

High Temperature BS EN 50525-2-41 Silicone Cable



Eland Product Group: **ASI**

APPLICATION

Designed for use in environments where sustained heat resistance is required, SIA and SIAF cables have heat resistant properties up to 180°C and can also be employed at temperatures as low as -60°C. These cables are low smoke zero halogen and are suitable for power plants, a wide range of industrial applications in processing, packaging, refrigeration, foundries, air craft construction and ship building .

CONSTRUCTION

Conductor

SIA/H05S-U - Class 1 solid tinned copper conductor according to BS EN 60228 (previously BS 6360)

SIAF/H05S-K - Class 5 flexible tinned copper conductor according to BS EN 60228 (previously BS 6360)

Insulation

Silicone rubber

CABLE STANDARDS

BS EN 50525-2-41 (0.5mm² to 2.5mm²),
SIA/SIAF generally to BS EN 50525-2-41 (4mm² and above)



bsi.

The electrical and dimensional properties of this product are measured by the Technical and Quality Assurance department at the Eland Cables laboratory. Cable performance in respect of conductor resistance, construction quality (workmanship), dimensional consistency, and other parameters are verified to published standards and approved product drawings. Conformance to RoHS (Restriction of the use of Hazardous Substances) is determined and confirmed.

CHARACTERISTICS

Voltage Rating (U₀/U)

0.5mm² to 6mm²: 300/500V

10mm² and above: 600/1000V, when protected

Temperature Rating

Fixed: -60°C to +180°C

Minimum Bending Radius

Fixed: 4 x overall diameter

Sheath Colour

● Black ● Blue ● Brown ● Red ○ White ● Grey ● Violet
● Pink ● Orange ● Yellow ● Green/Yellow

DIMENSIONS

Solid Core Silicone Rubber Insulated Cable (SIA)

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm ²	NOMINAL THICKNESS OF INSULATION mm	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km
ASI0005**	1	0.5	0.6	2.0	10
ASI00075**	1	0.75	0.6	2.2	12
ASI0010**	1	1	0.6	2.3	15
ASI0015**	1	1.5	0.6	2.6	20
ASI0025**	1	2.5	0.7	3.2	31
ASI0040**	1	4	0.8	3.9	48
ASI0060**	1	6	0.8	4.4	67
ASI010**	1	10	1	5.6	108

Flexible Core Silicone Rubber Insulated Cable (SIAF)

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm ²	NOMINAL THICKNESS OF INSULATION mm	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km
ASIF00025**	1	0.25	0.6	1.8	7
ASIF00035**	1	0.35	0.6	1.9	8
ASIF0005**	1	0.5	0.6	2.1	10
ASIF00075**	1	0.75	0.6	2.3	13
ASIF0010**	1	1	0.6	2.5	15
ASIF0015**	1	1.5	0.6	2.8	21
ASIF0025**	1	2.5	0.7	3.5	34
ASIF0040**	1	4	0.8	4.1	49
ASIF0060**	1	6	0.8	4.7	68
ASIF010**	1	10	1	6.1	110
ASIF016**	1	16	1.2	7.5	168
ASIF025**	1	25	1.4	9.1	254
ASIF035**	1	35	1.4	10.3	347
ASIF050**	1	50	1.6	12	490
ASIF070**	1	70	1.6	13.7	686
ASIF095**	1	95	1.8	15.6	888
ASIF120**	1	120	1.8	17.4	1149
ASIF150**	1	150	2	19.3	1411
ASIF185**	1	185	2.2	21.4	1722
ASIF240**	1	240	2.4	24.3	2284
ASIF300**	1	300	2.6	26.9	2895

Eland Part No. shown above designate the sheath colour (). For each colour substitute * for a colour code as listed below. e.g. ASI0015PK = 1.5mm² Pink

Colour Codes

COLOUR	Black	Blue	Grey	Green/ Yellow	Orange	Red	Pink	Yellow	Violet	Brown	White
CODE	BK	BL	GR	GY	OR	RD	PK	YW	VI	BR	WH

CONDUCTORS

Class 1 Solid Conductors for Single Core and Multi-Core Cables (SIA)

NOMINAL CROSS SECTIONAL AREA mm ²	MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C	
	Circular, Annealed Copper Conductors	
	Plain Wires ohms/km	Metal-Coated Wires ohms/km
0.5	36	36.7
0.75	24.5	24.8
1	18.1	18.2
1.5	12.1	12.2
2.5	7.41	7.56
4	4.61	4.7
6	3.08	3.11
10	1.83	1.84

The above table is in accordance with BS EN 60228 (previously BS 6360)

Class 5 Flexible Copper Conductors for Single Core and Multi-Core Cables (SIAF)

NOMINAL CROSS SECTIONAL AREA mm ²	MAXIMUM DIAMETER OF WIRES IN CONDUCTOR mm	MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C	
		Plain Wires ohms/km	Metal-Coated Wires ohms/km
0.25	0.21	83.8	86
0.35	0.21	54.4	55.5
0.5	0.21	39	40.1
0.75	0.21	26	26.7
1	0.21	19.5	20
1.5	0.26	13.3	13.7
2.5	0.26	7.98	8.21
4	0.31	4.95	5.09
6	0.31	3.3	3.39
10	0.41	1.91	1.95
16	0.41	1.21	1.24
25	0.41	0.78	0.795
35	0.41	0.554	0.565
50	0.41	0.386	0.393
70	0.51	0.272	0.277
95	0.51	0.206	0.21
120	0.51	0.161	0.164
150	0.51	0.129	0.132
185	0.51	0.106	0.108
240	0.51	0.0801	0.0817
300	0.51	0.0641	0.0654

The above table is in accordance with BS EN 60228 (previously BS 6360)

ELECTRICAL CHARACTERISTICS

Current Carrying Capacity

Solid Core Silicone Rubber Insulated Cable (SIA)

NOMINAL CROSS SECTIONAL AREA mm ²	CURRENT RATING IN AIR Amps				
	at 30°C	at 60°C	at 90°C	at 120°C	at 150°C
0.5	24	21	17	14	9
0.75	30	26	22	17	11
1	36	31	26	20	13
1.5	45	39	33	26	17
2.5	61	53	45	55	23
4	81	71	60	47	31
6	105	92	77	60	39
10	146	128	107	84	55

Conductor operating temperature 180°C

Flexible Core Silicone Rubber Insulated Cable (SIAF)

NOMINAL CROSS SECTIONAL AREA mm ²	CURRENT RATING IN AIR Amps					
	at 30°C	at 60°C	at 90°C	at 120°C	at 150°C	at 170°C
0.25	15	13	11	9	6	3
0.35	19	17	14	11	7	4
0.5	23	20	17	13	9	5
0.75	30	26	22	17	11	6
1	35	31	26	20	13	7
1.5	44	38	52	25	17	8
2.5	61	53	45	35	23	12
4	82	71	60	47	31	16
6	104	91	77	60	39	20
10	148	129	108	85	56	28
16	197	173	145	114	75	58
25	263	230	193	151	99	51
35	327	286	240	188	124	63
50	413	362	304	238	157	80
70	531	465	391	306	201	103
95	623	545	458	359	236	121
120	738	645	543	425	280	143
150	850	744	626	491	323	166
185	969	848	714	560	369	190
240	1191	1043	879	689	454	234
300	1339	1173	988	776	512	264

Conductor operating temperature 180°C

The information contained within this datasheet is for guidance only and is subject to change without notice or liability. All the information is provided in good faith and is believed to be correct at the time of publication. When selecting cable accessories, please note that actual cable dimensions may vary due to manufacturing tolerances.