

SiliFlex Wire & Cable

SiliFlex Hookup and Multiconductor Cables

FEATURES:

- Resistant to temperature extremes
- Excellent electrical characteristics
- Easily stripped
- Lightweight
- Corona resistant
- High radiation resistance

GENERAL DESCRIPTION

SiliFlex is distinguished by its extreme limpness and flexibility. It is the most limber of all the High Flex Products offered by Calmont. Silicone rubber insulation compounds are inherently soft and pliable and resists the plastic flow that characterizes many insulation systems. Silicone compounds can be tailored to meet a variety of demands such as extreme high and low temperature requirements, flame resistance, flexibility, radiation resistance, strength and purity.

APPLICATIONS

SiliFlex is used extensively for robotic, aerospace and medical applications.

MULTICONDUCTOR JACKET OPTIONS

- Silicone • FEP • TPE

General Specifications

ELECTRICAL PROPERTIES

D.C. Volume Resistivity (ohm - CM)	1 x 10 ¹⁵
Dielectric Strength (VPM on .075 slab)	550 - 700
Dielectric Constant	1000
at 60 Hz	2.9 - 3.5
Power Factor at 60 Hz	.002 - .004
Radiation Resistant (Roentgens)	1 x 10 ⁸

PHYSICAL PROPERTIES

Specific Gravity	1.20 - 1.45
Elongation (%)	125 (min.)
Shore Hardness (A Scale)	65 (avg.)
Tensile Strength (PSI)	800 - 1100

THERMAL PROPERTIES

Temperature Rating	-100°F to 400 ° F
Estimated Useful Life - at -80 °F	Indefinite
- at 250 °F	10 years
- at 300 °F	5 years
- at 400 °F	2 years
- at 500 °F	3 months

FLAME RESISTANCE

Siliflex is available with a self-extinguishing silicone rubber insulation that will pass the Underwriters' Laboratories' VW-1 flame test and the 45° angle flame test of MIL-W-16878.

MEDICAL USAGE

Siliflex can be manufactured with medical grade silicone compounded under clean room conditions. This can be used for medical implantation. To maintain the highest level of purity, the insulation is available nonpigmented (translucent).

Calmont SiliFlex Hookup Wire

Part Number	Bare Copper Conductor ¹						Finished Wire			
	AWG SIZE	(No. of Strands/ Strand Size)	Strand Diameter (inches)	Conductor Diameter (Nominal)	Conductor Area (CM) (Nominal)	Conductor Resistance (OHMS/1000' NOM)	Current Carrying Capacity @80 °C (approximate)	Outside Diameter (± .003)	Weight (lbs./1000') approximate	Stiffness Comparison (pounds)
3006-028-20-1-C-CCC-S	20	105/40	.0031	.039	1038.00	10.00	4.00	.064	4.94	.1400
3006-028-22-1-C-CCC-S	22	65/40	.0031	.031	642.00	16.10	2.50	.056	3.34	.0500
3006-028-24-1-C-CCC-S	24	41/40	.0031	.023	405.00	25.60	1.60	.047	2.25	.0200
3006-028-26-1-C-CCC-S	26	66/44	.0020	.019	258.00	40.20	1.00	.042	1.61	.0090
3006-028-28-1-C-CCC-S	28	41/44	.0020	.015	160.00	64.70	.60	.038	1.17	.0056
3006-028-29-1-C-CCC-S	29	51/46	.0016	.014	125.00	82.70	.50	.030	.79	.0040
3006-028-30-1-C-CCC-S	30	41/46	.0016	.012	100.00	102.80	.40	.028	.67	.0020
3006-028-32-1-C-CCC-S	32	27/46	.0010	.008	38.00	266.50	.16	.022	.35	.0015
3006-028-34-1-C-CCC-S	34	40/50	.0010	.006	24.00	426.40	.10	.020	.27	.0012
3006-028-36-1-C-CCC-S	36	25/50	.0010	.005	16.00	666.20	.60	.019	.22	.0009
3006-028-38-1-C-CCC-S	38	16/50	.0010	.005	15.57	666.20	.06	.019	.22	.0039
3006-028-40-1-C-CCC-S	40	12/50	.0010	.003	12.00	888.30	.04	.018	.19	.0008

¹Contact Calmont for additional conductor options