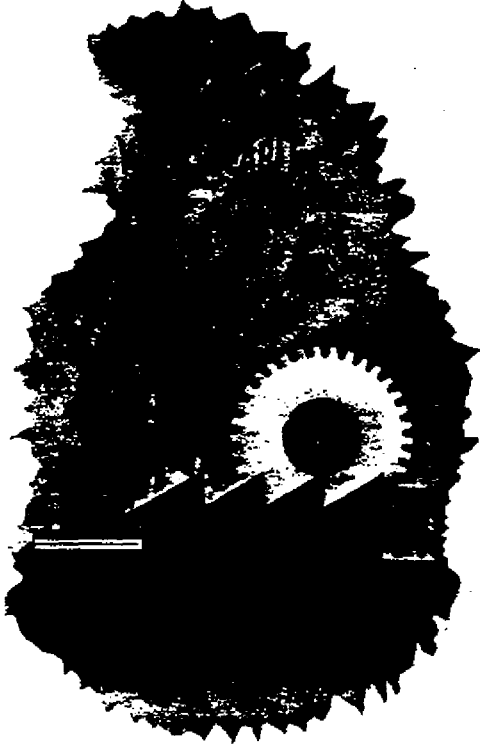


CONTINENTAL WIRE & CABLE

BOX 1863 YORK, PA 17403 TWX (510) 657-4748 PHONE (717) 792-2544



2804 LINDEN AVENUE
DUBLIN 39, Mich. NEWMOOD 1-1634



SILICONE RUBBER CABLES AND WIRE



CONTINENTAL

GIVES YOU ENGINEERING TALENT.
WE SOLVED MANY ELECTRICAL
AND ELECTRONIC WIRE & CABLE
PROBLEMS.

A FEW WE HAVE SOLVED:

- 2000° F Applications
- Improved Abrasion Resistance
- Low Noise Characteristics
- Water Tightness
- Multi Conductor (75° C to 750° F)

SOME APPLICATIONS:

- | | |
|--------------------|--------------------|
| SOOT BLOWERS | OPEN HEARTHES |
| BOILER ROOMS | STEEL PLANTS |
| TURBINE CONTROLS | GLASS PLANTS |
| LADLE & PIT CRANES | DIESEL LOCOMOTIVES |
| RHEOSTATS | HEAT TREATING |
| TRANSFORMERS | CEMENT KILNS |
| BALLASTS | APPLIANCES |
| MOTORS | ELECTRICAL HEATING |

SILICONE RUBBER POWER AND CONTROL CABLES HAVE BEEN FIELD
PROVEN. CONTINENTAL'S RESEARCH, QUALITY CONTROL, ENGINEER-
ING KNOWLEDGE, HAVE PROVED THE VALUE OF SILICONE RUBBER FOR
HIGH TEMPERATURES, WET OR DRY INSTALLATIONS.

RBB 00277

SC-ELEC-00050

WHY SHOULD I SPECIFY SILICONE RUBBER INSULATED WIRE & CABLE?

-because SILICONE RUBBER offers these distinct advantages as an insulation

HIGH TEMPERATURE OPERATION • MOISTURE RESISTANCE • FLEXIBILITY

CORONA RESISTANCE • OZONE AND SUNLIGHT RESISTANCE

RELIABILITY • RADIATION RESISTANCE • EXCELLENT ELECTRICAL CHARACTERISTICS

	Tensile Strength, psi Room Temperature		Tensile Strength, psi		Abrasion Resistance	Oil Resistance	Durometer Hardness Range	
			250F	400F				
Silicone	800-1800		850	400	Good	Good	20-95	
Maximum Service Temp., F	Minimum Service Temp., F		Resistance to 150 ppm Ozone at Room Temp. Under Stress	Elongation %, at Room Temp.	Elongation %		Tear Resistance #/in. at Room Temp.	Service Life at 300F In Dry Air
	Static	Dynamic			250F	400F		
500 (+)	-150	-100	Beyond 2 weeks	100-800	350	200-	40 to 250	Continuous

RESISTANCE TO TEMPERATURE EXTREMES

Heat resistance usually involves the change in physical properties which may result from exposing insulating materials to anticipated service operating temperatures over an extended period of time, or to short-time emergency overloads which cause a temperature rise well above normal operating temperatures. The following table may be used as a general guide for rating serviceability of standard silicone elastomers on a times-temperature basis.

It is important to recognize that the information shown in the following table applies only to a standard, heat-resistant silicone rubber compound designed for use in IPCEA standards. Silicone rubber compounds having much greater resistance to high temperatures are available and are presently being used in applications of an extremely severe nature.

ESTIMATED USEFUL LIFE OF A TYPICAL SILICONE RUBBER

Service Temp.	Useful Life-
250F	10 years
300F	5 years
400F	2 years
500F	3 months

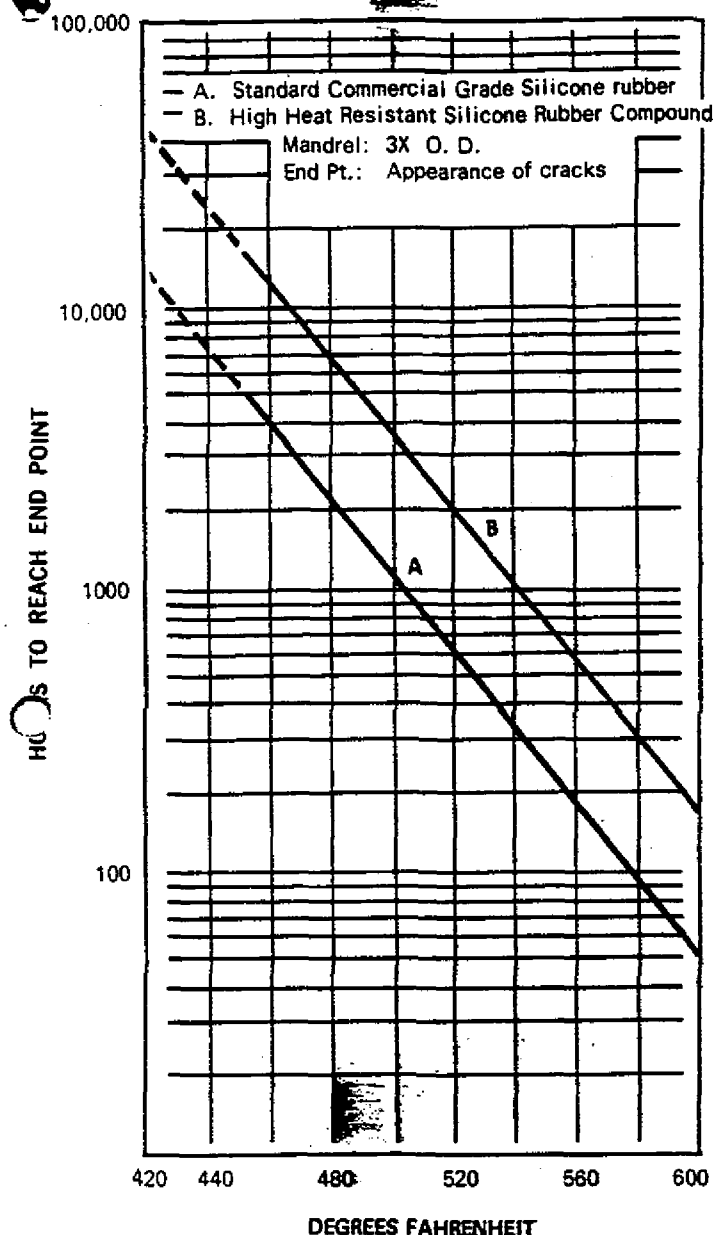
The foregoing estimate of useful life is based upon CONTINUOUS operation at a conductor temperature as shown. The end-point in the determination of useful life has been arbitrarily selected as that point in time at which the elongation of the insulation has been reduced to a value so low that the material is no longer able to withstand severe and repeated flexing about a small radius. If the cable is not subjected to continuous operation at high temperature, or if the application does not involve severe flexing, the useful life will be significantly extended. For example, in non-flexing service, useful life at 250F is more than 20 years.

The following ARRHENIUS plot will serve as an indication of anticipated service life for various heat-resistant grades of silicone rubber insulation.

The resistance of silicone rubber compounds to extremely low temperatures is an important feature. Certain compounds have a brittle point below -150 F. However, of paramount importance is the fact that the flexibility of the rubber is essentially unchanged over the temperature range from -100 F. to -80 F. No problems will be encountered in handling stiff wire or attempting to train it into place during the cold-weather months when silicone rubber is used.

RBB 00278

Service Determination



RADIATION RESISTANCE

Silicone rubber is the only flexible insulating material combining excellent heat resistance with a high level of radiation resistance. In severe flexing applications, silicone rubber insulated wire can withstand exposure up to 10^4 rads and still retain useful properties.

FLAME RESISTANCE

Self-extinguishing silicone rubber compounds are available which provide flame-resistant insulation for those applications where this characteristic is desirable. These compounds are capable of passing the Underwriters' Laboratories vertical flame test and the flame test of specification MIL-W-16878 even when applied to the smallest size conductors and without the necessity for flame-resistant outer protective coverings, braids, or lacquers.

FIRE RESISTANCE

When burned, silicone rubber leaves a non-conductive silicon dioxide ash which is an excellent dielectric and which permits continued operation of the cable for an indefinite period. Cables insulated with organic materials fail within 1-10 minutes exposure to open flame, whereas silicone insulated cables continue to operate for hours, even when subjected to some vibration.

In pre-installation tests on Navy power and control cable, samples are exposed to flame from a 200 ribbon burner. Samples are positioned directly into the flame and voltage is applied between conductors. The sample is expected to maintain electrical integrity for at least 3 hours. The internal temperature approximates 1800 F. during the test, but the silicon dioxide is retained by a glass braid and continues to insulate.

ELECTRICAL PROPERTIES

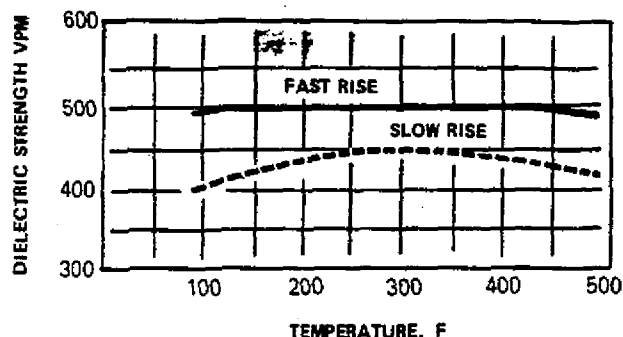
The electrical properties of silicone compare favorably with or exceed the best organic insulation materials. The outstanding advantage of silicone is that it retains excellent characteristics over a wide temperature and frequency range.

DIELECTRIC FATIGUE

The extreme resistance of silicone rubber insulated wire and cable to high voltage ionization permits operation of silicone rubber insulated wire and cable at high voltage and temperature levels without failure. Corona resistance approaches that of mica with the added advantage of flexibility. Fatigue life under continuous stress is high. High temperature organic polymers exhibit a far more rapid decrease in this characteristic when subjected to voltage for a prolonged period of time.

DIELECTRIC STRENGTH for a typical silicone rubber insulation is shown below over the temperature range 80 F to 500 F. It will be noted that the volts/mil electric strength remains essentially constant throughout the temperature range under both fast rise (1000 volts/second) and slow rise (2000 volts/minute).

DIELECTRIC STRENGTH vs. TEMPERATURE OF A
TYPICAL STOCK



CORONA AND OZONE RESISTANCE

Ozone and corona resistance should be distinguished as they affect insulating materials. Corona, the ionization of gas which leads to a discharge current of ionized particles, can easily damage and deteriorate electrical insulation. Continued corona discharge, eventually causes electrical failure.

The fact that corona discharge in air is known to generate ozone, and that corona attack of elastomers produces surface cracking, does not necessarily mean that ozone attack is the only factor involved.

Evidence indicates that corona damage can occur in the absence of oxygen. Fluoro-carbon materials, such as TFE resins, have good ozone resistance but degrade rapidly when subjected to corona. Silicone rubber is outstanding in its resistance to both ozone and corona conditions.

To determine the resistance of silicone rubber insulated wire to high voltage gradients, samples of #20 AWG wire with 3/64 inch wall of insulation have been subjected to a 10,000 volt potential while wrapped in helical form (outer surface elongated 25%) and placed in an oven at 250 C. for 100 hours. There were no signs of stress cracking or corona erosion at the conclusion of this test. Under these conditions organic rubber insulations failed within a few minutes even when the test was conducted at room temperature.

FUNGUS RESISTANCE

Properly cured silicone rubber will not support the growth of fungus. Samples of silicone rubber have been successfully tested against the two major military specifications for fungus resistance: MIL-F-8261, Fungus, Resistance Tests, Aeronautical and Associated Materials, General Specification For; and MIL-3-5272A, Environmental Testing, Aeronautical and Associated Equipment, General Specification For. The fungi included in these tests were: *Aspergillus Niger*, *Aspergillus Flavus*, *Trichoderma T-1*, *Chaetomium Globosum*, *Penicillium Luteum*, *Memnoniella Echinata*.

CHEMICAL RESISTANCE

Silicone rubber's resistance to chemicals is particularly useful at temperatures which prevent the use of other elastomers. The following table shows the effect of a variety of materials on a general purpose, silicone rubber compound after one week's immersion at 77°F.

Material	Weight Change %	Volume Change %	Durometer Change Points
ACIDS			
Nitric conc.	+10	+10	-30
Nitric 7%	<1	<1	-2
Sulfuric conc.	Disintegrates		
Sulfuric 10%	<1	<1	-2
Acetic conc.	+2	+3	-4
Acetic 5%	+4	+4	-8
Hydrochloric conc.	+1	+1	-6
Hydrochloric 10%	+2	+4	-4
Hydrochloric 3%	<1	<1	-2
BASES			
Sodium Hydroxide 20%	<1	<1	-2
Sodium Hydroxide 1%	<1	<1	-4
Ammonium Hydroxide conc.	+2	+2	-4
Ammonium Hydroxide 10%	+3	+2	-6
SALTS			
Sodium Chloride 10%	<1	<1	-2
Sodium Carbonate 2%	<1	<1	-0
SOLVENTS			
Ethyl Alcohol	+5	+6	-10
Acetone	+6	+15	-15
Toluene	+75	+120	-30
Gasoline, Regular	+65	+130	-25
Gasoline, Aviation	+60	+110	-30
Mineral Spirits	+65	+110	-30
Carbon Tetrachloride	+130	+110	-25
HYDRAULIC FLUIDS			
Hollingshead H-2	+4	+5	-10
Hollingsheads H-2 ¹	+9	+12	-15
Skydrol	+4	+4	-8
Skydrol ¹	+7	+8	-10
PRL3161	+5	+7	-8
PRL3161 ¹	+9	+9	-15
OILS			
Castor Oil	<1	<1	-4
Lard Oil	<1	<1	-4
Linseed Oil	<1	<1	-2
Mineral Oil	+5	+6	-6
ASTM #1 Oil ²	+3	+5	-6
ASTM #3 Oil ²	+20	+31	-20
Silicon Oil SF96 (100) ²	+25	+35	-25
Silicone Oil 42,000 cstk. ²	+9	+10	-12
OTHER			
Water	<1	<1	<1
Hydrogen Peroxide 3%	<1	<1	<1
Pyranol 1476	+4	+4	-8

¹70 hours @ 212 F. ²70 hours @ 300 F.

REPRESENTATIVE COMPOUND DATA for wire & cable.

(CWC TYPE CC2101)

RESISTANCE TO WEATHERING

Silicone rubber resists the deteriorating effects of sunlight, ozone, and gases which cause weathering. Inherently water repellent, silicone rubber is not affected by moist operating conditions. Very dry conditions and low humidity will not leach, dry out, or affect silicone rubber in any way, at any temperature extreme found in nature.

Silicone rubber also has good resistance to deteriorating agents found in rain water: chloride, sulfate, nitrate, and hydrogen ions. Surface water which may have leached minerals, acids, bases, and salts from the soil normally has no detrimental effect on silicone rubber. Silicone rubber will effectively resist the concentrations of such materials found in surface water.

INERTNESS

An inert material, silicone rubber is odorless and tasteless. Because it is extremely stable and contains no sulphur or other acid producing chemicals, it does not cause staining, corrosion, or deterioration of other materials with which it comes in contact.

TYPICAL VALUES

COMPOUND	CC2101
Color	White
CV/HAV (on wire)	
Tensile Strength, psi	1100
Elongation, %	300
Press Cure 10 Min./275F (Slabs)	
Hardness, Shore A	58±5
Tensile Strength, psi	1050
Elongation, %	425
Oven Cure 1 Hr./300F (Slabs)	
Hardness, Shore A	62±5
Tensile Strength, psi	1075
Elongation, %	375
Tear Strength, Die B, psi	100
Oven Cure 24 Hrs./300F (Slabs)	
Hardness, Shore A	64±5
Tensile Strength, psi	1050
Elongation, %	350
Tear Strength, Die B, pi	90

PHYSICAL PROPERTIES AFTER HEAT AGING

Heat Aging 24 Hrs./480F (Slabs)	
Hardness, Shore A	67±5
Tensile Strength, psi	900
Elongation, %	240
Heat Aging 96 Hrs./480F (Slabs)	
Hardness, Shore A	68±5
Tensile Strength, psi	750
Elongation, %	190
Heat Aging 60 Days/410F (Slabs)	
Hardness, Shore A	72±5
Tensile Strength, psi	750
Elongation, %	125

ELECTRICAL PROPERTIES¹

Volume Resistivity, ohm-cm	4 x 10 ¹⁵
IR(K) Value	>4000
Electric Strength, volts/mil	650
Dielectric Constant, 60 cps	3.3
Power Factor, 60 cps	0.002

WATER ABSORPTION²

70 Hrs. in H ₂ O at 212F	
Hardness Change, Points	+3
Volume Change, %	+1
Weight Change, %	0
168 Hrs. in H ₂ O at 158F	
Hardness Change, Points	+2
Volume Change, %	0
Weight Change, %	0
Corrected Water Absorption, mg/in ²	+6
Water Extractables, mg/in ²	+3

ACCELERATED WATER ABSORPTION

Electrical Method ³	
Increase in Capacitance, Max. %	
1 to 14 days	<2.0
7 to 14 days	<1.0
Stability Factor 14 days in 75C water	<1.0
Gravimetric Method	
Water Absorption, mg/in ²	<10.0

RBB 00281

SRG
SILICONE RUBBER
GLASS BRAID
MOTOR LEAD WIRE

600 VOLT 150°C-200°C

U.L. APPROVED IN SIZES #8-#4/0 AWG

STYLE #3125 #3126 200°C

STYLE #3127 #3128 150°C

Copper conductor with tin, nickel or silver coating; silicone rubber insulation, glass braid or braids, high temperature silicone varnish.

USES—For hazardous location motors where exposed to temperatures not exceeding 200°C (or 150°C depending on stranding) or internal wiring of appliances where exposed to temperatures not exceeding 200°C (or 150° depending on stranding).

APPROVED BY—Underwriters Laboratories Inc. in four styles.



TABLE SRG-S600
U.L. STYLE 3125 600 VOLTS 200°C

Size AWG	Stranding	Insulation Wall—64ths	Glass Braid Wall—Mils	Nominal O.D. Inches	Amperacity 30°C	Weight Lbs./M Ft.
8	19/.0295	4	10	.299	115	90
6	19/.0372	4	10	.337	154	140
4	19/.0469	4	10	.386	205	210
2	19/.0591	4	10	.447	280	300

TABLE SRGG-S600
U.L. STYLE 3126 600 VOLTS 200°C

1	19/.0664	5	20	.539	325	405
1/0	19/.0745	5	20	.580	385	485
2/0	19/.0837	5	20	.626	450	625
3/0	19/.0940	5	20	.667	520	765
4/0	19/.1055	5	20	.735	600	895

TABLE SRG-X600
U.L. STYLE 3127 600 VOLTS 150°C

8	133/.0111	4	10	.317	115	90
6	133/.014	4	10	.362	154	140
4	133/.0177	4	10	.421	205	210
2	133/.0223	4	10	.490	280	300

TABLE SRGG-X600
U.L. STYLE 3128 600 VOLTS 150°C

1	259/.018	5	20	.585	325	410
1/0	259/.0202	5	20	.631	385	490
2/0	259/.0227	5	20	.684	450	630
3/0	259/.0255	5	20	.743	520	770
4/0	259/.0286	5	20	.808	600	900

Tinned copper, extruded silicone rubber, glass braid.

USES—For hazardous location motors where exposed to temperatures not exceeding 200°C intermittently (150°C normal).

APPROVAL—For use at 150°C normal or 200°C AIEE Intermittent Service.

SRG-X600
SILICONE RUBBER
GLASS BRAID
MOTOR LEAD
WIRE

600V SIZES 20-10
 150° - 200°C AWG



TABLE SRG-X600		CLASS H (AIEE INTERMITTENT SERVICE)		600 VOLTS	200°C	
Size AWG	Strand	Insulation Wall in 64th	Voltage Rating	Nominal Inches O.D.	Ampacity 30°C	Weight in Lbs./M Ft.
22	7/.010	2	600	.107	8	8
20	10/.010	2	600	.115	16	9
18	16/.010	2	600	.125	24	12
16	26/.010	2	600	.137	30	16
14	41/.010	2	600	.155	40	22
12	65/.010	2	600	.178	55	32
10	105/.010	3	600	.224	75	62

SILICONE RUBBER ELECTRONIC INSTRUMENT WIRE

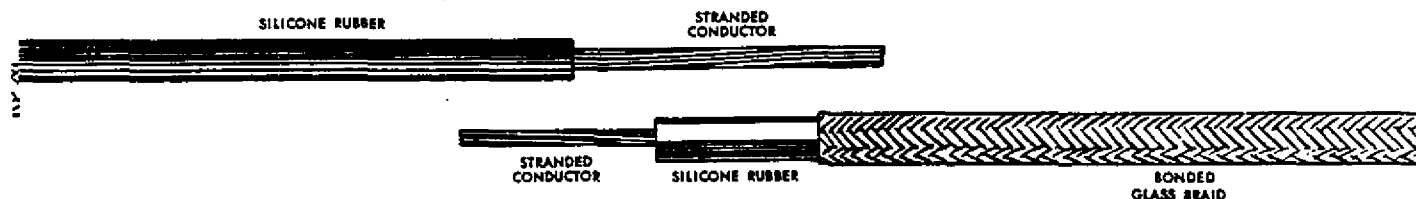
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**600 AND 1000 VOLT SERVICE
AVAILABLE SIZES**

TYPE F TYPE FF
#24 TO #12 #24 TO 4/0

Tinned Copper,* extruded Silicone rubber, glass braid
Application—In electrical or electronic circuits at a maximum
temperature of 200°C and where a high degree of flexibility is
required.

* Available also with silver plated and nickel clad copper conductor.



TYPE F PLAIN 600 VOLTS			
Size (AWG.)	Stranding	Nominal O.D. (Inches)	Wt. in Lbs. M. Ft.
24	7	.055	3
24	19	.055	3
22	7	.061	4
22	19	.061	4
20	7	.069	5
20	19	.069	5
18	7	.079	7
18	19	.079	7
16	19	.088	10
14	19	.118	16
12	19	.137	25

200°C TYPE F GLASS BRAIDED			
Size (AWG.)	Stranding	Nominal O.D. (Inches)	Weight in Lbs. M. Ft.
24	7	.067	4
24	19	.067	4
22	7	.073	5
22	19	.073	5
20	7	.081	7
20	19	.081	7
18	7	.091	9
18	19	.091	9
16	19	.100	12
14	19	.132	19
12	19	.151	28

TYPE FF PLAIN 1000 VOLTS			
Size (AWG.)	Stranding	Nominal O.D. (Inches)	Wt. in Lbs. M. Ft.
24	7	.086	5
24	19	.086	5
22	7	.095	6
22	19	.095	6
20	7	.103	8
20	19	.103	8
18	7	.111	11
18	19	.111	11
16	19	.123	13
14	19	.163	22
12	19	.182	31
10	37	.204	44
8	133	.298	79
6	133	.342	114
4	133	.398	176
2	133	.467	254
1	259	.542	336
1/0	259	.588	405
2/0	259	.644	504
4/0	259	.768	770

200°C TYPE FF GLASS BRAIDED			
Size (AWG.)	Stranding	Nominal O.D. (Inches)	Weight in Lbs. M. Ft.
24	7	.098	6
24	19	.098	6
22	7	.107	8
22	19	.107	8
20	7	.115	9
20	19	.115	9
18	7	.123	12
18	19	.123	12
16	19	.146	16
14	19	.175	25
12	19	.194	37
10	37	.216	52
8	133	.318	87
6	133	.362	130
4	133	.418	194
2	133	.487	277
1	259	.566	362
1/0	259	.612	451
2/0	259	.668	535
4/0	259	.792	823

CONTINENTAL WIRE & CABLE



RBB 00284

CONDUCTOR—Nickel Chromium Alloy

APPLICATION:—To heat pipes to prevent freezing, or to maintain proper viscosity of liquids being stored, or in transit through pipes. Soil heating, roof defrosting, food display case defrosting.

ELECTRICAL DATA— #19 Nickel Chromium Conductor

Resistance—0.52 ohms per foot

Out Put—55 ft. length at 120 volts = 500 watts

110 ft. length at 240 volts = 500 watts

SILICONE RUBBER HEATING CABLE

200°C

RATED 10 WATTS

PER FOOT

TEMPERATURE IS OPERATING VALUE



CWC *Type	Insulation	Normal Cond. Size AWG	Cond. Diam.	Diam over Insul.	Nominal Diameter
6	Glass Yarn, .047 Silicone Rubber, Glass Braid	19	.036	.041	.146
		16	.051	.056	.161
		12	.081	.086	.191
8	.030 Silicone Rubber, Tinned Copper Braid Shield, Silicone Rubber Jacket	19	.036	.098	.164
8-A	Same as Type 8 above but without Silicone Jacket	19	.036	.098	.132
9	Silicone Rubber, Insulation, Tinned Copper Wrap Shield, .015" FEP Jacket	19	.036	.070	.110
		16	.051	.091	.135
		12	.081	.131	.181

*See heating cable page in catalogue for other types commonly used



CONTINENTAL WIRE & CABLE

RBB 00285

SRG
SILICONE RUBBER
GLASS BRAID
APPLIANCE and
FIXTURE WIRE

300 AND 600 VOLT SERVICE
 AVAILABLE SIZES: 22 to 4/0
 AWG inclusive
 150°C - 200°C



Tinned copper*, nickel, or nickel-plated iron (SRG-S600 only), extruded silicone rubber, glass braid.

USES—Silicone Rubber insulation is recommended for radio and electronic wiring as well as for appliances where moisture, cold and/or heat may be present.

*Standard construction.

APPROVED BY—Underwriters Laboratories Inc. All items approved as appliance wiring materials. SF and SFF types approved as fixture wire. (Tinned, Nickel Plated, Silver Plated Copper, or Nickel conductors.) Also approved by Canadian Standards Association for equipment wiring.

MAXIMUM OPERATING TEMPERATURES—(UL) 150°C with copper conductor strand size less than 0.015".
 200°C with copper conductor strand size 0.015" and larger.
 200°C with nickel conductor strand size 0.010" and larger.



BONDED
GLASS BRAID

SILICONE RUBBER
INSULATION

STRANDED
CONDUCTOR

CONSTRUCTION SPECIFICATIONS

TABLE SRG-X300

CLASS B

300 VOLTS

150°C

U/L Style #	CSA Type Designation	Size AWG	Strand	Insulation Wall in 64ths	Voltage Rating	Inches O.D.	Ampacity 30°C	Weight in lbs/M
SFF-1	SEWF-1	22	7/.010	1	300	.075	8	5
	SEWF-1	20	10/.010	1	300	.083	16	7
	SEWF-1	18	16/.010	1	300	.093	24	9
	SEWF-1	16	26/.010	1	300	.105	30	12

TABLE SRG-X600

600 VOLTS

200°C

U/L Style #	CSA Type Designation	Size AWG	Strand	Insulation Wall in 64ths	Voltage Rating	Inches O.D.	Ampacity 30°C	Weight in lbs/M
3069	SEWF-2	22	7/.010	2	600	.107	8	8
3069	SEWF-2	20	10/.010	2	600	.115	16	9
SFF-2 (3070)	SEWF-2	18	16/.010	2	600	.125	24	12
SFF-2 (3070)	SEWF-2	16	26/.010	2	600	.137	30	16
SFF-2 (3070)	SEWF-2	14	41/.010	2	600	.155	40	22
3070	SEWF-2	12	65/.010	2	600	.178	55	32
	SEWF-2	10	105/.010	3	600	.224	75	62
3127		8	133/.0111	4	600	.317	115	90
3127		6	133/.0140	4	600	.362	154	140
3127		4	133/.0177	4	600	.421	205	205
3127		2	133/.0223	4	600	.490	280	300
		1	259/.0180	5	600	.568	325	400
		1/0	259/.0202	5	600	.614	385	480
		2/0	259/.0227	5	600	.668	450	620
		3/0	259/.0255	5	600	.727	520	760
		4/0	259/.0286	5	600	.798	600	890

TABLE SRG-S600

CLASS H

600 VOLTS

200°C

U/L Style #	CSA Type Designation	Size AWG	Strand	Insulation Wall in 64ths	Voltage Rating	Inches O.D.	Ampacity 30°C	Weight in lbs/M
SF-2	SEW-2	18	7/.0153	2	600	.123	24	12
SF-2 (3071)	SEW-2	16	7/.0192	2	600	.135	30	16
SF-2 (3071)		14	7/.0242	2	600	.150	40	22
3074		12	19/.0185	2	600	.169	55	32
3075		10	19/.0234	3	600	.227	75	52
3075		8	19/.0295	4	600	.299	115	90
3075		6	19/.0372	4	600	.337	154	140
3075		4	19/.0469	4	600	.386	205	205
3075		2	19/.0591	4	600	.447	280	300

Tinned copper or nickel conductor (also nickel plated iron style 3134), silicone rubber, no outer covering.

USES—For high temperature applications where flexibility is required, such as internal wiring of appliances where totally enclosed and where exposed to temperatures not to exceed 150°C.

**SR
BRAIDLESS
SILICONE RUBBER
APPLIANCE WIRE**



600 VOLT SERVICE

AVAILABLE SIZES 18

to 12 inclusive

UL STYLE 3134 150°C

UL STYLE 3135 200°C

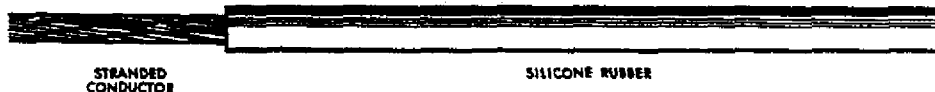


TABLE SR-600 UL STYLE 3135 600 VOLTS 200°C

Size AWG	Stranding	Insulation Wall in 64ths	Nominal O.D. (inches)	Amperity	Wt. in lbs. in ft.	Standard Pack (ft. per spool)
18	Solid	2	.105	24	10	500
16	Solid	2	.116	30	14	500
14	Solid	2	.129	40	21	500
12	Solid	2	.146	55	29	500

TABLE SR-S600 UL STYLE 3135 600 VOLTS 200°C

18	7/.0152	2	.111	24	11	500
16	7/.0192	2	.123	30	15	500
14	7/.0242	2	.138	40	22	500
12	7/.0305	2	.157	55	31	500

TABLE SR-X600 UL STYLE 3134 600 VOLTS 150°C

18	16/.010	2	.113	24	11	500
16	26/.010	2	.125	30	15	500
14	41/.010	2	.143	40	22	500
12	65/.010	2	.166	55	31	500

NOTE: Larger AWG sizes of unbraided constructions per IPCEA S-19-81 Spec. are available.

SILICONE RUBBER POWER CABLE ASBESTOS BRAID



**N.E.C. TYPE SA
600V SERVICE**

AVAILABLE SIZES: 14 AWG to

2000 MCM Inclusive

90°C U/L (125°C SPECIAL APPLICATION)

Tinned copper, silicone rubber, black asbestos braid, flame and moisture resistant finish.

USES—For power circuits in wet or dry locations, exposed or in conduit, to withstand constant high temperatures. Maximum operating temperature 90°C (125°C special applications).

APPROVED BY—Underwriters Laboratories, Inc.



BLACK ASBESTOS BRAID—FLAME
AND MOISTURE RESISTANT FINISH

SILICONE RUBBER

STRANDED
CONDUCTOR

**TABLE SA-S600
SINGLE CONDUCTOR 600 VOLTS**

AWG or MCM**	Stranding	*Insulation Wall in 64ths	Asbestos Braid in MILS	Approx. O.D. in Inches	Ampacities†	Approx. Ship. Wt. Lbs. M Feet
14	7	3	40	.251	27	42
12	7	3	40	.270	35	55
10	7	3	40	.294	48	73
8	7	4	45	.369	62	115
6	7	4	45	.409	82	160
4	7	4	45	.456	110	230
2	7	4	45	.516	146	336
1	19	5	45	.591	166	425
1/0	19	5	45	.632	192	525
2/0	19	5	45	.679	219	635
3/0	19	5	45	.730	252	780
4/0	19	5	45	.786	293	975
250	37	6	45	.870	324	1150
350	37	6	45	.989	395	1560
500	37	6	45	1.118	484	2150

*MINIMUM AVERAGE WALL THICKNESS

**U/L APPROVAL TO 2000 MCM

**TABLE SA-X600
SINGLE CONDUCTOR 600 VOLTS**

8	133	4	45	.388	62	115
6	133	4	45	.435	82	160
4	133	4	45	.491	110	230
2	133	4	45	.560	146	336
1	259	5	45	.635	166	425
1/0	259	5	45	.681	192	525
2/0	259	5	45	.737	219	635
3/0	259	5	45	.795	252	780
4/0	259	5	45	.861	293	975

†Based upon 3 cables in conduit—40°C Ambient.

‡Three insulated conductors per conduit (N.E.C.)

RBB 00288

Tinned copper, silicone rubber, black asbestos braid, flame and moisture resistant finish.

USES—For power circuits in wet or dry locations, exposed or in conduit, to withstand constant high temperatures. Maximum operating temperature 125°C.

SPECIFICATIONS—Cables listed below conform to IPCEA specification S-19-81.



BLACK ASBESTOS BRAID—FLAME AND MOISTURE RESISTANT FINISH

SILICONE RUBBER

STRANDED CONDUCTOR

SRA SILICONE RUBBER POWER CABLE ASBESTOS BRAID

600 and 5KV SERVICE

AVAILABLE SIZES: 14 AWG to 500 MCM Inclusive

125°C

200°C TYPES Available on special order

**TABLE SRA-S600
SINGLE CONDUCTOR 600 VOLTS**

AWG or MCM	Stranding	Insulation Wall in 64ths	Asbestos Braid in MILS	Approx. O.D. in inches	Ampacity†	Approx. Ship. Wt. Lbs. M Foot
14	7	3	40	.251	27	43
12	7	3	40	.270	35	56
10	7	3	40	.294	48	74
8	7	4	45	.369	62	115
6	7	4	45	.406	82	160
4	7	4	45	.453	110	230
2	7	4	45	.513	146	336
1	19	5	45	.588	166	425
1/0	19	5	45	.629	192	525
2/0	19	5	45	.676	219	635
3/0	19	5	45	.727	252	780
4/0	19	5	45	.783	293	975
250	37	6	45	.867	324	1150
350	37	6	45	.986	395	1560
500	37	6	45	1.115	484	2150

**TABLE SRA-X600
SINGLE CONDUCTOR 600 VOLTS**

8	133	4	45	.388	62	115
6	133	4	45	.432	82	160
4	133	4	45	.488	110	230
2	133	4	45	.557	146	336
1	259	5	45	.632	166	425
1/0	259	5	45	.678	192	525
2/0	259	5	45	.734	219	635
3/0	259	5	45	.792	252	780
4/0	259	5	45	.858	293	975

**TABLE SRA-S5000
SINGLE CONDUCTOR 5 KV GROUNDED NEUTRAL**

8	19	10	45	.560	62	210
6	19	10	45	.600	82	270
4	19	10	45	.650	110	340
2	19	10	45	.710	146	470
1	19	10	45	.750	166	550
1/0	19	10	45	.790	192	645
2/0	19	10	45	.840	219	780
3/0	19	10	45	.890	252	940
4/0	19	10	45	.950	293	1130
250	37	11	45	1.020	324	1330
350	37	11	45	1.130	395	1750
500	37	11	45	1.260	484	2370

†Based upon 3 cables in conduit — 40° C Ambient.

‡Three insulated conductors per conduit (N.E.C.)

RBB 00289

SILICONE RUBBER AIRCRAFT WIRE

**TO
MIL - W - 8777B &
MS - 2547I**

600V 200°C

WIRE—Electrical, silicone insulated, copper, 600 volt, 200°C

CONSTRUCTION: Stranded silver plated conductor; silicone insulation; a glass and dacron braid impregnated with a high temperature lacquer; dacron outer braid and high temperature lacquer.

FEATURES: Capable of operation from — 65°F. to 400°F. Flame resistant. Resistant to aircraft hydraulic fluids, lubricants and fuels. Free stripping.



TABLE MIL-W-8777B & MS-2547I

600 VOLTS

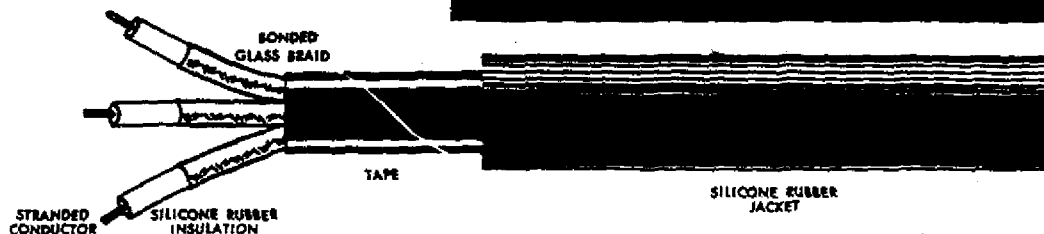
200 C

Wire Size	Strand	Approx. Cond. Diam.	Normal O.D. (inch)	Maximum Net Wt. Lbs./M Ft.
22	19/.0063	.0315	.085	.58
20	19/.008	.040	.095	7.8
18	19/.010	.050	.110	10.8
16	19/.0113	.0565	.125	13.5
14	19/.0142	.071	.143	20.0
12	19/.0179	.0895	.163	29.0
10	49/.0142	.128	.193	45.0
8	133/.0113	.167	.248	72.0
6	133/.0142	.213	.303	107.0
4	133/.0179	.268	.360	165.0
2	665/.010	.325	.425	262.0
1	817/.010	.371	.460	317.0
0	1045/.010	.420	.535	390.0
00	1330/.010	.486	.585	500.0

Modern silicone rubber insulated and jacketed cables are for use in power circuits in wet or dry locations, exposed or in conduit, and to withstand continuous high temperature. Maximum recommended operating temperature is 200°C.

SRGS CONTROL CABLE

SILICONE RUBBER INSULATION
SILICONE SHEATH
600 VOLTS
200°C RATING
SIZES #16, 14, 12 AND 9
(ADDITIONAL SIZES ON REQUEST)



USES: SRGS multi-conductor cables are designed specifically to operate control and signal circuits in continuous very high temperature environments found in steel mills, boiler rooms, glass and cement plants and power stations. The combination of silicone rubber and glass used in SRGS cables afford excellent resistance to heat, moisture, abrasion, flame, ozone and corrosive atmospheres while maintaining excellent flexibility.

FIRE PROOFNESS: An outstanding characteristic of this cable is the ability to maintain circuit integrity during and after exposure to direct flame.

CONSTRUCTION: Stranded tinned copper conductors insulated with 3/64" wall high dielectric grade silicone rubber and colored glass braid for circuit identification. NEMA Control Cable Color Code for Multi-Conductor Cables is used throughout. Individual conductors are cabled with asbestos fillers where necessary to effect a round cross-section, wrapped with mylar binder tape and finished with a flame, moisture, and abrasion resistant silicone rubber jacket. All cables are available with galvanized steel or aluminum armor braid overall. SRGS-C600 cables follow IPCEA Spec S-19-81 for materials of construction and electrical performance.

TABLE SRGS-C600

Approx. #16 AWG (19)		
Number of Conductors	Nominal O.D.	Weight Pounds 1,000
2	.375	66
3	.396	93
4	.430	119
5	.470	143
6	.511	169
7	.511	192
8	.594	231
9	.635	259
10	.681	289
11	.681	309
12	.702	333
19	.817	512

Approx. #12 AWG (19)		
Number of Conductors	Nominal O.D.	Weight Pounds 1,000
2	.543	140
3	.574	180
4	.625	230
5	.677	248
6	.747	330
7	.747	360
8	.815	427
9	.923	450
10	.992	590
11	.992	620
12	1.023	690

*Except #16 which is 2/64"

Approx. #14 AWG (19)		
Number of Conductors	Nominal O.D.	Weight Pounds 1,000
2	.471	102
3	.499	153
4	.579	212
5	.635	257
6	.689	302
7	.689	343
8	.751	389
9	.812	433
10	.917	510
11	.917	551
12	.944	592

Approx. #9 AWG (19)		
Number of Conductors	Nominal O.D.	Weight Pounds 1,000
2	.619	201
3	.656	280
4	.716	350
5	.788	440
6	.903	530
7	.903	580
8	.984	720
9	1.062	780

RBB 00291

SRGA CONTROL CABLE SILICONE RUBBER ASBESTOS BRAID

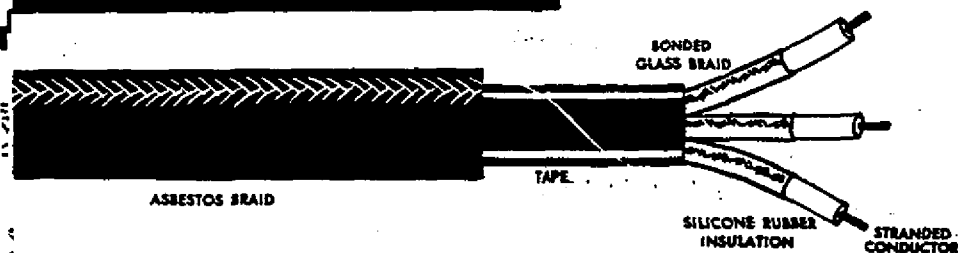
600 VOLTS 125°C

SIZES #12 and #9

(ADDITIONAL SIZES AVAILABLE ON REQUEST)

Modern silicone rubber insulated cables are for use in power circuits in wet or dry locations, exposed or in conduit, and to withstand continuous high temperature. Maximum recommended operating temperature is 125°C. In power cable design an asbestos braid, saturated with flame and moisture retardant compound, is commonly used to provide a durable covering with heat resistant properties compatible with the insulation.

For 200°C rated cables see type SRGS-C600.



USES: SRGA multi-conductor cables are designed specifically to operate control and signal circuits in continuous high temperature environments found in steel mills, boiler rooms, glass and cement plants and power stations. The combination of silicone rubber, glass and asbestos as used in SRGA cables afford excellent resistance to heat, moisture, oil, grease, abrasion, flame, ozone and corrosive atmospheres while maintaining good flexibility.

FIRE PROOFNESS: An outstanding characteristic of this cable is the ability to maintain circuit integrity during and after exposure to direct flame.

CONSTRUCTION: Stranded conductors #12 (19) and #9 (19) tinned copper insulated with 3/64" wall high dielectric grade silicone rubber and colored glass braid for circuit identification. NEMA Control Cable Color Code for Multi-Conductor Cables is used throughout. Individual conductors are cabled with asbestos fillers where necessary to effect a round cross-section, wrapped with mylar binder tape and finished with a flame and moisture resistant asbestos braid. All cables are available with galvanized steel or aluminum armor braid overall.

TABLE SRGA-C600

APPROX. SIZE #12 AWG (19)		
Number of Conductors	Nominal O.D.	Weight Pounds 1,000
2	.499	141
3	.518	182
4	.580	231
5	.641	248
6	.702	331
7	.702	365
8	.769	427
9	.837	452
10	.905	592
11	.905	620
12	.933	690

APPROX. SIZE #9 AWG (19)		
Number of Conductors	Nominal O.D.	Weight Pounds 1,000
2	.573	204
3	.607	283
4	.669	354
5	.741	437
6	.813	528
7	.813	576
8	.893	715
9	.973	774
10	1.053	856
11	1.053	908
12	1.087	975

FOR SINGLE CONDUCTOR SEE TABLE SRA-S600, SRA-X600.