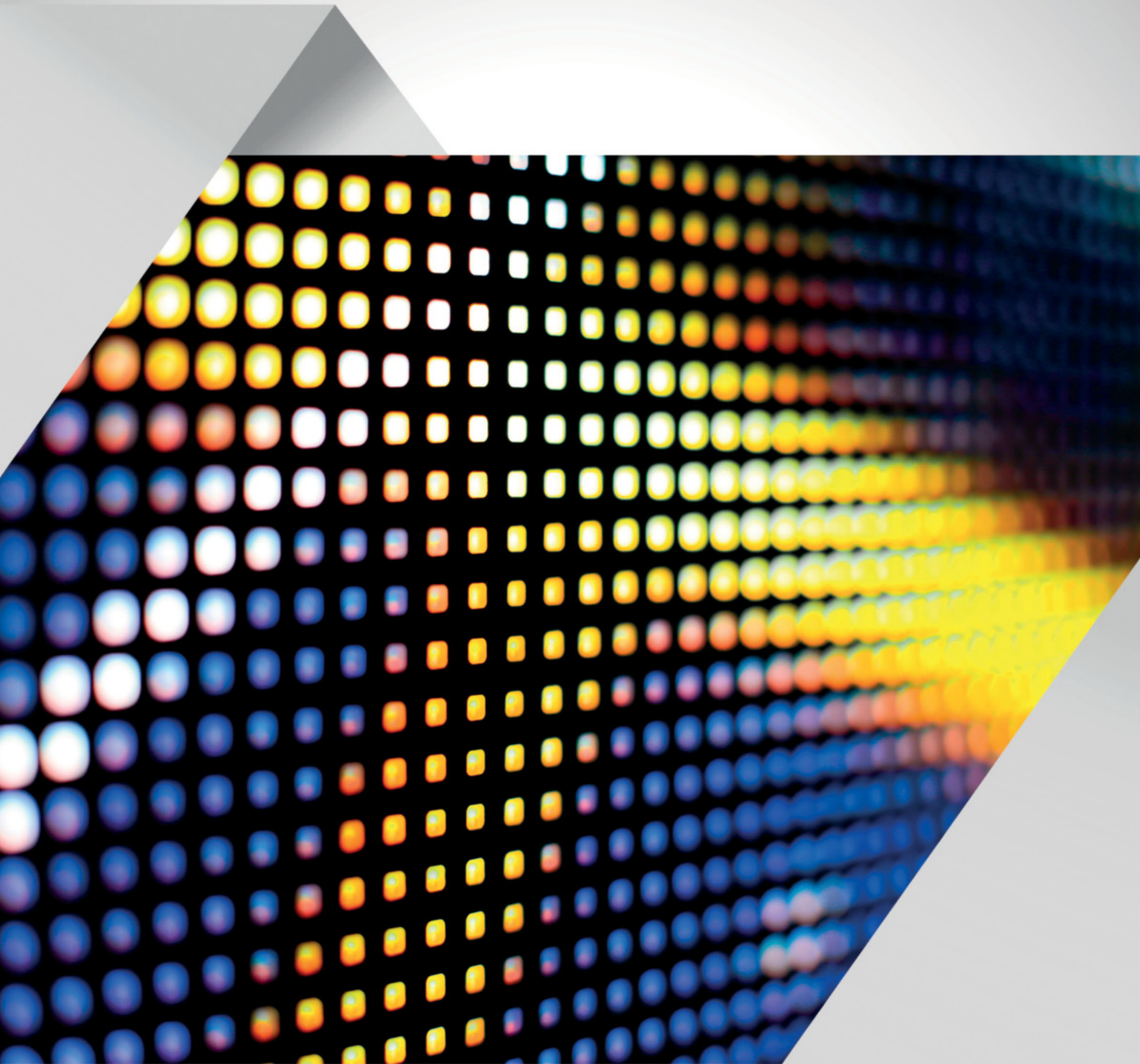


CABLES FOR THE LAMP AND LIGHT INDUSTRY



www.sab-cable.com



Lamp and light industry

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Besilen® is a specially developed Silicone rubber-based material with good electrical characteristics and it is a registered trademark of SAB BRÖCKSKES GmbH & Co. KG.

Family business in the third generation

75 years of experience in cable and wire manufacturing as well as in temperature measurement technology turned a one-man business into a company with more than 550 employees. We prove our strength every year with more than 1500 special products according to customers' requirements. Each product is a new challenge for our creative technical team. We at **SAB** see ourselves as a manufacturer and a service provider – in the sense of true partnership and the greatest possible customer orientation.

Today, the quality of our products is known and appreciated in more than 80 countries around the world. In all product ranges, we are certified according to DIN EN ISO 9001. Furthermore, we have implemented an environmental management system for our company according to DIN EN ISO 14001, an occupational health and safety management system according to DIN EN ISO 14001 and DIN ISO 45001, and an energy management system according to DIN EN ISO 50001.

And also for the future, our slogan is: **"WE CONTINUE!"**

FOUNDED:	1947 by Peter Bröckskes sen. an independent, medium-sized company.
CEO:	Peter Bröckskes and Sabine Bröckskes-Wetten
PLANT/LOCATION:	In Viersen (Lower Rhine) 110.000 m ² company site. Own manufacturing from copper conductor to outer sheath. VDE proved burnchamber and laboratory within the company.
EMPLOYEES/WORKERS:	Approx. 430 at the plant in Viersen, 550 worldwide
YEARLY SALES:	Approx. 95 Mio. € worldwide
PRODUCTS:	Special Cables Measurement Technology Cable Harnessing

CERTIFICATES AND APPROVALS:



Quality management system acc. to DIN EN ISO 9001 for every manufacturing field

Environmental management system acc. to DIN EN ISO 14001

Occupational health and safety management acc. to NLF/ILO-OSH and DIN ISO 45001

Energy management system acc. to DIN EN ISO 50001

Applications

■ Applications of FEP/PVC lamp cable

TA 835 Y (TR)	Our lamp cable is used in the lamp and light industry for the connection of halogen lamps and lighting or rather downlights. This cable is because of design reasons equipped with a transparent PVC outer sheath. The cores have a FEP insulation which is very temperature resistant and which is made to withstand the extremely high temperature of the halogen lights of up to +180 °C
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■ Applications of Besilen® cables

Our Besilen® (Silicone) cables are suitable for diverse applications. The product programme ranges from ignition cables to sheathed cables with mechanical protection and cables with flame protection. Therefore, Besilen® cables can be used for example in the following industries: coke oven plants, foundries, heating appliances, smelteries, steelworks, hot-rolling mills, illumination, in ships and aeroplanes, cement, glass and ceramic factories, bakeries, oil burners, solariums, saunas, coolers, air-conditioning, electronic motor engineering and under certain conditions in food and medical industries. Wherever they are used, Besilen® cables have one thing in common: outstanding heat and cold resistance.

Exemplary applications:

BiS	Especially for the insulation of connecting and soldering points, can be drawn over cables or conductors in lamps, heating appliances and electrical plants
BiAF/YW	Connection cable for low-voltage lamps, connection between transformer and halogen lamp

■ Applications of Besilen® single conductors

Our Besilen® ignition cables and Besilen® high-voltage ignition cables are suitable for the application at high or very unsteady ambient temperatures of up to +180°C. Besilen® insulated wires and Besilen® insulated strands are suitable for the use at high ambient temperatures especially for the internal wiring of lamps and appliances as well as for the wiring of switchboard plants and distributors, at low mechanical loads.

Exemplary applications:

BiZ	Application in smelteries, steelworks and hot-rolling mills, in cement, glass and ceramic factories or for the internal wiring of lamps and heating appliances
ZKBi	Ignition cable for the use at high and very unsteady ambient temperatures, e.g. in thermal and process technologies, in motor engineering, in heat system technology, in dedusting plant and fan engineering
HZLBi	Ignition cable for the use at high and very unsteady ambient temperatures in lamp and illumination industries, e.g. for floodlight projectors or industrial lamps, in electric heating engineering, in thermal and process technologies, in refrigeration and air-conditioning industries
BiL	Single conductor for tubes lamps, especially for the use at high and very unsteady ambient temperatures, mostly in lamp and illumination industries, e.g. for floodlight projectors or industrial lamps, drop lights, equipment lights (protected installation is necessary)
BiA	For internal wiring in lamps, appliances, switchboard plants and distributors in industries such as industrial oven construction, smelteries, steelworks and hot-rolling mills, cement, glass, ceramic and plastic processing and electric industries
BiAF N2GFA/2GFA	Flexible applications for internal wiring of lamps, heating appliances, switchboard plants and distributors in industries such as smelteries, steelworks and hot-rolling mills, industrial oven and textile machine construction, lamp, illumination and electric industries, wood working and paper processing industries
BiAFF N2GFAF/2GFAF	Highly flexible applications for internal wiring of lamps, heating appliances, switchboard plants and distributors in industries such as e.g. smelteries, steelworks and hot-rolling mills, industrial oven and machine tool construction, lamp, illumination and electric industries as well as electric drive technology. Equally they are applied as connection of battery system or energy storage.
B 118 B 119 B 120	These insulated strands with 0,6/1kV, 1,8/3 kV resp. 3,6/6 kV are for example used in switchboards and distributors, in industrial furnaces and textile machine construction as well as in railway technology. Equally they are applied as connection of battery system or energy storage.

■ Applications of Besilen® single conductors with fibre-glass braiding

This Besilen® cables with fibre-glass braiding are for use at high ambient temperatures for internal wiring e.g. of lamps, heating appliances and electric machines as well as for wiring of switchboard plants and distributors. The fibre-glass braiding offers protection against mechanical damage and at the same time offers excellent heat resistance.

Exemplary applications:

BiAF/GL 05SJ-U 05SJ-K	Application at ambient temperatures higher than +55°C, for internal wiring of e.g. lamps and illuminations, heating appliances, household, kitchen and laboratory appliances, electric machines, switchboard plants and distributors, medical appliances
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Note: If hermetically sealed and used at temperatures higher than 90°C the mechanical characteristics of Silicone rubber will be reduced.

TA 835 Y (TR)

FEP/PVC lamp cable



Application: For the connection of lamps and lighting.

Construction:

Conductor:	tinned copper strands, fine wires
Insulation:	FEP, transparent, with coloured separating threads acc. to VDE 0293-308
Stranding:	in layers
Sheath material:	PVC
Sheath colour:	transparent
optional:	steel rope connected parallel with bridge – can be separated from each other

Technical data:

Nominal voltage:	Uo/U 300/500 V
Testing voltage:	core/core 2500 V
Min. bending radius	
<i>fixed laying:</i>	5 x d
<i>flexible application:</i>	10 x d
Temperature range	
<i>fixed laying:</i>	-40/+70 °C
<i>flexible application:</i>	+5/+70 °C
Min. tensile strength of the steel rope (optional):	0,86 kN
Absence of harmful substances:	acc. to RoHS directive of the European Union

Outstanding features:



- transparent
- flexible
- optional steel rope for separate load reception for suspended lamps

without steel rope

item no.	no. of cores x cross section n x mm ²	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
38350307	3 x 0,75	5,2	21,6	46
38350507	5 x 0,75	6,1	36,0	70
38350315	3 x 1,50	5,9	43,2	71

Other dimensions and colours are possible on request.

with steel rope

item no.	no. of cores x cross section n x mm ²	outer-ø approx. mm	copper figure kg/km	cable weight ≈ kg/km
38359005	3 x 0,75	5,1 x 8,7	21,6	53

Other dimensions and colours are possible on request.

SAB Pyro 735

halogen-free fireproof installation cable



Marking for: SAB Pyro 735 07359006:

SAB BRÜCKSKES · D-VIERSEN · Special Cable 8 x 0,75 mm² 0735-9006 CE

Application: For the fireproof installation of lamps and lighting in the interior of buildings.

Construction:

Conductor:	tinned copper strands, fine wires acc. to IEC 60228, VDE 0295, class 5
Insulation:	Besilen®
Colour code:	black cores with consecutive numbers
Stranding:	in layers
Wrapping:	mica tape
Sheath material:	SABIX®
Sheath colour:	black (similar RAL 9005)

Technical Data:

Nominal voltage:	U _o /U 300/500 V
Testing voltage:	core/core 2000 V
Min. bending radius <i>fixed laying:</i>	10 x d
Temperature range <i>during installation:</i> <i>fixed laying:</i>	-25/+90 °C -40/+90 °C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Fire performance:	acc. to EN 50200, Classification PH 30
Corrosiveness of conflagration gases:	in compliance with IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases
Absence of harmful substances:	acc. to RoHS directive of the European Union

Outstanding features:



- very good flexibility
- halogen-free
- no development of corrosive conflagration gases
- fireproof PH 30

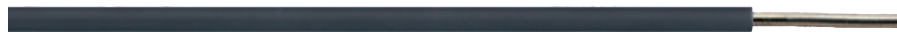
item no.	no. of cores x cross section n x mm ²	outer-ø approx. mm	copper figure kg/km	cable weight ≈ kg/km	ohmic resistance at 20°C max. Ω/km
07359006	8 x 0,75	10,1	57,6	156	26,7

Other dimensions and colours are possible on request.

Lamp and light industry

N2GFA/2GFA

Besilen® insulated wire acc. to DIN VDE 0250



Construction:

Conductor:	solid tinned copper wire acc. to IEC 60228, VDE 0295, class 1
Insulation:	Besilen® EI2 acc. to EN 50363-1 + VDE 0207-363-1

Outstanding features:



- halogen-free
- 0,75 mm² VDE standardized
- flexible at low temperatures
- heat resistant

Technical data:

Nominal voltage:	U ₀ /U 300/300 V
Testing voltage:	2000 V
Min. bending radius:	7,5 x d
Radiation resistance:	2 x 10 ⁷ cJ/kg
Temperature range	
<i>fixed laying:</i>	-40/+180 °C
<i>flexible application:</i>	-25/+180 °C
<i>short-time use:</i>	+250 °C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2
Corrosiveness of conflagration gases:	IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases
Weather resistance:	very good
Absence of harmful substances:	acc. to RoHS directive of the European Union

item no.	nominal cross section mm ²	nominal wire-ø mm	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
0157005...*	0,50	0,80	2,1	4,8	9
0151007...*	0,75**	0,98	2,2	7,2	11
0157010...*	1,00	1,13	2,4	9,6	14
0157015...*	1,50	1,38	2,8	14,4	21
0157025...*	2,50	1,78	3,4	24,0	33

Other dimensions and colours are possible on request.

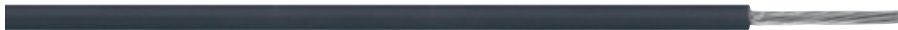
* Colour code for single conductors:

...0 = green-yellow	...4 = grey
...1 = blue	...5 = white
...2 = black	...6 = reddish brown
...3 = brown	...7 = red
	...9 = nature

** N2GFA 0,75 mm²
according to DIN VDE 0250 part 502.
Other cross sections with reference to
DIN VDE 0250 part 502.

N2GFAF/2GFAF

Besilen® insulated strands acc. to DIN VDE 0250



Construction:

Conductor: tinned copper strands
acc. to IEC 60228, VDE 0295, class 5

Insulation: Besilen® EI2
acc. to EN 50363-1 + VDE 0207-363-1

Technical data:

Nominal voltage: U₀/U 300/300 V

Testing voltage: 2000 V

Min. bending radius: 7.5 x d

Radiation resistance: 2 x 10⁷ cJ/kg

Temperature range
fixed laying: -40/+180 °C
flexible application: -25/+180 °C
short-time use: +250 °C

Halogen-free: acc. to IEC 60754-1 + VDE 0482-754-1

Fire performance: flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2

Corrosiveness of conflagration gases: IEC 60754-2 + VDE 0482-754-2
- no development of corrosive conflagration gases

Weather resistance: very good

Absence of harmful substances: acc. to RoHS directive of the European Union

Outstanding features:



- flexible
- halogen-free
- 0,75 mm² VDE standardized
- flexible at low temperatures
- heat resistant

item no.	nominal cross section mm ²	largest single wire ø mm	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
0158002...*	0,25	0,16	1,9	2,4	6
0158003...*	0,34	0,26	2,0	3,3	7
0158005...*	0,50	0,21	2,1	4,8	9
0152007...*	0,75**	0,21	2,4	7,2	12
0158010...*	1,00	0,21	2,5	9,6	14
0158015...*	1,50	0,26	3,0	14,4	20
0158025...*	2,50	0,26	3,6	24,0	31

Other dimensions and colours are possible on request.

* Colour code for single conductors:

- | | |
|---------------------|----------------------|
| ...0 = green-yellow | ...4 = grey |
| ...1 = blue | ...5 = white |
| ...2 = black | ...6 = reddish brown |
| ...3 = brown | ...7 = red |
| | ...9 = nature |

** N2GFA 0,75 mm² according to DIN VDE 0250 part 502. Other cross sections with reference to DIN VDE 0250 part 502.

Lamp and light industry

05SJ-U

Besilen® insulated wire with fibre-glass braiding with reference to DIN EN 50525-2-41



Construction:

Conductor:	solid tinned copper wire acc. to IEC 60228, VDE 0295, class 1
Insulation:	Besilen® EI2 acc. to EN 50363-1 + VDE 0207-363-1
Standard colour:	nature
Braiding:	fibre-glass
Impregnation:	impregnating lacquer

Technical data:

Nominal voltage:	U ₀ /U 300/500 V
Testing voltage:	2000 V
Min. bending radius:	7.5 x d
Radiation resistance:	2 x 10 ⁷ cJ/kg
Temperature range	
<i>fixed laying:</i>	-40/+180 °C
<i>flexible application:</i>	-25/+180 °C
<i>short-time use:</i>	+250 °C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2
Corrosiveness of conflagration gases:	IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases
Absence of harmful substances:	acc. to RoHS directive of the European Union

Outstanding features:



- halogen-free
- flexible at low temperatures
- heat resistant

item no.	nominal cross section mm ²	nominal wire-ø mm	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
01540109	1,00	1,13	3,0	9,6	19
01540159	1,50	1,38	3,4	14,4	26
01540259	2,50	1,78	4,0	24,0	38
01540409	4,00	2,26	4,5	38,4	55
01540609	6,00	2,76	5,0	57,6	75
01541009	10,00	3,57	6,2	96,0	125

Other dimensions and colours are possible on request.

Lamp and light industry

05SJ-K

Besilen® insulated strands with fibre-glass braiding with reference to DIN EN 50525-2-41



Construction:

Conductor:	tinned copper strands acc. to IEC 60228, VDE 0295, class 5
Insulation:	Besilen® EI2 acc. to EN 50363-1 + VDE 0207-363-1
Standard colour:	nature
Braiding:	fibre-glass
Impregnation:	impregnating lacquer

Technical data:

Nominal voltage:	U ₀ /U 300/500 V
Testing voltage:	2000 V
Min. bending radius:	7.5 x d
Radiation resistance:	2 x 10 ⁷ cJ/kg
Temperature range	
<i>fixed laying:</i>	-40/+180 °C
<i>flexible application:</i>	-25/+180 °C
<i>short-time use:</i>	+250 °C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2
Corrosiveness of conflagration gases:	IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases
Absence of harmful substances:	acc. to RoHS directive of the European Union

Outstanding features:



- flexible
- halogen-free
- flexible at low temperatures
- heat resistant

item no.	nominal cross section mm ²	largest single wire ø mm	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
01550059	0,50	0,21	2,7	4,8	14
01550079	0,75	0,21	3,0	7,2	17
01550109	1,00	0,21	3,1	9,6	19
01550159	1,50	0,26	3,5	14,4	25
01550259	2,50	0,26	4,2	24,0	35
01550409	4,00	0,31	4,8	38,4	50
01550609	6,00	0,31	5,3	57,6	60
01551009	10,00	0,41	6,4	96,0	120
01551609	16,00	0,41	8,3	153,6	178
01552509	25,00	0,41	10,1	240,0	281
01553509	35,00	0,41	11,5	336,0	388
01555009	50,00	0,41	13,1	480,0	537
01557009	70,00	0,41	15,4	672,0	721
01559509	95,00	0,51	18,0	912,0	963

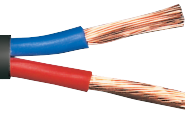
Other dimensions and colours are possible on request.

Lamp and light industry

BiAF/YW

low-voltage connection cable for halogen lamps

SAB BRÖCKSKES · D-VIERSEN · BiAF/YW 2x1,5mm²



Marking for BiAF/YW 01352151:

SAB BRÖCKSKES · D-VIERSEN · BiAF/YW 2x1,5mm²

Construction:

Conductor:	bare copper strands acc. to IEC 60228, VDE 0295, class 5
Insulation:	Besilen® EI2 acc. to EN 50363-1 + VDE 0207-363-1
Colour code:	blue, red
Stranding:	2 cores parallel
Sheath material:	PVC, TM4 acc. to EN 50363-4-1 + VDE 0207-363-4-1
Sheath colour:	black (similar RAL 9005)
Shape:	flat

Outstanding features:

- due to silicone core insulation suitable for temperatures up to 180°C at conductors
- heat resistant PVC outer sheath for ambient temperatures up to 105°C for short-time use
- due to flat construction space-saving
- simplified connecting possibilities
- no wiring with single conductors

Technical data:

Nominal voltage:	24 V
Testing voltage:	core/core 600 V
Min. bending radius:	7.5 x d
Radiation resistance:	8 x 10 ⁷ cJ/kg
Temperature range	
<i>fixed laying:</i>	-40/+90 °C
<i>flexible application:</i>	+5/+90 °C
<i>short-time use:</i>	+105 °C
<i>at the conductor:</i>	+180 °C
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2
Absence of harmful substances:	acc. to RoHS directive of the European Union

item no.	no. of cores x cross section n x mm ²	largest single wire ø mm	dimen- sions mm x mm	copper figure kg/km	cable weight ≈ kg/km
01352151	2 x 1,50	0,26	5,8 x 3,5	28,8	44
01352251	2 x 2,50	0,26	6,8 x 4,0	48,0	66
01352401	2 x 4,00	0,31	7,8 x 4,4	76,8	96

Other dimensions and colours are possible on request.

Lamp and light industry

BiS

Besilen® insulating sleeve, non-fibrous



Outstanding features:



- halogen-free
- flexible at low temperatures
- heat resistant

Technical data:

Dielectric voltage:	20 kV/mm
Radiation resistance:	2×10^7 cJ/kg
Temperature range	
<i>fixed laying:</i>	-40/+180 °C
<i>flexible application:</i>	-25/+180 °C
<i>short-time use:</i>	+250 °C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Corrosiveness of conflagration gases:	IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases
Absence of harmful substances:	acc. to RoHS directive of the European Union

item no.	inside diameter x wall thickness mm	outer ø mm	weight ≈ kg/km
01001004	1,0 x 0,40	1,8	2,2
01001504	1,5 x 0,40	2,3	3,0
01001506	1,5 x 0,60	2,7	5,7
01002004	2,0 x 0,40	2,8	3,8
01002504	2,5 x 0,40	3,3	4,7
01003004	3,0 x 0,40	3,8	5,5
01004005	4,0 x 0,50	5,0	8,9
01004007	4,0 x 0,75	5,5	14,2
01006009	6,0 x 0,90	7,8	23,5
01007009	7,0 x 0,90	8,8	27,0
01008010	8,0 x 1,00	10,0	34,0
01005210	10,0 x 1,00	12,0	44,0

Lamp and light industry

BiZ

Besilen® twin cable



Construction:

Conductor:	tinned copper strands acc. to IEC 60228, VDE 0295, class 5
Insulation:	Besilen® EI2 acc. to EN 50363-1 + VDE 0207-363-1
Sheath colour:	reddish brown (similar RAL 3016)

Technical data:

Nominal voltage:	U ₀ /U 300/300 V
Testing voltage:	1500 V
Min. bending radius:	5 x d
Radiation resistance:	2 x 10 ⁷ cJ/kg
Temperature range	
<i>fixed laying:</i>	-40/+180 °C
<i>flexible application:</i>	-25/+180 °C
<i>short-time use:</i>	+250 °C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2
Corrosiveness of conflagration gases:	IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases
Weather resistance:	very good
Absence of harmful substances:	acc. to RoHS directive of the European Union

Outstanding features:



- halogen-free
- flexible at low temperatures
- heat resistant

item no.	no. of cores x cross section n x mm ²	largest single wire ø mm	dimensions mm x mm	copper figure kg/km	cable weight ≈ kg/km
01020205	2 x 0,50	0,21	4,2 x 2,1	9,6	17
01020207	2 x 0,75	0,21	4,8 x 2,4	14,4	23

Other dimensions and colours are possible on request.



Construction:

Conductor:	tinned copper strands acc. to IEC 60228, VDE 0295, class 5
Insulation:	Besilen® EI2 acc. to EN 50363-1 + VDE 0207-363-1
Braiding:	fibre-glass
Sheath material:	Besilen® 2GM1 acc. to EN 50363-2-1 + VDE 0207-363-2-1
Sheath colour:	blue (similar RAL 5012)

Outstanding features:



- halogen-free
- flexible at low temperatures
- heat resistant
- voltage-stable

Technical data:

Testing voltage:	20 kV
Min. bending radius:	7.5 x d
Radiation resistance:	2 x 10 ⁷ cJ/kg
Temperature range	
<i>fixed laying:</i>	-40/+180 °C
<i>flexible application:</i>	-25/+180 °C
<i>short-time use:</i>	+250 °C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2
Corrosiveness of conflagration gases:	IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases
Weather resistance:	very good
Absence of harmful substances:	acc. to RoHS directive of the European Union

item no.	nominal cross section mm ²	largest single wire ø mm	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
01040101	1,00	0,21	8,0	9,6	78
01040115	1,50	0,26	8,5	14,4	95

Other dimensions and colours are possible on request.

HZLBi

Besilen® high-voltage ignition cable

Testing voltage
20 kV



Construction:

Conductor:	tinned copper strands 19 x 0,25 mm ø
Insulation:	Besilen® EI2 acc. to EN 50363-1 + VDE 0207-363-1
Sheath colour:	reddish brown (similar RAL 3016)

Technical data:

Testing voltage:	5 mm ø: 15 kV 7 mm ø: 20 kV
Min. bending radius:	7,5 x d
Radiation resistance:	2 x 10 ⁷ cJ/kg
Temperature range	
<i>fixed laying:</i>	-40/+180 °C
<i>flexible application:</i>	-25/+180 °C
<i>short-time use:</i>	+250 °C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2
Corrosiveness of conflagration gases:	IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases
Weather resistance:	very good
Absence of harmful substances:	acc. to RoHS directive of the European Union

Outstanding features:



- halogen-free
- flexible at low temperatures
- heat resistant
- voltage-stable

item no.	nominal cross section mm ²	largest single wire ø mm	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
01050103	1,00	0,26	5,0	9,6	35
01050102	1,00	0,26	7,0	9,6	62

Other dimensions and colours are possible on request.

BiL

Besilen® insulated single conductor for tube lamps (neon cable)



Construction:

Conductor:	tinned copper strands acc. to IEC 60228, VDE 0295, class 5
Insulation:	Besilen® EI2 acc. to EN 50363-1 + VDE 0207-363-1
Sheath colour:	yellow (similar RAL 1006)

Technical data:

Nominal voltage:	U ₀ 3,5 kV · U ₀ 4,0 kV · U ₀ 7,5 kV
Testing voltage:	10 kV
Min. bending radius:	7,5 x d
Radiation resistance:	2 x 10 ⁷ cJ/kg
Temperature range	
<i>fixed laying:</i>	-40/+180 °C
<i>flexible application:</i>	-25/+180 °C
<i>short-time use:</i>	+250 °C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2
Corrosiveness of conflagration gases:	IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases
Weather resistance:	very good
Absence of harmful substances:	acc. to RoHS directive of the European Union

Outstanding features:



- halogen-free
- flexible at low temperatures
- heat resistant
- neon coloured

item no.	nominal cross section mm ²	largest single wire ø mm	nominal voltage kV	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
01063515	1,50	0,26	3,5	4,4	14,4	32
01064815	1,50	0,26	4,0	6,6	14,4	59
01067515	1,50	0,26	7,5	7,6	14,4	75

Other dimensions and colours are possible on request.

Lamp and light industry

BiA

Besilen® insulated wire



Construction:

Conductor:	solid tinned copper wire acc. to IEC 60228, VDE 0295, class 1
Insulation:	Besilen® EI2 acc. to EN 50363-1 + VDE 0207-363-1

Technical data:

Nominal voltage:	U ₀ /U 300/300 V
Testing voltage:	2000 V
Min. bending radius:	7.5 x d
Radiation resistance:	2 x 10 ⁷ cJ/kg
Temperature range	
<i>fixed laying:</i>	-40/+180 °C
<i>flexible application:</i>	-25/+180 °C
<i>short-time use:</i>	+250 °C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2
Corrosiveness of conflagration gases:	IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases
Weather resistance:	very good
Absence of harmful substances:	acc. to RoHS directive of the European Union

Outstanding features:

	● halogen-free
	● heat resistant

item no.	nominal cross section mm ²	nominal wire-ø ø mm	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
0111005 *	0,50	0,80	1,8	4,8	8
0111007 *	0,75	0,98	2,0	7,2	10
0111010 *	1,00	1,13	2,1	9,6	13
0111015 *	1,50	1,38	2,6	14,4	19
0111025 *	2,50	1,78	3,2	24,0	31
0111040 *	4,00	2,26	3,7	38,4	47
0111060 *	6,00	2,76	4,2	57,6	67
0111100 *	10,00	3,57	5,6	96,0	114

Other dimensions and colours are possible on request.

* Colour code for single conductors, position 8 of the item no.:

0 = green-yellow	4 = grey
1 = blue	5 = white
2 = black	6 = reddish brown
3 = brown	7 = red

Lamp and light industry

BiAF

Besilen® insulated strands



Construction:

Conductor:	tinned copper strands acc. to IEC 60228, VDE 0295, class 5
Insulation:	Besilen® EI2 acc. to EN 50363-1 + VDE 0207-363-1

Technical data:

Nominal voltage:	U ₀ /U 300/500 V
Testing voltage:	2000 V
Min. bending radius:	7.5 x d
Radiation resistance:	2 x 10 ⁷ cJ/kg
Temperature range	
<i>fixed laying:</i>	-40/+180 °C
<i>flexible application:</i>	-25/+180 °C
<i>short-time use:</i>	+250 °C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2
Corrosiveness of conflagration gases:	IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases
Weather resistance:	very good
Absence of harmful substances:	acc. to RoHS directive of the European Union

Outstanding features:

	● halogen-free
	● flexible at low temperatures
	● heat resistant

item no.	nominal cross section mm ²	largest single wire ø mm	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
0113002.*	0,25	0,16	1,7	2,4	5
0113003.*	0,34	0,26	1,8	3,3	6
0113005.*	0,50	0,21	1,9	4,8	8
0113007.*	0,75	0,21	2,2	7,2	10
0113010.*	1,00	0,21	2,3	9,6	13
0113015.*	1,50	0,26	2,8	14,4	18
0113025.*	2,50	0,26	3,4	24,0	29
0113040.*	4,00	0,31	4,0	38,4	44
0113060.*	6,00	0,31	4,5	57,6	62
0113100.*	10,00	0,41	6,1	96,0	107
0113160.*	16,00	0,41	7,5	153,6	167
0113250.*	25,00	0,41	9,3	240,0	271
0113350.*	35,00	0,41	10,7	336,0	376
0113500.*	50,00	0,41	12,3	480,0	523
0113700.*	70,00	0,41	14,6	672,0	713
0113950.*	95,00	0,51	17,5	912,0	961
0113120.*	120,00	0,51	19,0	1152,0	1177
0113150.*	150,00	0,51	20,9	1440,0	1462
0113185.*	185,00	0,51	23,0	1776,0	1785
0113240.*	240,00	0,51	26,9	2304,0	2404
0113300.*	300,00	0,51	30,0	2880,0	2998

Other dimensions and colours are possible on request.

* Colour code for single conductors, position 8 of the item no.:

0 = green-yellow	4 = grey
1 = blue	5 = white
2 = black	6 = reddish brown
3 = brown	7 = red

Lamp and light industry

BiAFF

Besilen® insulated strands, highly flexible



Construction:

Conductor:	tinned copper strands, highly flexible
Insulation:	Besilen® EI2 acc. to EN 50363-1 + VDE 0207-363-1

Technical data:

Nominal voltage:	U ₀ /U 300/300 V
Testing voltage:	2000 V
Min. bending radius:	5 x d
Radiation resistance:	2 x 10 ⁷ cJ/kg
Temperature range	
<i>fixed laying:</i>	-40/+180 °C
<i>flexible application:</i>	-25/+180 °C
<i>short-time use:</i>	+250 °C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2
Corrosiveness of conflagration gases:	IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases
Weather resistance:	very good
Absence of harmful substances:	acc. to RoHS directive of the European Union

Outstanding features:



- halogen-free
- flexible at low temperatures
- heat resistant
- highly flexible

item no.	nominal cross section mm ²	largest single wire ø mm	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
0115025 *	0,25	0,05	1,9	2,4	6
0115050 *	0,50	0,05	2,2	4,8	9
0115051 *	0,50	0,07	2,2	4,8	9
0115075 *	0,75	0,05	2,4	7,2	12
0115076 *	0,75	0,07	2,5	7,2	13
0115100 *	1,00	0,05	2,7	9,6	15
0115101 *	1,00	0,07	2,7	9,6	15
0115150 *	1,50	0,07	3,3	14,4	22
0115250 *	2,50	0,07	4,0	24,0	35

Other dimensions and colours are possible on request.

* Colour code for single conductors, position 8 of the item no.:

0 = green-yellow	4 = grey
1 = blue	5 = white
2 = black	6 = reddish brown
3 = brown	7 = red

Lamp and light industry

BiAF/GL

Besilen® insulated strands with fibre-glass braiding



Construction:

Conductor:	tinned copper strands acc. to IEC 60228, VDE 0295, class 5
Insulation:	Besilen® EI2 acc. to EN 50363-1 + VDE 0207-363-1
Standard colour:	white
Braiding:	fibre-glass
Impregnation:	impregnating lacquer

Technical data:

Nominal voltage:	U ₀ /U 300/500 V
Testing voltage:	2000 V
Min. bending radius:	7.5 x d
Radiation resistance:	2 x 10 ⁷ cJ/kg
Temperature range	
<i>fixed laying:</i>	-40/+180 °C
<i>flexible application:</i>	-25/+180 °C
<i>short-time use:</i>	+250 °C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2
Corrosiveness of conflagration gases:	IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases
Absence of harmful substances:	acc. to RoHS directive of the European Union

Outstanding features:



- halogen-free
- flexible at low temperatures
- heat resistant
- flexible

item no.	nominal cross section mm ²	largest single wire ø mm	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
01230050	0,50	0,21	2,4	4,8	11
01230070	0,75	0,21	2,7	7,2	13
01230100	1,00	0,21	2,8	9,6	19
01230150	1,50	0,26	3,3	14,4	21
01230250	2,50	0,26	3,9	24,0	34
01230400	4,00	0,31	4,5	38,4	48
01230600	6,00	0,31	5,0	57,6	67
01231000	10,00	0,41	6,6	96,0	118
01231600	16,00	0,41	8,0	153,6	178
01232500	25,00	0,41	9,8	240,0	276
01233500	35,00	0,41	11,2	336,0	379
01235000	50,00	0,41	12,0	480,0	535
01237000	70,00	0,41	15,1	672,0	710
01239500	95,00	0,51	17,6	912,0	976

Other dimensions and colours are possible on request.

Lamp and light industry

B 118

Besilen® insulated strands Uo/U 0.6/1 kV

On request with
RoHS recognition

Nominal voltage
Uo/U 0.6/1 kV



Application: These insulated strands with 0,6/1 kV are for example used in switchboards and distributors, in industrial furnaces and textile machine construction as well as in railway technology. Equally they are applied as connection of battery system or energy storage.

Construction:

Conductor:	tinned copper strands acc. to IEC 60228, VDE 0295, class 5
Insulation:	Besilen® EI2 acc. to EN 50363-1 + VDE 0207-363-1

Technical data:

Nominal voltage:	Uo/U 0,6/1 kV
Testing voltage:	2500 V
Current-carrying capacity:	acc. to VDE 0298-4
Min. bending radius:	7,5 x d
Temperature range	
<i>fixed laying:</i>	-40/+180 °C
<i>flexible application:</i>	-25/+180 °C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2
Corrosiveness of conflagration gases:	IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases
Weather resistance:	very good
Absence of harmful substances:	acc. to RoHS directive of the European Union

Outstanding features:



- halogen-free
- heat resistant
- flexible at low temperatures

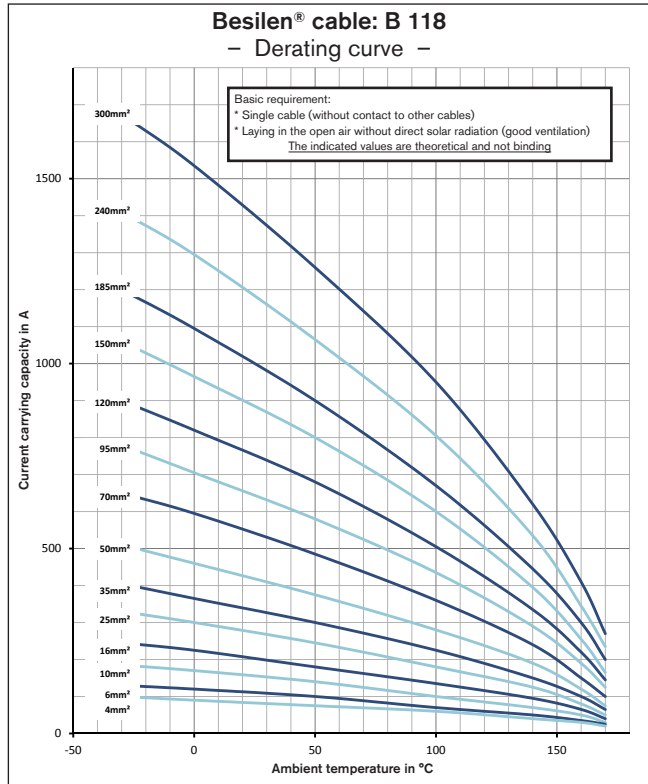
item no.	nominal cross section mm ²	largest single wire ø mm	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
0118 .. 50*	0,50	0,21	2,5	4,8	10
0118 .. 75*	0,75	0,21	2,8	7,2	13
0118 .. 80*	1,00	0,21	2,9	9,6	16
0118 .. 82*	1,50	0,26	3,2	14,4	20
0118 .. 84*	2,50	0,26	3,8	24,0	31
0118 .. 86*	4,00	0,31	4,6	38,4	48
0118 .. 87*	6,00	0,31	5,1	57,6	66
0118 .. 88*	10,00	0,41	6,7	96,0	113
0118 .. 89*	16,00	0,41	8,1	153,6	171
0118 .. 90*	25,00	0,41	9,9	240,0	262
0118 .. 91*	35,00	0,41	11,3	336,0	361
0118 .. 92*	50,00	0,41	12,9	480,0	527
0118 .. 93*	70,00	0,41	15,2	672,0	696
0118 .. 94*	95,00	0,51	17,7	912,0	948
0118 .. 95*	120,00	0,51	19,6	1152,0	1161
0118 .. 96*	150,00	0,51	21,5	1440,0	1452
0118 .. 97*	185,00	0,51	23,6	1776,0	1776
0118 .. 98*	240,00	0,51	27,3	2304,0	2378
0118 .. 99*	300,00	0,51	30,4	2880,0	2963

Other dimensions and colours are possible on request.

* Colour code for single conductors, position 5 and 6 of the item no.:

01 = black	06 = green
02 = blue	07 = violet
03 = brown	08 = white
04 = grey	16 = gentian blue
05 = yellow	27 = green-yellow

Besilen® cable: B 118
- Derating curve -



B 119

Besilen® insulated strands U₀/U 1.8/3 kV

On request with
 recognition

Nominal voltage
 U₀/U 1.8/3 kV



Application: These insulated strands with 1,8/3 kV are for example used in switchboards and distributors, in industrial furnaces and textile machine construction as well as in railway technology. Equally they are applied as connection of battery system or energy storage.

Construction:

Conductor:	tinned copper strands acc. to IEC 60228, VDE 0295, class 5
Insulation:	Besilen® EI2 acc. to EN 50363-1 + VDE 0207-363-1

Outstanding features:



- halogen-free
- heat resistant
- flexible at low temperatures

Technical data:

Nominal voltage:	U ₀ /U 1,8/3 kV
Testing voltage:	6500 V
Current-carrying capacity:	acc. to VDE 0298-4
Min. bending radius:	7,5 x d
Temperature range	
<i>fixed laying:</i>	-40/+180 °C
<i>flexible application:</i>	-25/+180 °C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2
Corrosiveness of conflagration gases:	IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases
Weather resistance:	very good
Absence of harmful substances:	acc. to RoHS directive of the European Union

item no.	nominal cross section mm ²	largest single wire ø mm	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
0119 .. 82*	1,50	0,26	4,2	14,4	28
0119 .. 84*	2,50	0,26	4,6	24,0	38
0119 .. 86*	4,00	0,31	5,2	38,4	54
0119 .. 87*	6,00	0,31	5,7	57,6	73
0119 .. 88*	10,00	0,41	7,3	96,0	122
0119 .. 89*	16,00	0,41	8,7	153,6	181
0119 .. 90*	25,00	0,41	10,7	240,0	278
0119 .. 91*	35,00	0,41	12,1	336,0	381
0119 .. 92*	50,00	0,41	13,3	480,0	531
0119 .. 93*	70,00	0,41	15,6	672,0	709
0119 .. 94*	95,00	0,51	18,5	912,0	978
0119 .. 95*	120,00	0,51	20,4	1152,0	1194
0119 .. 96*	150,00	0,51	21,9	1440,0	1472
0119 .. 97*	185,00	0,51	24,0	1776,0	1788
0119 .. 98*	240,00	0,51	27,7	2304,0	2400
0119 .. 99*	300,00	0,51	30,8	2880,0	2988

Other dimensions and colours are possible on request.

* Colour code for single conductors, position 5 and 6 of the item no.:

01 = black	06 = green
02 = blue	07 = violet
03 = brown	08 = white
04 = grey	16 = gentian blue
05 = yellow	27 = green-yellow

B 120

Besilen® insulated strands Uo/U 3.6/6 kV

Nominal voltage
Uo/U 3.6/6 kV



Application: These insulated strands with 3,6/6 kV are for example used in switchboards and distributors, in industrial furnaces and textile machine construction as well as in railway technology. Equally they are applied as connection of battery system or energy storage.

Construction:

Conductor:	tinned copper strands acc. to IEC 60228, VDE 0295, class 5
Insulation:	Besilen® EI2 acc. to EN 50363-1 + VDE 0207-363-1

Technical data:

Nominal voltage:	Uo/U 3,6/6 kV
Testing voltage:	11 kV
Current-carrying capacity:	acc. to VDE 0298-4
Min. bending radius:	7.5 x d
Temperature range	
<i>fixed laying:</i>	-40/+180 °C
<i>flexible application:</i>	-25/+180 °C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2
Corrosiveness of conflagration gases:	IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases
Weather resistance:	very good
Absence of harmful substances:	acc. to RoHS directive of the European Union

Outstanding features:



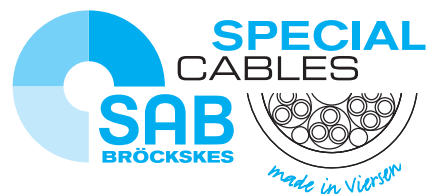
- halogen-free
- heat resistant
- flexible at low temperatures

item no.	nominal cross section mm ²	largest single wire ø mm	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
0120 .. 82*	1,50	0,26	6,8	14,4	57
0120 .. 84*	2,50	0,26	7,2	24,0	69
0120 .. 86*	4,00	0,31	7,8	38,4	88
0120 .. 87*	6,00	0,31	8,3	57,6	110
0120 .. 88*	10,00	0,41	9,5	96,0	160
0120 .. 89*	16,00	0,41	10,9	153,6	225
0120 .. 90*	25,00	0,41	12,9	240,0	332
0120 .. 91*	35,00	0,41	14,3	336,0	440
0120 .. 92*	50,00	0,41	15,5	480,0	599
0120 .. 93*	70,00	0,41	17,8	672,0	784
0120 .. 94*	95,00	0,51	20,5	912,0	1058
0120 .. 95*	120,00	0,51	22,4	1152,0	1280
0120 .. 96*	150,00	0,51	23,9	1440,0	1565
0120 .. 97*	185,00	0,51	25,6	1776,0	1986

Other dimensions and colours are possible on request.

* Colour code for single conductors, position 5 and 6 of the item no.:

01 = black	06 = green
02 = blue	07 = violet
03 = brown	08 = white
04 = grey	16 = gentian blue
05 = yellow	27 = green-yellow



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