

## Applications

### ■ Application of Besilen® single conductors

Our Besilen® ignition cables and Besilen® high-voltage ignition cables are suitable for applications with high or very unsteady ambient temperatures of up to +180°C. Besilen® insulated wires and Besilen® insulated conductors are suitable for use at high 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:

<b>SC 113</b>	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, illumination and electric industries, wood working and paper processing industries
<b>B 118</b> <b>B 119</b> <b>B 120</b>	Switchboard plants and distributors, smelteries, steelworks and hot-rolling mills, cement, glass and ceramic processing, industrial oven and textile machine construction, lamp, illumination and electric industries, railway technology
<b>B 110 C</b>	for example for the connection of converters to test benches for electric mobility

### ■ Application of Besilen® single conductors with fiberglass braiding

These Besilen® cables with fiberglass 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 fiberglass braiding offers protection against mechanical damage and at the same time offers excellent heat resistance.

#### Exemplary applications:

<b>SC 123</b>	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
---------------	--

### ■ Application of Besilen® jacketed cables

Our Besilen® jacketed cables are suitable for applications at high ambient temperatures in dry, damp and wet areas as well as for outdoor use; as flexible connection cable with low mechanical load. The mechanical load capacity can be enhanced by using a steel wire armoring, a fiberglass braiding or an inner jacket. The EMC characteristics can be improved with an overall tinned copper screen. If these cables are used for fixed installation, they are only to be installed in ventilated tube systems or conduits.

#### Exemplary applications:

<b>BiHF-J</b> <b>BiHF(K)-J</b> <b>SC 600 HDTR</b> <b>SC 700 HDTR</b>	Application in plastics processing, packaging machine construction, smelteries, steelworks and hot-rolling mills, safety technology, measuring and control technologies, cement, glass and ceramic industries, refrigeration, heat and air-conditioning technologies, power plants, sauna construction
<b>BiHFP-J</b> <b>SC 600 HDTRS</b>	Application in plastics processing, packaging and textile machine engineering, smelteries, steelworks and hot-rolling mills, cement, glass and ceramic industries sauna construction, refrigeration, heat and air-conditioning technologies, paper industry, foundries
<b>BiHF/Cu/Bi-J</b> <b>BiHF/Cu/Bi(K)-J</b> <b>SC 600 C HDTR</b> <b>SC 700 C HDTR</b>	Application in packaging and textile machine construction, refrigeration, heat and air-conditioning, plastics processing, smelteries, steelworks and hot-rolling mills, cement, glass and ceramic industries, plastic processing machine construction

**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.

## Applications

### ■ Application of cable track cables with Besilen® outer jacket

SAB cable track cables with Besilen® outer jacket are for continuous flex use in high temperature areas as for example in cable tracks as control cable with medium mechanical stress.

#### Exemplary applications:

**S 180 HT**                      Conveyor systems in steel production and steel processing industries,  
**S 180 C HT**                    at feeding lines for blast furnaces

---

### ■ Application of silicone insulated round single conductors for railway technology

The conductors can be laid easily in narrow spaces due to its extremely flexible construction. The translucent insulation enables an easy inspection of the state of conductor. An additional copper support braiding under the insulation provides a supplementary reinforcement for applications with high mechanical stress.

#### Exemplary applications:

**R 107**                      3rd Rail current collectors at pantographs and as earth connection at wheel sets,  
**B 107**                      coupling blocks and crane mountings on rail vehicles  
**B 108**

---

**Note:** If hermetically sealed and used at temperatures higher than 90°C the mechanical characteristics of silicone rubber will be reduced.

**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.

# HIGH TEMPERATURE CABLES

## Selection index

		Cable type																			
		SC 600 HDTR	SC 600 C HDTR	SC 600 HDTRS	SC 700 HDTR	SC 700 C HDTR	SC 113	SC 123	B 118	B 119	B 110 C	B 120	BiHF-J / BiHF(K)-J	BiHFP-J	BiHF/Cu/Bi-J / BiHF/Cu/Bi(K)-J	S 180 HT	S 180 C HT	R 107	B 107	B 108	
Application	Single conductor						x	x	x	x	x	x						x	x	x	x
	Screen		x			x										x		x			x
	Steel wire braiding			x										x							
	Inner jacket		x											x							
Temperature range static*	+ 250°C																				
	+ 200°C																				
	+ 180°C																				
	- 25°C																				
	- 40°C																				
	- 50°C																				
Voltage	UL/CSA 600 V	x	x	x																	
	UL/cUL 600 V					x	x														
	Nominal voltage Uo/U 300/500 V	x	x	x	x	x	x	x						x	x	x					
	Nominal voltage Uo/U 0.6/1 kV									x							x	x			
	Nominal voltage Uo/U 1.5/1.5 kV											x								x	x
	Nominal voltage Uo/U 1.8/3 kV										x	x							x	x	x
	Nominal voltage Uo/U 3.6/6 kV												x								
	Testing voltage 2000 V	x	x	x	x	x	x	x						x	x	x					
	Testing voltage 4000 V									x		x					x	x		x	x
	Testing voltage 6000 V										x	x								x	x
	Testing voltage 6500 V																		x		
Testing voltage 11000 V												x									
Standards and approvals	Zero halogen acc. to DIN VDE 0472 part 815 and IEC 60754-1	x	x	x	x	x	x	x	x	x	x	x	x	x	x					x	x
	Zero halogen for use in rail vehicles																		x		
	Burning characteristics flame retardant and self-extinguishing acc. to IEC 60332-1-2 and EN 60332-1-2	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x
	Burning characteristics flame retardant and self-extinguishing acc. to DIN EN for use in rail vehicles																		x		
	Burning characteristics acc. to CSA FT1 and FT2	x	x	x																	
	Burning characteristics acc. to cUL FT1 and FT2					x	x														
	Corrosivity in compliance with IEC 60754-2 + EN 50267-2-2 + VDE 0482 part 267-2-2 - no development of corrosive conflagration gases	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x				x	x
	UL recognition, CSA approval	x	x	x																	
UL/cUL recognition					x	x															
acc. to EN 45545-2 for use in rail vehicles																			x		
Special features	Min. bending radius x O.D. free movement	6	10	10	6	10	7.5	7.5	7.5	7.5	10	7.5	6	10	10	10	15	5	5	5	
	Weather resistance	x	x	x	x	x	x					x	x	x	x				x	x	x
	Flexibility	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Protection against mechanical damage			x											x						

Temperature range:  

 from short time use   
 to

\*The temperature range for flexing is mentioned on the particular catalog page