

Mica taped wires

Cablosam®-insulated conductors

- **Single or stranded copper wires insulated with Cablosam®**
- **Single core conductors used in the manufacture of fire-resistant safety cables**

Description :

CABLOSAM®-insulated single core conductors are taped bare or tinned single or stranded copper wires. The tape consists of glass fabric or Polyethylene foil and non-inflammable mica paper as carrier and a special Silicone-based binder. The SAMICA® mica paper, developed by Von Roll, is used. One or two layers of CABLOSAM® can be applied to the single or stranded wires.

The CABLOSAM® insulation is both fire- and heat-proof in safety cables, which are used to prevent catastrophies in case of fire. In most cases, the dire consequences of fire can somewhat be limited, if power supply, switch boards and control systems remain intact. During a fire, supply cables must continue to function for a considerable time to safeguard rescue work, and to allow for appropriate safety measures to be taken.

CABLOSAM®-insulated single core conductors are processed into safety cables in Cable Works.

Advantages :

Depending on the construction of the single-core CABLOSAM®-insulated safety cables, they keep functioning for a definite period of time, at flame temperatures of over 1000 °C. The mica layer is not combustible and prevents fire from spreading. Neither do toxic fumes form. CABLOSAM® is corona resistant and also radiation-proof up to 10⁹ rad.

Application :

CABLOSAM®-insulated single core conductors are used in the manufacture of safety cables for communication control systems and to ensure electricity supply in:

Public buildings (schools, airports, hospitals, ...)
Offshore oil rigs
Mining- and tunnel installations
Installations for nuclear technology
Transport facilities (railways, subways, trams, ships, ...)
Telecommunication systems

Standards

All CABLOSAM®-insulated single core conductors can be used in manufacturing cables, which meet the current international standards for fire - resistant cables, e.g.:

IEC 60331
EN 50200
DIN 4102/12
BS 6387

Construction	Standard conductors			Flexible untinned bare copper wires		Flexible tinned bare copper wires	
	Nominal cross section mm ²	Number of single wires	Nominal diameter of single wire mm	Number of single wires	Nominal diameter of single wire mm	Number of single wires	Nominal diameter of single wire mm
Stranded cond.	0,75	7	0,37	24	0,20	24	0,20
	1,00	7	0,43	32	0,20	32	0,20
	1,50	7	0,53	32	0,235	30	0,25
	2,50	7	0,67	54	0,235	50	0,25
	4,00	7	0,85	56	0,30	56	0,30
	6,00	7	1,04	84	0,30	84	0,30
	10,00	7	1,35	80	0,40	80	0,40
Solid wires	0,50	1	0,80				
	0,75	1	1,02				
	1,00	1	1,13				
	1,50	1	1,355				
	2,50	1	1,74				
	4,00	1	2,22				
	6,00	1	2,70				
	10,00	1	3,50				

The resistance of the listed conductors is according to IEC 60228 class 1, 2 and 5. The single conductors of stranded wires can be bare or tinned. On request, other constructions are also possible. Von Roll insulates also single core conductors supplied by customers.

CABLOSAM® based on Muscovite Mica	Unit	Cablosam HP - 366.21-10
Thickness of tape	mm	0.12 ± 0,03
Weight	g/m ²	130 ± 16
Mica paper (SAMICA®)	g/m ²	80 ± 6
Glass fabric	g/m ²	23 ± 3
Binder	g/m ²	32 ± 10
Tensile strength (longitudinally)	N/cm	≥ 80
Breakdown voltage	kV	≥ 1.3

CABLOSAM® based on Phlogopite Mica	Unit	Cablosam AP - PG90 366.20-81	Cablosam AP - PG110 366.19-81
Thickness of tape	mm	0.09 ± 0.02	0.11 ± 0.03
Weight	g/m ²	120 ± 10	159 ± 14
Mica paper (SAMICA®)	g/m ²	80 ± 4	120 ± 6
Glass fabric	g/m ²	23 ± 2	23 ± 3
Polyethylene Foil	g/m ²		
Binder	g/m ²	17 ± 4	16 ± 5
Tensile strength (longitudinally)	N/cm	≥ 80	≥ 80
Breakdown voltage	kV	≥ 1.0	≥ 1.2

Appearance

Slight color variations are raw material or process-related and have no influence on the technical properties of the wire.

Types available :

Our standard types with indication of tapes used, overlap and increase due to insulation. Other types can be supplied upon request.

Type	SK 785	SK 135	SK 150	2SK 785
Tape used:	PG110	366.21-10	366.21-10	PG110
Overlap:	30 ... 40 %	25 ... 35 %	40 ... 50 %	30 ... 40 %
Increase due to insulation (mm):	0,40	0,40	0,50	0,80

Order data :

Quantity, Designation and Mode of Supply

e.g.

The designation shall contain

Type of conductor	stranded wires	or	single wire
Number of single wires, e.g.	7		1
Nominal diameter of single wires, e.g.	0,53 mm		1,355 mm
Conductor material	CU tinned		CU
Type	SK 135		SK 135
Material No. of insulation	366.23-10		366.23-10
Overlap	25...35 %		25...35 %

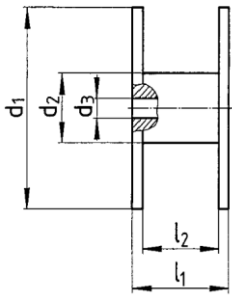
The mode of supply shall indicate the type of reel required, e.g. Cylindrical reel according to DIN 46399 and IEC 60264-2 (pls. refer to the Table below). Other forms of put-up are also possible on request, e.g. drums.

e.g.:

10'000 m stranded wires 7 x 0,53 CU tinned SK 135 366.21-10 25...35 on reels D8p

Mode of supply :

Type, dimensions and capacity of the reels



Type	Dimensions of reels in mm					Capacity kg	Material
	d_1	d_2	d_3	l_1	l_2		
E7	700	400	85	310	250	≈ 175	Wood
D8p	800	400	40	270	200	≈ 300	Plastic

On request, other types of supply reels are also possible

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