

Temperature Ratings of Various CWC Products

1093	2000 MIL-C-25038B (EMERGENCY)
1000	1832 REFRASIL HEATING CABLE
538	1000 MICAMAT
398	750 MIL-W-25038B
260	500 MIL-W-16878D (E & EE)
250	482 TAGT
200	392 SRG, SRA, A, AA, AG, AGS, A-16a (CSA), MIL-W-7139B, SEW, SF, SR, MIL-W-16878D (F & FF, K & KK) TEFLON HEATING CABLE, A-7 (CSA) SRGA, PF, PGF
150	302 AF, SRG, SR, A-16a (CSA), AGX-300, SFF, SEWF, PFF, PGFF
125	257 SRA, AIA, AI, A-16(b) (CSA)
115	239 MIL-W-16878D TYPES BN, CN, DN
110	230 AVA, VCA, A-17 (CSA), A-15 (CSA)
106	223 AVA-PS-3000
105	221 PVC APPLIANCE, TEW (CSA), MIL-W-16878D TYPES B, C, D, MIL-W-5086A
100	212 AVA-PS5000
90	194 PE/N-90, MTW, AHG, AHC, AVB, TA, TBS, SHFS, AF-B, AF-SB, THHN, SIS, CROSSLENE, HYPALON
80	176 BUS DROP
75	167 PN, 20/10, THWN, THW, VCB, GAS & OIL RESISTANT, CRCS CABLES
60	140 TW (PETROL), TF, TFF

°C

°F

CONTINENTAL WIRE & CABLE

division of GULTON INDUSTRIES, INC.

BOX 1863 YORK, PA. 17406 • TWX (510) 657-4748 PHONE (717) 792-2544



RBB 00079

SC-ELEC-04001

Competition file

POWER AND APPARATUS CABLE
SILICONE RUBBER INSULATION
600 AND 5000 VOLT RATING

CONTINENTAL

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. Single and multi-conductor constructions are available for specific applications.



For Power Cables with conductors of 500,000 CM, or larger, Silicone Rubber, Glass Reinforced insulation, with Moisture Resisting Asbestos Braids are recommended.

The use of the Silicone Rubber insulated Power Cables will often provide for increased power in applications where existing conduits or ducts will not accept more conventional cables having larger overall diameters.

*The Silicone Rubber insulation alone is normally rated at 200°C.

SILICONE RUBBER

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

TABLE SRA-S600

600 VOLTS

Size (AWG or MCM)	Conductor Stranding	Insulation Wall in Mils	Asbestos Braid in MILS	Nominal* O.D. (inch)	Approx. Net Wt. Lbs./M Ft.
14	7	3	45	.260	43
12	7	3	45	.280	56
10	7	3	45	.300	74
8	7	4	45	.370	115
6	7	4	45	.400	160
4	7	4	45	.450	230
2	7	4	45	.510	336
1	19	5	45	.580	425
1/0	19	5	45	.630	525
2/0	19	5	45	.670	635
3/0	19	5	45	.720	780
4/0	19	5	45	.780	975
250	37	6	45	.860	1150
350	37	6	45	.970	1560
500	37	6	45	1.100	2150

TABLE SRA-S5000

5 KV GROUNDED NEUTRAL

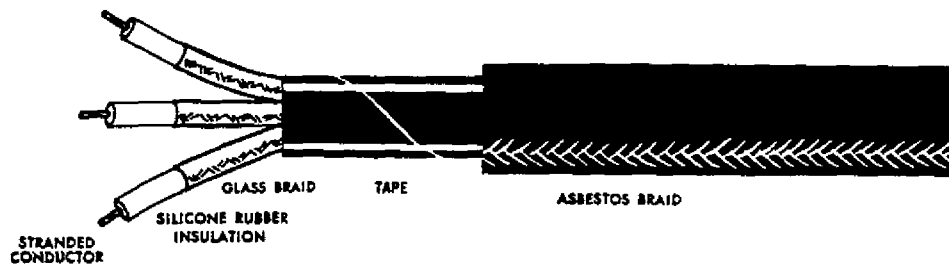
Size (AWG or MCM)	Conductor Stranding	Insulation Wall in Mils	Asbestos Braid in MILS	Nominal* O.D. (inch)	Approx. Net Wt. Lbs./M Ft.
8	19	10	45	.560	210
6	19	10	45	.600	270
4	19	10	45	.650	340
2	19	10	45	.710	470
1	19	10	45	.750	550
1/0	19	10	45	.790	645
2/0	19	10	45	.840	780
3/0	19	10	45	.890	940
4/0	19	10	45	.950	1130
250	37	11	45	1.020	1330
350	37	11	45	1.130	1750
500	37	11	45	1.260	2370

*Diameters are subject to a plus or minus 5% tolerance.

CONTINENTAL WIRE & CABLE



CONTROL CABLE
SILICONE RUBBER INSULATION, GLASS BRAID,
ASBESTOS BRAID OVERALL
TABLE SRA-CS600
600 VOLTS
125°C RATING



USES: SRA 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 SRA cables afford excellent resistance to heat, moisture, oil, grease, abrasion, flame, ozone and corrosive atmospheres while maintaining good flexibility.

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 and moisture resistant asbestos braid. All cables are available with galvanized steel or aluminum armor braid overall.

Number of Conductors	No. 18 AWG (19/28)		No. 14 AWG (19/27)	
	Nominal O.D.	Weight Pounds 1,000	Nominal O.D.	Weight Pounds 1,000
2	.421	97	.455	102
3	.444	118	.482	137
4	.503	146	.529	170
5	.549	170	.581	203
6	.600	201	.636	239
7	.600	215	.636	260
8	.653	245	.691	292
9	.703	274	.746	358
10	.769	310	.817	378
11	.769	331	.817	399
12	.796	353	.847	418
13	.838	375	.893	461
14	.838	397	.893	480
15	.890	435	.946	539
16	.890	448	.946	558
17	.938	488	.998	608
18	.938	499	.998	624
19	.938	517	.998	645

Number of Conductors	No. 12 AWG (19/25)		No. 8 AWG (19/22)	
	Nominal O.D.	Weight Pounds 1,000	Nominal O.D.	Weight Pounds 1,000
2	.485	141	.558	204
3	.517	182	.595	283
4	.573	231	.661	354
5	.630	248	.729	437
6	.693	331	.803	528
7	.693	365	.803	576
8	.755	427	.876	715
9	.820	452	.952	774
10	.888	592	1.033	856
11	.888	620	1.033	908
12	.919	690	1.070	975

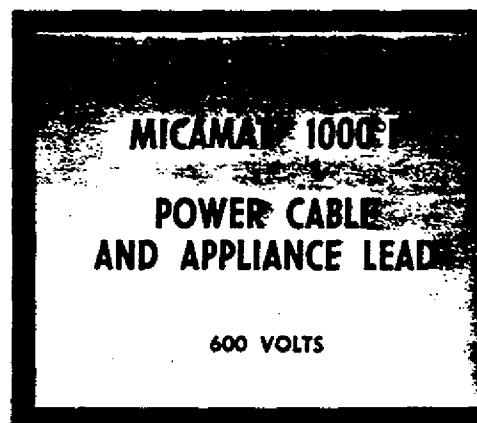
For single conductor see Table SRA-S600, SRA-X600.

CONTINENTAL WIRE & CABLE CORP.



RBB 00081

Micamat cable is a flexible, high temperature insulated power cable and appliance lead designed to operate within specified limits of temperature, humidity and flexing.



Micamat cable is constructed with stranded nickel clad copper conductor, "micamat" tape insulation, impregnated asbestos and an asbestos braid with high temperature silicone impregnation.† The natural color of the wire is straw-tan appearance. These cables are suitable for continuous operation at ambient temperatures up to 1000°F and under emergency conditions will operate in direct flame. Micamat cables are rated at 600 volts.

Applications for micamat include wiring in or on basic oxygen furnaces, open hearths, blast furnaces, cement kilns, electric heaters, glass plants, steel mills, boiler rooms and many others.

A special micamat construction is available with a ceramic finish on the glasbestos braid with no change in overall diameter and weight and only a slight increase in cost. Color—green or red.



STRANDED NICKEL-
CLAD COPPER

"MICAMAT"
TAPES

ASBESTOS

ASBESTOS BRAID W/HIGH
TEMPERATURE FINISH

SPECIFICATIONS

AWG SIZE	STRANDS	NOMINAL O.D.	WGT./ MFT.
18	16/30	0.175"	18#
16	26/30	0.185"	21#
14	41/30	0.200"	28#
12	65/30	0.220"	38#
10	105/30	0.245"	61#
8	168/30	0.375"	84#
6	266/30	0.420"	111#

* GE Trademark

** In dry locations only over 700°F

† At approx. 750°F the impregnation will begin to dissipate however the other constituents of the cable will continue to be held in place and function properly



CONTINENTAL WIRE & CABLE CORP.

RBB 00082

CONSTRUCTION: Solid or Stranded tinned copper conductor, paper separator, Cross-linked polyethylene insulation, felted asbestos finished with heat and moisture resistant compound.

USES: Recommended for use in internal wiring of electric heating appliances at maximum operating temperatures of 150°C.

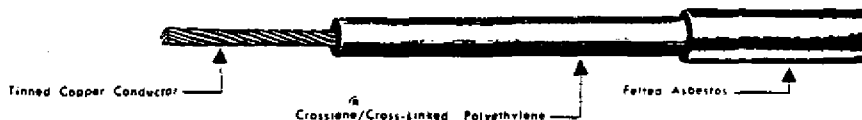
APPROVALS: U.L. approved and Labeled under Styles 5066 and 5068.

TYPE XAT 

APPLIANCE WIRE

150 C 300 VOLT

U.L. STYLE 5066 & 5068



CONSTRUCTION SPECIFICATIONS

XAT-300

AWG	STRANDING	WALL IN MILS CROSSLINK	WALL IN MILS ASBESTOS	NOM O.D.	APPROX WGT LBS./M'	PUT UP	
						SPOOLS	REELS
20	1	20	10	.098	7	500	5000
18	1	20	10	.106	9	500	5000
16	1	20	10	.117	12	500	5000
14	1	20	10	.130	18	500	5000
12	1	25	15	.168	29	500	5000
10	1	25	15	.189	43	500	5000

XAT-S300

20	7	20	10	.104	8	500	5000
18	7	20	10	.112	10	500	5000
16	7	20	10	.124	13	500	5000
14	7	20	10	.139	19	500	5000
12	7	25	15	.179	30	500	5000
10	7	25	15	.203	44	500	5000

XAT-X300

20	10	20	10	.104	8	500	5000
18	16	20	10	.114	10	500	5000
16	26	20	10	.127	13	500	5000
14	41	20	10	.143	19	500	5000
12	65	25	15	.184	30	500	5000
10	105	25	15	.210	47	500	5000

Minimum Quantity Purchase: 5000' per color
Colors available: Black, White, Red, Green, Orange, Blue, Yellow.

* Registered Trade Mark



CONTINENTAL WIRE & CABLE CORP.

RBB 00085

POWER CABLE

SILICONE RUBBER, GLASS REINFORCED INSULATION, FLAME AND MOISTURE RESISTING ASBESTOS BRAID

A silicone rubber insulation, with a 125°C. conductor temperature rating, can often provide for additional power in an existing insulation where conduits or ducts will not accept larger diameter cables having conventional rubber insulation.

Voltage 600 & 5000

A comparison of Ampacities for this and a 90°C cable is shown in the following table.

Voltage: 600 and 5000
Ambient: 40°C

Size MCM	OVERALL DIAMETER — inches				AMPACITY — amperes		
	90°C Butyl Insulation		Silicone Rubber- Glass Reinforced Insulation		90°C Butyl Insulation	Silicone Rubber- Glass Reinforced Insulation	Possible Increase in Current
	600 V	5000 V	600 V	5000 V			
500	1.14	1.31	1.035	1.135	393	485	23%
600	1.25	1.38	1.115	1.215	435	540	24%
700	1.32	1.45	1.185	1.285	471	585	24%
750	1.35	1.49	1.220	1.320	489	608	24%
800	1.38	1.54	1.250	1.350	503	631	25%
900	1.44	1.63	1.315	1.415	531	672	26%
1000	1.51	1.72	1.375	1.475	560	711	27%

APPARATUS LEADS

AIEE — CLASS H 600 VOLT SERVICE

Tinned or nickel clad copper, silicone rubber, glass braid.

APPLICATIONS — For high temperature applications where flexibility is required, such as leads for motors, transformers etc. Maximum conductor temperature is 200°C (392°F). Nickel clad copper conductors are recommended where the conductor temperature exceeds 150°C.

TABLE SRG-X000

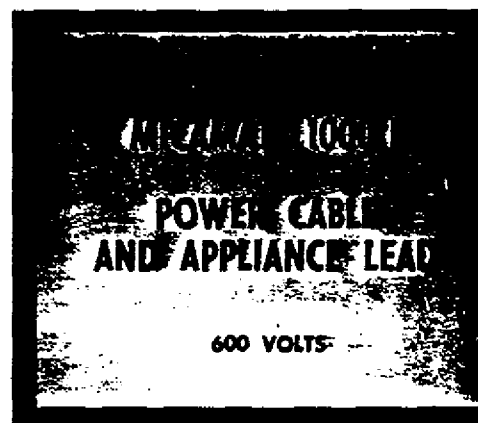
Size (AWG)	Stranding	Insulation Wall in 600V	Minimum* O.D. (inch)	Approx. Net Wt. Lbs./M Ft.	Standard Shipping Length (Ft.)
8	133/.0113	4	.315	92	2000
6	133/.014	4	.362	131	2000
4	133/.0177	4	.417	203	1000
2	133/.0223	4	.486	273	1000
1	259/.018	5	.585	397	1000
1/0	259/.0202	5	.631	481	1000
2/0	259/.0227	5	.684	617	1000
3/0	259/.0255	5	.743	726	1000
4/0	259/.0286	5	.804	881	1000

*Diameters are subject to a plus or minus 5% tolerance.

CONTINENTAL WIRE & CABLE



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Applications for micamat include wiring in or on basic oxygen furnaces, open hearths, blast furnaces, cement kilns, electric heaters, glass plants, steel mills, boiler rooms and many others.

A special micamat construction is available with a ceramic finish on the glasbestos braid with no change in overall diameter and weight and only a slight increase in cost. Color—green or red.



STRANDED NICKEL-
CLAD COPPER

"MICAMAT"
TAPES

ASBESTOS

ASBESTOS BRAID W/HIGH
TEMPERATURE FINISH

SPECIFICATIONS

AWG SIZE	STRANDS	NOMINAL O.D.	WGT./ MFT.
18	16/30	0.175"	18#
16	26/30	0.185"	21#
14	41/30	0.200"	28#
12	65/30	0.220"	38#
10	105/30	0.245"	61#
8	168/30	0.375"	84#
6	266/30	0.420"	111#

* GE Trademark

** In dry locations only over 700°F

† At approx. 750°F the impregnation will begin to dissipate however the other constituents of the cable will continue to be held in place and function properly

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RBB 00099

BOILER ROOM WIRE

TYPE AVA

600 VOLT

AVAILABLE SIZES: 18 to 4/0 AWG inclusive

Solid or stranded copper conductor, varnished cambric and asbestos insulation, asbestos braid, heat, flame and moisture resistant impregnation and finish.

APPLICATIONS — Open or in conduit wiring of boiler rooms and apparatus in such rooms. Type AVA Boiler Room Wire may be used where oil, grease, corrosive vapors or moisture are present. The maximum operating temperature is 110°C (230°F).

APPROVED BY — Underwriters' Laboratories Incorporated.

CONFORMS TO — N. E. Code Standard and NEMA Standard WCI-1963 and ASA C8.36-1962. (Solid only). (Sizes 16 and 18 not listed in N. E. Code Standard).



BLACK
ASBESTOS BRAID

FELTED
ASBESTOS

SEPARATOR

VARNISHED
CAMBRIC

BARE COPPER
CONDUCTOR

(ILLUSTRATION SHOWS CONSTRUCTION
FOR SIZES 8 AND SMALLER)

**TABLE AVA-600 CONSTRUCTION SPECIFICATIONS
SOLID CONDUCTOR**

CONDUCTOR		Bare Diam. (Inch)	Nominal* O.D. (Inch)	Approx. Net Wt. Lbs./M Ft.
Size (AWG)				
4/0		.460	.710	790
3/0		.410	.660	630
2/0		.365	.615	523
1/0		.325	.575	430
1		.289	.539	350
2		.258	.478	260
4		.204	.424	185
6		.162	.382	130
8		.128	.308	82
10		.102	.282	61
12		.081	.261	45
14		.064	.244	37
16		.051	.231	30
18		.040	.220	22

**TABLE AVA-BS600 CONSTRUCTION SPECIFICATIONS
STRANDED CONDUCTOR**

CONDUCTOR		Bare Diam. (Inch)	Nominal* O.D. (Inch)	Approx. Net Wt. Lbs./M Ft.
Size (AWG)	Stranding			
8 AWG	7/.0486	.146	.326	92
10	7/.0385	.116	.296	70
12	7/.0305	.092	.272	53
14	7/.0242	.073	.253	41
16	7/.0192	.058	.238	34
18	7/.0152	.056	.226	25

*Diameters are subject to a plus or minus 5% tolerance.

Shipping Lengths: No. 8 and Smaller 500' Coils.
No. 6 and Larger 1000' Reels.

CONTINENTAL WIRE & CABLE



N.E.C. TYPE AVA

N.E.M.A. STANDARD WC 1-1963

A.S.A. CS 8.36-1962

600 to 5000 VOLT RATING

APPLICATIONS— Type AVA power cables are designed to operate under high ambient temperatures either in the open or in conduit installations. Type AVA power cable is recommended for the wiring of circuits which may be exposed to oil, grease, corrosive vapors or limited amounts of moisture.



(ILLUSTRATION SHOWS CONSTRUCTION FOR SIZES 6 AND SMALLER)

MAXIMUM OPERATING TEMPERATURES

RATING	TEMP.
600 volt	110°C (230°F)
1000 volt	110°C (230°F)
2000 volt	109°C (228°F)
3000 volt	106°C (222°F)
4000 volt	103°C (217°F)
5000 volt	100°C (212°F)

POWER CABLE

TABLE AVA-PS600 600 VOLT

MAXIMUM OPERATING TEMPERATURE 110°C

TABLE AVA-PS5000 5000 VOLT

MAXIMUM OPERATING TEMPERATURE 100°C

CONSTRUCTION SPECIFICATIONS

Conductor AWG or MCM	Stranding	Diameter Overall		Net Weight	
		600 V.	5000 V.	600 V.	5000 V.
1000	61/.1280	1.460	1.620	3490	3720
900	61/.1215	1.405	1.565	3165	3360
800	61/.1145	1.340	1.500	2840	3040
750	61/.1109	1.310	1.470	2670	2880
700	61/.1071	1.275	1.435	2500	2700
600	61/.1032	1.205	1.365	2180	2370
500	61/.0992	1.115	1.275	1825	2000
400	37/.1040	1.030	1.190	1490	1665
300	37/.0900	.930	1.090	1155	1310
250	37/.0822	.875	1.035	985	1140
4/0	19/.1055	.780	.960	815	960
3/0	19/.0940	.720	.900	665	800
2/0	19/.0837	.670	.850	545	680
1/0	19/.0745	.625	.805	455	580
1	19/.0664	.580	.760	370	490
2	7/.0974	.510	.700	288	410
4	7/.0772	.450	.640	200	300
6	7/.0612	.405	.595	141	230
8	7/.0486	.345	.555	100	190
10	7/.0385	.305	.525	70	150
12	7/.0305	.280	—	55	—
14	7/.0242	.265	—	45	—

Shipping Length
250 MCM and larger 500' Reel.
4/0 and smaller 1000' Reel.

CONTINENTAL WIRE & CABLE



POWER AND APPARATUS CABLE SILICONE RUBBER INSULATION 600 AND 5000 VOLT RATING

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. Single and multi-conductor constructions are available for specific applications.



For Power Cables with conductors of 500,000 CM, or larger, Silicone Rubber, Glass Reinforced insulation, with Moisture Resisting Asbestos Braids are recommended.

The use of the Silicone Rubber insulated Power Cables will often provide for increased power in applications where existing conduits or ducts will not accept more conventional cables having larger overall diameters.

*The Silicone Rubber Insulation alone is normally rated at 200°C.

SILICONE RUBBER

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

TABLE SRA-S600			600 VOLTS		
Size (AWG or MCM)	CONDUCTOR		Insulation Wt. in O.D.s	Asbestos Braid in Mils	Nominal* O.D. (inches)
	Stranding				
14	7	3	45	.260	43
12	7	3	45	.280	56
10	7	3	45	.300	74
8	7	4	45	.370	115
6	7	4	45	.400	160
4	7	4	45	.450	230
2	7	4	45	.510	336
1	19	5	45	.580	425
1/0	19	5	45	.630	525
2/0	19	5	45	.670	635
3/0	19	5	45	.720	780
4/0	19	5	45	.780	975
250	37	6	45	.860	1150
350	37	6	45	.970	1560
500	37	6	45	1.100	2150

TABLE SRA-S5000			5 KV GROUNDED NEUTRAL		
Size (AWG or MCM)	CONDUCTOR		Insulation Wt. in O.D.s	Asbestos Braid in Mils	Nominal* O.D. (inches)
	Stranding				
8	19	10	45	.560	210
6	19	10	45	.600	270
4	19	10	45	.650	340
2	19	10	45	.710	470
1	19	10	45	.750	550
1/0	19	10	45	.790	645
2/0	19	10	45	.840	780
3/0	19	10	45	.890	940
4/0	19	10	45	.950	1130
250	37	11	45	1.020	1330
350	37	11	45	1.130	1750
500	37	11	45	1.260	2370

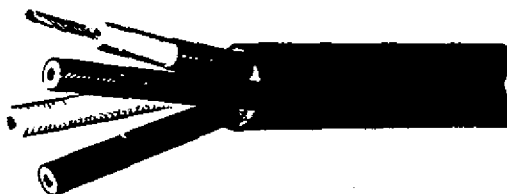
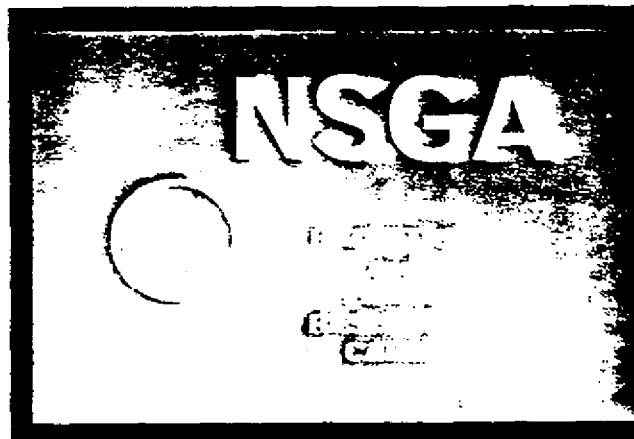
*Diameters are subject to a plus or minus 5% tolerance.

CONTINENTAL WIRE & CABLE





**CONTINENTAL
WIRE & CABLE
CORP.**



**NUCLESIL® RUBBER INSULATION, GLASS BRAIDS, FLAME & ABRASION RESISTANT
ASBESTOS BRAID OVERALL.**

SPECIFICATIONS

NSGA

CONSTRUCTION: Stranded tinned copper conductors, nucleasil silicone rubber insulation specifically compounded for extreme radiation resistance, color coded glass braids, flame, abrasion and radiation resistant asbestos braid overall. Nucleasil silicone rubber insulation exceeds P3.17 IPCEA S-19-81 5th. edition.

FEATURES: Circuit integrity during and after exposure to simulated loca and fire. Minimum flame propagation and smoking. No corrosive fumes given off on burning. Exceeds all known vertical tray tests.

ADVANTAGES: Radiation levels to 10⁶ rads
Maintains circuit integrity
Excellent electrical properties
Excellent overload characteristics
40 year life (remains flexible and usable)
Brilliant color code
Good abrasion resistance
125°C temp. rating*
Good flexibility
No cold flow
Superior corona & ozone

USES: Instrumentation or control wiring in nuclear generating stations. Available in single and multi-conductor form in AWG Sizes #20 through 500 MCM and up to 100 conductors or components, shielded or unshielded, armoured or unarmoured. Suitable for use in conduit or open cable trays.

*200°C on special order