 5 N/mm²

after ageing (240h / 200°C): 4 N/mm²

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	number of conductor	Construction of individual conductor	External diameter	Sheath thickness	Conductor resistance at 20 °C	Cu weight	Cable weight	Packing*
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cross-section							
	nominal		nominal	max.		approx.	
N x mm ²	n x mm		mm	Ω/km	kg/km	kg/km	
2 x 0,75	24 x 0,20	7,9	0,8	26,7	14,4	90	CUT
3 x 0,75	24 x 0,20	8,3	0,8	26,7	21,6	101	CUT
4 x 0,75	24 x 0,20	9,3	1	26,7	28,8	129	CUT
5 x 0,75	24 x 0,20	10,0	1	26,7	36,0	157	CUT
7 x 0,75	24 x 0,20	10,7	1	26,7	50,4	177	CUT
2 x 1	32 x 0,20	8,0	0,8	20,0	19,2	97	CUT
3 x 1	32 x 0,20	8,9	1	20,0	28,8	122	CUT
4 x 1	32 x 0,20	9,4	1	20,0	38,4	141	CUT
5 x 1	32 x 0,20	10,4	1	20,0	48,0	166	CUT
7 x 1	32 x 0,20	11,1	1	20,0	67,2	197	CUT
2 x 1,5	30 x 0,25	9,0	1	13,7	28,8	127	CUT
3 x 1,5	30 x 0,25	9,5	1	13,7	43,2	145	CUT
4 x 1,5	30 x 0,25	10,3	1	13,7	57,6	173	CUT
5 x 1,5	30 x 0,25	11,0	1	13,7	72,0	202	CUT
6 x 1,5	30 x 0,25	12,0	1	13,7	86,4	240	CUT
7 x 1,5	30 x 0,25	12,0	1	13,7	100,8	244	CUT
12 x 1,5	30 x 0,25	15,5	1,5	13,7	172,8	327	CUT
14 x 1,5	30 x 0,25	16,2	1,5	13,7	201,6	382	CUT
18 x 1,5	30 x 0,25	18,7	1,5	13,7	259,2	440	CUT
24 x 1,5	30 x 0,25	21,5	1,8	13,7	345,6	600	CUT
2 x 2,5	50 x 0,25	10,7	1,2	8,21	48,0	187	CUT
3 x 2,5	50 x 0,25	11,2	1,2	8,21	72,0	205	CUT
4 x 2,5	50 x 0,25	12,1	1,2	8,21	96,0	278	CUT
5 x 2,5	50 x 0,25	13,3	1,2	8,21	120,0	322	CUT
6 x 2,5	50 x 0,25	14,3	1,2	8,21	144,0	351	CUT
7 x 2,5	50 x 0,25	14,4	1,2	8,21	168,0	380	CUT
2 x 4	56 x 0,30	12,5	1,2	5,09	76,8	240	CUT
3 x 4	56 x 0,30	13,0	1,2	5,09	115,2	311	CUT
4 x 4	56 x 0,30	15,0	1,5	5,09	153,6	384	CUT
5 x 4	56 x 0,30	16,0	1,5	5,09	192,0	454	CUT
7 x 4	56 x 0,30	17,5	1,5	5,09	268,8	633	CUT

2 x 6	84 x 0,30	15,1	1,5	3,39	115,2	321	CUT
3 x 6	84 x 0,30	15,9	1,5	3,39	172,8	432	CUT
4 x 6	84 x 0,30	18,0	1,5	3,39	230,4	544	CUT
5 x 6	84 x 0,30	19,4	1,8	3,39	288,0	656	CUT
7 x 6	84 x 0,30	20,7	1,8	3,39	403,2	768	CUT
4 x 10	80 x 0,40	22,1	1,8	1,95	384,0	925	CUT
4 x 16	128 x 0,40	26,1	2	1,24	614,4	1235	CUT
4 x 25	200 x 0,40	30,4	2,2	0,795	960,0	1700	CUT