

Flexibility

Ultra Flex, tinned copper wire conductors, and flexible silicone make Cicoil cables highly flexible, making them ideal for flexing applications requiring a small bend radius.

Long Life

Rated for over 10 million cycles in flexing applications.

Extreme Environments

Silicone rubber cables operate from -65°C to 260°C, including exposure to water, steam, salt, and most chemicals. The cables are ideal for clean room use, and they can also be used in vacuum environments.

Fire Resistant

Cables are fire resistant, as they meet the UL-94 vertical flame standard, as well as other fire standards.



Cables with 1-12 wires, from 4 to 38 AWG.

Cicoil's line of Hi-Flex Unshielded Cables provides the advantages of all Cicoil flexible silicone cables in a standard, low-cost package. Ultra-flexible, finely stranded wire conductors are used for maximum flexibility and long life in dynamic, flexing applications. Cicoil's exclusive extrusion process, encapsulates the wire conductors in a crystal clear, flexible, yet extremely durable silicone insulation. Ideal in diverse applications, including aerospace, festoon systems, food & beverage, forestry, industrial automation, medical, packaging, printing, pulp & paper and semiconductor.

Specifications

Electrical

Insulation Resistance: 200 megΩ @ 500Vdc
Dielectric Strength: 450 volts/mil (17.7KV/mm)
Dielectric Constant: 2.8 (nominal)

Environmental

Temperature Rating: -65°C to 260°C
Moisture Rating: Submersible
Vacuum Rating: 5 x 10⁻⁵ torr^①
Outgassing: 0.24 %TML, 0.02 %CVC^②
Radiation: 10⁷ Roentgens (exposure)
Acid Resistance: Good
Ozone Resistance: Outstanding
Oil Resistance: Good
Flame Resistance: Good
Water/Steam Resistance: Excellent (Including salt and DIW)
Alcohol Resistance: Good
Toxins: Halogen-free

Mechanical

Life Expectancy: 10,000,000 cycles, min.^③
Minimum Bend Radius (Flexing): 10x cable thickness (Dimension 'A')
Durometer Rating: Shore A, 65
Tensile Strength: 6.5 Mpa (psi)
Tear Strength: 18 kN/m

Approvals

UL Recognized—File #E324413, CE

Notes

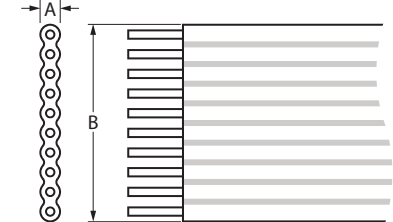
- Cicoil cable can exceed this rating when specified
- Cicoil outgassed cables are NASA rated for space applications (NASA Outgassing spec 1124)
- Continuous flexing applications

Dimensions

Single Conductor



2 - 12 Conductors



AWG	Number of Conductors															
	1		2		3		4		6		8		10		12	
	Dim	Dim	Dim	Dim	Dim	Dim	Dim	Dim	Dim	Dim	Dim	Dim	Dim	Dim	Dim	Dim
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
4	0.50	0.50	—	—	—	—	0.47	1.77	—	—	—	—	—	—	—	—
6	0.44	0.44	—	—	—	—	0.40	1.47	—	—	—	—	—	—	—	—
8	0.39	0.39	—	—	—	—	0.35	1.26	—	—	—	—	—	—	—	—
10	0.33	0.33	—	—	—	—	0.29	0.92	—	—	—	—	—	—	—	—
12	0.30	0.30	—	—	0.24	0.58	0.24	0.75	—	—	—	—	—	—	—	—
14	0.28	0.28	—	—	0.19	0.47	0.19	0.61	—	—	0.19	1.16	—	—	—	—
16	0.26	0.26	0.15	0.26	0.15	0.37	0.15	0.48	0.15	0.70	0.15	0.92	0.15	1.14	0.15	1.36
18	0.25	0.25	0.14	0.24	0.14	0.33	0.14	0.43	0.14	0.62	0.14	0.81	0.14	1.00	0.14	1.19
20	0.24	0.24	0.12	0.20	0.12	0.28	0.12	0.36	0.12	0.51	0.12	0.67	0.12	0.83	0.12	0.99
22	0.23	0.23	0.11	0.18	0.11	0.25	0.11	0.32	0.11	0.45	0.11	0.59	0.11	0.73	0.11	0.87
24	0.22	0.22	0.09	0.15	0.09	0.21	0.09	0.27	0.09	0.38	0.09	0.50	0.09	0.62	0.09	0.74
26	0.22	0.22	0.09	0.14	0.09	0.19	0.09	0.25	0.09	0.35	0.09	0.46	0.09	0.57	—	—
28	0.21	0.21	0.08	0.13	0.08	0.18	0.08	0.23	0.08	0.33	0.08	0.43	0.08	0.53	—	—
30	0.21	0.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—

All dimensions are in inches.

Specify Hi-Flex Unshielded Cables by Part Number and Length in feet. Hi-Flex Unshielded Cables are maintained in stock for immediate delivery. Cable with prepared ends or assemblies with connectors are produced to order with minimum lead times.

	AWG	Amp Rating*	Volts DC	Part Number	
Single Conductor	4	125	42,000	969M101-4-1	
	6	95	42,000	969M101-6-1	
	8	65	42,000	969M101-8-1	
	10	47	42,000	969M101-10-1	
	12	36	42,000	969M101-12-1	
	14	27	42,000	969M101-14-1	
	16	19	42,000	969M101-16-1	
	18	15	42,000	969M101-18-1	
	20	10	31,000	969M101-20-1	
	22	8	31,000	969M101-22-1	
	24	7	12,000	969M101-24-1	
	26	6	12,000	969M101-26-1	
	28	5	12,000	969M101-28-1	
	30	3	10,000	969M101-30-1	
2 Conductors	16	19	20,000	969M101-16-2	
	18	15	20,000	969M101-18-2	
	20	10	18,000	969M101-20-2	
	22	8	18,000	969M101-22-2	
	24	7	12,000	969M101-24-2	
	26	6	12,000	969M101-26-2	
	28	5	12,000	969M101-28-2	
3 Conductors	12	36	20,000	969M101-12-3	
	14	27	20,000	969M101-14-3	
	16	19	20,000	969M101-16-3	
	18	15	20,000	969M101-18-3	
	20	10	18,000	969M101-20-3	
	22	8	18,000	969M101-22-3	
	24	7	12,000	969M101-24-3	
	26	6	12,000	969M101-26-3	
4 Conductors	4	125	20,000	969M101-4-4	
	6	95	20,000	969M101-6-4	
	8	65	20,000	969M101-8-4	
	10	47	20,000	969M101-10-4	
	12	36	20,000	969M101-12-4	
	14	27	20,000	969M101-14-4	
	16	19	20,000	969M101-16-4	
	18	15	20,000	969M101-18-4	
	20	10	18,000	969M101-20-4	
	22	8	18,000	969M101-22-4	
	24	7	12,000	969M101-24-4	
	26	6	12,000	969M101-26-4	
	28	5	12,000	969M101-28-4	

	AWG	Amp Rating*	Volts DC	Part Number	
6 Conductors	16	19	20,000	969M101-16-6	
	18	15	20,000	969M101-18-6	
	20	10	18,000	969M101-20-6	
	22	8	18,000	969M101-22-6	
	24	7	12,000	969M101-24-6	
	26	6	12,000	969M101-26-6	
	28	5	12,000	969M101-28-6	
	14	27	20,000	969M101-14-8	
8 Conductors	16	19	20,000	969M101-16-8	
	18	15	20,000	969M101-18-8	
	20	10	18,000	969M101-20-8	
	22	8	18,000	969M101-22-8	
	24	7	12,000	969M101-24-8	
	26	6	12,000	969M101-26-8	
	28	5	12,000	969M101-28-8	
	16	26	20,000	969M101-16-10	
10 Conductors	18	20	20,000	969M101-18-10	
	20	13	18,000	969M101-20-10	
	22	11	18,000	969M101-22-10	
	24	8	12,000	969M101-24-10	
	26	6	12,000	969M101-26-10	
	28	5	12,000	969M101-28-10	
	16	19	20,000	969M101-16-12	
	18	15	20,000	969M101-18-12	
12 Conductors	20	10	18,000	969M101-20-12	
	22	8	18,000	969M101-22-12	
	24	7	12,000	969M101-24-12	

* Amp rating is the maximum value for each conductor (excluding ground) at a room temperature of 86°F (30°C). Amp rating decreases as temperature increases, if multiple cables are bundled, or if inserted into conduit.