High Temperature Silicone Cable SIA/SIAF

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, foundaries, air craft construction and ship building.

CHARACTERISTICS

Voltage Rating Uo/U
SIA: 300/500V
SIAF: 0.25mm² to 6mm² 300/500V
10mm² and above: 0.6/1kV

Temperature Rating
Fixed: -60°C to +180°C

Minimum Bending Radius
Fixed: 4 x overall diameter

CONSTRUCTION

Conductor
Class 1 solid copper (plain or tinned) conductor
Class 5 flexible copper (plain or tinned) conductor

Insulation
Silicone rubber

Sheath Colour

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

STANDARDS

EN 50525-2-41, IEC/EN 60228

THE CABLE LAB®

AN ISO/IEC 17025 AND IECEE CBTL ACCREDITED FACILITY

Our world-class testing facility assures the quality and compliance of this cable through a continuous and rigorous testing regime.

SUSTAINABILITY COMMITMENT

We are on a journey to Net Zero.

We've committed to near-term emissions reductions and a net-zero target with the Science Based Targets initiative and we're a signatory to the United Nations Global Compact Sustainable Development Goals.

Learn more about embodied carbon and our carbon emissions reduction actions, our comprehensive recycling services, and wider ESG activities for sustainable operations at: www.elandcables.com/company/about-us/esg-sustainability

REGULATORY COMPLIANCE

This cable meets the requirements of the RoHS Directive 2015/65/EU and Reach Directive EC 1907/2006. RoHS compliance has been tested and confirmed by The Cable Lab®.

DIMENSIONS

Solid Core Silicone Rubber Insulated Cable (SIA)

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm²	NOMINAL THICKNESS OF INSULATION mm²	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km
ASI0005**C1	1	0.5	0.6	2.0	10
ASI00075**C1	1	0.75	0.6	2.2	12
ASI0010**C1	1	1	0.6	2.3	15
ASI0015**C1	1	1.5	0.6	2.6	20
ASI0025**C1	1	2.5	0.7	3.2	31
ASI0040**C1	1	4	0.8	3.9	48
ASI0060**C1	1	6	0.8	4.4	67
ASI010**C1	1	10	1	5.6	108

Flexible Core Silicone Rubber Insulated Cable (SIAF)

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm²	NOMINAL THICKNESS OF INSULATION mm²	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km
ASI00025**	1	0.25	0.6	1.8	7
ASI00035**	1	0.35	0.6	1.9	8
ASI0005**	1	0.5	0.6	2.1	10
ASI00075**	1	0.75	0.6	2.3	13
ASI0010**	1	1	0.6	2.5	15
ASI0015**	1	1.5	0.6	2.8	21
ASI0025**	1	2.5	0.7	3.5	34
ASI0040**	1	4	0.8	4.1	49
ASI0060**	1	6	0.8	4.7	68
ASI010**	1	10	1	6.1	110
ASI016**	1	16	1.2	7.5	168
ASI025**	1	25	1.4	9.1	254
ASI035**	1	35	1.4	10.3	347
ASI050**	1	50	1.6	12	490
ASI070**	1	70	1.6	13.7	686
ASI095**	1	95	1.8	15.6	888
ASI120**	1	120	1.8	17.4	1149
ASI150**	1	150	2	19.3	1411
ASIF85**	1	185	2.2	21.4	1722
ASI240**	1	240	2.4	24.3	2284
ASI300**	1	300	2.6	26.9	2895

* Designates the sheath colour. For each Eland Cables part number replace with the 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

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CONDUCTORS

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

NOMINAL CROSS SECTIONAL AREA mm²	MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C ohms/km
	Circular, Annealed Copper Conductors, Metal-Coated Wires
0.5	36.7
0.75	24.8
1	18.2
1.5	12.2
2.5	7.56
4	4.7
6	3.11
10	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 mm²	MAXIMUM DIAMETER OF WIRES IN CONDUCTOR mm	MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C ohms/km
		Metal-Coated Wires
0.25	0.21	86
0.35	0.21	55.5
0.5	0.21	40.1
0.75	0.21	26.7
1	0.21	20
1.5	0.26	13.7
2.5	0.26	8.21
4	0.31	5.09
6	0.31	3.39
10	0.41	1.95
16	0.41	1.24
25	0.41	0.795
35	0.41	0.565
50	0.41	0.393
70	0.51	0.277
95	0.51	0.21
120	0.51	0.164
150	0.51	0.132
185	0.51	0.108
240	0.51	0.0817
300	0.51	0.0654

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

CURRENT CARRYING CAPACITY

Solid Core Silicone Rubber Insulated Cable (SIA)

NOMINAL CROSS SECTIONAL AREA mm²	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 mm²	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	32	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

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