

## HIGH TEMPERATURE CABLES

SICY Series	156
SIHF Single Series	.157
SIHE Multi Series	158

### SICY SERIES

High Performance Flexible Silicone Rubber SWB High Temperature Cable 300/500V 180°C



#### **APPLICATIONS:**

**High Temperature** Suitable for wiring on kilns, boilers, lighting and other high temperature applications and surfaces not exceeding 180°C.

**Low Temperature** Used for wiring in industrial cool stores and freezers to -60°C.

**Tough Environments** The steel wire external braid adds to its mechanical strength and ensures disturbance free transmission of signals.

#### **PRODUCT FEATURES:**

- ► Tinned fine stranded copper conductor
- ► High ignition or flashpoint
- ► Halogen Free
- ▶ Minimal change to dielectric strength at high temperature
- ▶ Minimal change to insulation resistance at high temperature
- ▶ In the event of a fire the silicone forms an insulating layer of SiO<sub>2</sub>
- UV stabilised
- ► Flame retardant
- Resistant to environmental factors such as oxidation, ozone and sunlight
- ▶ Heat, oil and chemical resistant (See Technical Section)

#### **CONSTRUCTION:**

**Conductor** Annealed tinned copper stranded high flexibility (Class 5).

**Insulation** Silicone rubber.

Sheath Silicone rubber.

Screen External steel wire braid.

#### **CHARACTERISTICS:**

Operating Temperature Range Fixed -60°C to 180°C /

Flexing -40°C to 180°C.

**Maximum Conductor Temperature 180°C.** 

Rated Voltage Uo/U 300/500v

Max AC Operating Voltage Uo 318v.

Minimum Bending Radius Fixed 10 x cable diameter /

Flexing 15 x cable diameter.

**Sheath Colour** Tinned steel wire braid over glass fibre tape over reddish-brown silicone.

#### **Standard Core Colours**

3 Core - Blue, Brown, Green/Yellow.

4 Core - Brown, Black, Grey, Green/Yellow.

**Relevant Standards** DIN VDE 0295, IEC 60332-1, IEC 60754-1, IEC 60228, VDE 0472, VDE 0282,

C € Directive 2006/95/EC, *RoHS* Compliant.

Code	No. of Cores x Size (mm²)	Approx. Stranding No. of wires x mm	Approx. Overall Diameter (mm)	Approx. Weight (Kg/Km)	Nominal Amps un-enclosed protected from sun @ 150°C fixed installation Touching or in ventilated duct
SICY3/1.5	3 x 1.5	30/0.25	7.9	145	18
SICY3/2.5	3 x 2.5	50/0.25	9.5	205	26
SICY4/1.5	4 x 1.5	30/0.25	8.7	173	18
SICY4/2.5	4 x 2.5	50/0.25	10.3	278	26
SICY4/4.0	4 x 4.0	56/0.30	12.1	384	34

CONVERSION FACTORS FOR DEVIATING AMBIENT TEMPERATURES							
Temp. °C	Up to 150	150–155	155–160	160–165	165–170	170–175	
<b>Derating Factor</b>	1.00	0.91	0.82	0.71	0.58	0.41	



## SIHF SINGLE CORE SERIES

High Performance Flexible Silicone Rubber High Temperature Cable 300/500V 180°C

#### **APPLICATIONS:**

**High Temperature** Suitable for wiring on kilns, boilers, lighting and other high temperature applications and surfaces to 180°C.

**Low Temperature** Used for wiring in industrial cool stores and freezers to -60°C.

**Power** Suitable for wiring of public lighting in medical areas.

#### PRODUCT FEATURES:

- ► Halogen Free IEC 60754
- ► Tinned fine stranded copper conductor
- ► High ignition or flashpoint
- ▶ Minimal change to dielectric strength at high temperature
- ▶ Minimal change to insulation resistance at high temperature
- ► In the event of a fire the silicone forms an insulating layer of SiO<sub>2</sub>
- UV stabilised
- ► Flame retardant
- Resistant to environmental factors such as oxidation, ozone and sunlight
- ▶ Water and moisture resistant
- ▶ Heat, oil and chemical resistant (See Technical Section)



#### **CONSTRUCTION:**

**Conductor** Annealed tinned copper stranded high flexibility (Class 5). **Insulation** Silicone rubber.

#### **CHARACTERISTICS:**

Operating Temperature Range Fixed -60°C to 180°C /

Flexing -40°C to 180°C.

**Maximum Conductor Temperature** 180°C (Current ratings are based on 30°C air temp. See technical section for de-rating factors).

Rated Voltage Uo/U 300/500v.

Max AC Operating Voltage Uo 318v.

Minimum Bending Radius Fixed 4 x cable diameter /

Flexing 7.5 x cable diameter.

#### **Insulation Colour**

1.0 - 1.5mm<sup>2</sup> - Black, Blue, Green/Yellow, Red

2.5mm<sup>2</sup> - Black, Blue, Green/Yellow, Red, Grey, Brown

4.0mm<sup>2</sup> - Black, Blue, Green/Yellow

 $6.0 - 16.0 \text{mm}^2 - \text{Black}$ 

25.0mm<sup>2</sup> and above – Red, Black. Other colours subject to availability.

**Relevant Standards** IEC 60332-1, IEC 60754-1, IEC 60228, VDE 0282, VDE 0295, VDE 0472, **€** Directive 2006/95/EC, **RoHS** Compliant.

Code	No. of Cores x Size	Approx. Stranding	Approx. Overall Diamete	Approx. r Weight	Nominal Amps un-enclosed protected from sun or in ventilated duct @ 150°C fixed installation		
	(mm²)	No. of wires x mm	(mm)	(Kg/Km)	Spaced	Laid in ventilated duct	
SIHF1/1.0	1 x 1.0	32/0.21	2.3	13	19	12	
SIHF1/1.5	1 x 1.5	30/0.25	2.7	18	24	16	
SIHF1/2.5	1 x 2.5	50/0.25	3.4	30	32	21	
SIHF1/4.0	1 x 4.0	56/0.30	4.0	47	42	28	
SIHF1/6.0	1 x 6.0	84/0.30	4.5	71	54	36	
SIHF1/10	1 x 10.0	80/0.40	6.8	119	73	49	
SIHF1/16	1 x 16.0	128/0.40	7.8	187	98	65	
SIHF1/25	1 x 25.0	200/0.40	10.3	290	129	85	
SIHF1/35	1 x 35.0	280/0.40	11.6	398	158	105	
SIHF1/50	1 x 50.0	400/0.40	13.9	560	198	140	
CONVERSION FACTORS FOR DEVIATING AMBIENT TEMPERATURES							
Temp. °C	Up to 150	150–155	155–160	160–165	165–170	170–175	
<b>Derating Factor</b>	1.00	0.91	0.82	0.71	0.58	0.41	

Firstflex has taken every precaution to ensure accurate information in this catalogue, but accept no liability for any errors or omissions. Firstflex reserves the right to modify specifications at any time.



## SIHE MULTI CORE SERIES

High Performance Flexible Silicone Rubber High Temperature Cable 300/500V 180°C

#### **APPLICATIONS:**

**High Temperature** Suitable for wiring on kilns, boilers, lighting and other high temperature applications and surfaces not exceeding

**Low Temperature** Used for wiring in industrial cool stores and freezers to -60°C.

#### PRODUCT FEATURES:

- ► Halogen Free IEC 60754
- ► Tinned fine stranded copper conductor
- ► High ignition or flashpoint
- ▶ Minimal change to dielectric strength at high temperature
- ▶ Minimal change to insulation resistance at high temperature
- ▶ In the event of a fire the silicone forms an insulating layer of SiO<sub>2</sub>
- UV stabilised
- ► Flame retardant
- Resistant to environmental factors such as oxidation, ozone and sunlight
- ▶ Very good behaviour to variations of outdoor temperature
- ▶ Heat, oil and chemical resistant (See Technical Section)

#### **CONSTRUCTION:**

**Conductor** Annealed tinned copper stranded high flexibility (Class 5).

**Insulation** Silicone rubber.

**Sheath** Silicone rubber.

#### **CHARACTERISTICS:**

Operating Temperature Range Fixed -60°C to 180°C /

Flexing -40°C to 180°C.

Maximum Conductor Temperature 180°C.

Rated Voltage Uo/U 300/500v.

Max AC Operating Voltage Uo 318v.

Minimum Bending Radius Fixed 4 x cable diameter /

Flexing 7.5 x cable diameter.

Sheath Colour Reddish-Brown.

**Standard Core Colours** 

3 Core - Blue, Brown, Green/Yellow.

4 Core – Brown, Black, Grey, Green/Yellow. 5 Core – Blue, Brown, Black, Grey, Green/Yellow.

Multi Core – Black Numbered, Green/Yellow.

**Relevant Standards** IEC 60332-1, IEC 60754-2, IEC6 0228,

VDE 0472, VDE 0282, **C €** Directive 2006/95/EC,

RoHS Compliant.

Code	No. of Cores x Size	Approx. Stranding	Approx. Overall Diameter	Approx. Weight	Nominal Amps un-enclosed protected from sun @ 150°C fixed installation
	(mm²)	No. of wires x mm	(mm)	(Kg/Km)	Touching or in ventilated ducts
SIHF3/0.75	3 x 0.75	24/0.20	6.8	76	12
SIHF3/1.0	3 x 1.0	32/0.20	7.4	93	15
SIHF3/1.5	3 x 1.5	30/0.25	8.0	117	18
SIHF3/2.5	3 x 2.5	50/0.25	9.7	179	26
SIHF4/0.75	4 x 0.75	24/0.20	7.8	101	12
SIHF4/1.5	4 x 1.5	30/0.25	8.8	145	18
SIHF4/2.5	4 x 2.5	50/0.25	10.6	222	26
SIHF4/4.0	4 x 4.0	56/0.30	13.2	346	34
SIHF4/6.0	4 x 6.0	84/0.30	15.6	497	44
SIHF4/10	4 x 10.0	80/0.40	19.1	778	61
SIHF5/0.5	5 x 0.5	16/0.20	7.8	59	3
SIHF5/1.5	5 x 1.5	30/0.25	9.6	175	18
SIHF5/2.5	5 x 2.5	50/0.25	11.6	268	26

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#### SIHF MULTI CORE SERIES continued

Code	No. of Cores x Size	Approx. Stranding No. of wires x mm	Approx. Overall Diameter	Approx. Weight (Kg/Km)	Nominal Amps un-enclosed protected from sun @ 150°C fixed installation Touching or in ventilated ducts
SIHF5/4.0	5 x 4.0	56/0.30	14.4	359	34
SIHF7/0.75	7 x 0.75	24/0.20	9.2	148	12
SIHF7/1.5	7 x 1.5	30/0.25	10.4	220	18
SIHF12/1.5	12 x 1.5	30/0.25	14.6	413	18
SIHF19/1.5	19 x 1.5	30/0.25	17.0	591	18

CONVERSION FACTORS FOR DEVIATING AMBIENT TEMPERATURES							
Temp. °C	Up to 150	150–155	155–160	160–165	165–170	170–175	
<b>Derating Factor</b>	1.00	0.91	0.82	0.71	0.58	0.41	



# ON ALL FIRSTFLEX STOCKED CABLES

YES - THAT MEANS FROM 0.22mm<sup>2</sup> TO 500mm<sup>2</sup>

