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INTRODUCTION

Gulf Cable and Electrical Industries Company K.S.C. (Gulf Cable) is the only domestic manufacturer and exporter of power cables, control cables, telecommunication cables and overhead conductors in Kuwait. We were established in March 1975 and have been listed on the Kuwait Stock Exchange since 1984. Our manufacturing operations commenced in 1979.

We embarked upon a massive restoration of our plant & its facilities during the early 90's when state-of-the-art machinery and testing equipment were acquired. Thereafter, new machines are recurrently being introduced to enhance our production capacity and product range. The new machines and equipment have numerous built-in functions and features assuring precision and consistency of the highest standard.

On a regular basis, we develop new products and enhance our existing ones. At Gulf Cable we pay utmost attention to product quality, and to ensure this, we have adapted a comprehensive Quality Assurance System that complies with international standards.

Quality has always been our top priority and meeting customer's expectations has been our prime objective. The very basis on which we have earned the confidence of our clientele.

At Gulf Cable we follow stringent quality standards which go beyond stipulations of international specifications, rendering long term performance and reliability to our products during their service life.

At Gulf Cable we always aim for the best. When most of the cable manufacturers in the region settled for ISO: 9002, we stand out with ISO 9001, which recognizes our ability for Design and Development as well. We are also acknowledged by the Kuwait Quality Mark issued by the Ministry of Commerce and Industries.



PRODUCT RANGE



We at Gulf Cable always aim for the best. While most of the Cable Manufacturers in Gulf and Middle East region settled for ISO 9002, we stand out with ISO 9001 which recognizes our ability for Design & Development as well.

As a philosophy, our commitment to customers does not end with a sale. We also offer a host of related services before and after the sale. These include,

- Application engineering service for selection of appropriate product best suiting the end use.
- An extensive range of cables, single core wires, flexible cords bare & insulated conductors manufactured to stringent Quality Standards going beyond international specifications.
- Design and Development of products tailored to meet specific requirements of the application.
- To help the customers understand the product intricacies and its performance levels.

NOTE 1: THE TABULATIONS ON SUBSEQUENT PAGES FURNISH OVERALL DIMENSIONS, NET & GROSS WEIGHTS AND DRUM DIMENSIONS PLEASE NOTE THAT THESE ARE "APPROXIMATE" VALUES. THEY HAVE BEEN FURNISHED FOR GENERAL GUIDELINES AND INTENDED TO BE USED FOR THUMB RULE ESTIMATIONS/FREIGHT CALCULATIONS

NOTE 2: THE FOLLOWING LIST TABULATES ONLY THE "STANDARD" PRODUCTS. FOR ANY PRODUCT NOT LISTED BELOW, PLEASE DO NOT HESITATE TO CONTACT OUR SALES & MARKETING DIVISION. WE SHALL BE TOO PLEASED TO MEET YOUR SPECIFIC REQUIREMENTS.

PRODUCT	STANDARD
Telephone & communication cables	
• PE insulated, star quaded, fully colour coded telephone cables of armoured, unarmoured or self supporting type	MOC standards
• PVC insulated internal telephone cables	MOC standards
• Coaxial and data transmission cables	Gulf Cables / Customer Standards
• Irrigation Cable	UL 493

IRRIGATION CABLE
IN LINE WITH UL SPECIFICATION NO 493 - 1995

1



Suitable for direct burial applications like irrigation systems, commercial sprinklers etc.

Conductor: Circular Solid / Stranded Annealed Copper

Insulation: HR PVC type 5 (Equivalent to UL 493 600 V grade)

Tested for AC spark test, Insulation Resistance and Flammability as per IEC: 332 - I

Insulation Colours to choose from: Green/Yellow, Green, White, Natural Grey, Red, Black or any other colour as required.

Identification: IRRIGATION CABLE xx AWG UF 600 V GULF CABLE KUWAIT

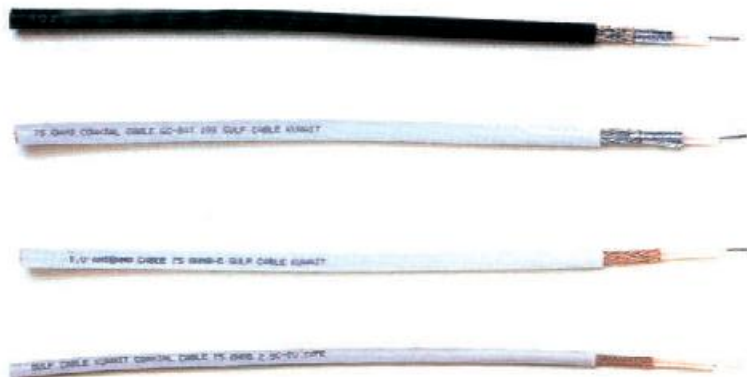
(where xx indicates conductor size)

Packing: Available in Spools / Shrink Wrap coils as required in mutually agreed lengths

Nominal Conductor Cross Section	Nominal Insulation Thickness	Overall Diameter (Approx)	Net Weight (Approx)	DC Resistance at 20 deg C (Maximum)
AWG	mm	mm	Kg/km	Ohm/km
14	1.6	5.0	45	8.45
12	1.6	5.5	60	5.33
10	1.6	6.0	83	3.25

Note: For any conductor cross section other than listed above, you are welcome to contact our Marketing Department.

COAXIAL CABLES FOR T.V / SATELLITE ANTENNA Etc.



GULF CABLE REF. TYPE		CA 1 - 001	CA 2 - 001	CA 2 - 005	CA 2 - 006 SAT - 100
Inner Conductor Type and Dia. Over (mm)		Solid Plain Copper 0.4	Solid Plain Copper 0.65	Solid Plain Copper 0.955	Solid Plain Copper 1.03
Dielectric Type and Dia. Over (mm)		Solid PE 2.6	Solid PE 3.8	Air-Spaced PE 4.65	Air-Spaced PE 4.65
Screen Type and Dia. Over (mm)		Plain Cu Wire Braid 3.0	Plain Cu Wire Braid 4.2	Poly-AL Tape+ Plain Cu Wire Braid 5.1	Poly-AL Tape+ Tinned Cu Wire Braid 5.3
Jacket Type and Dia. Over (mm)		PVC 5.0	PVC 6.4	PVC 7.1	PVC 7.0
Colour of Jacket		White	White	Black	White
Characteristic Impedance		75 Ohm ± 3	75 Ohm ± 3	75 Ohm ± 3	75 Ohm ± 3
D.C. Resistance of Inner Conductor Ohm/Km. at 20°C		145	57.0	25.5	21.5
Nominal Capacitance nF / Km		70	73	56	55
Screen Coverage		95%	-	100%	100%
A T T E N U A T I O N	80 MHz dB / 100 M	13.5	8.8	5.7	5.3
	100 MHz dB / 100M	15.1	9.9	6.4	6.0
	120 MHz dB / 100M	16.6	10.9	7.0	6.6
	200 MHz dB / 100M	21.6	14.2	9.2	8.6
	400 MHz dB / 100M	30.9	20.5	13.3	12.5
	600 MHz dB / 100M	38.2	25.4	16.6	15.6
	800 MHz dB / 100M	44.5	29.7	19.5	18.3
	1000 MHz dB / 100M	50.2	33.6	22.1	20.8
Standard Packing Length (M)		100	100	100	100
Weight Per Coil (Kg)		3.2	4.5	4.7	4.7
Equivalent Spec. / Type		2.5C - 2V	4.5C - 2V	RG 6 / U	SAT-100

DATA TRANSMISSION CABLE

24 AWG - 4 PAIR UNSHIELDED TWISTED PAIR (UTP-CAT-5) (ENHANCED)



TYPE OF CABLE	*UTP
Conductor Size	Solid Plain Copper 24 AWG
Type of Insulation	Polypropylene
Thickness of Insulation (mm)	0.21
Type of Shield	N.A.
Type of Jacket	PVC - Grey (Type - 9)
Thickness of Jacket (mm)	0.6
Overall Diameter (mm)	5.3
Conductor Resistance Max.Ohm / Km at 20°C	93.8
Mutual Capacitance Max.	5.6 nF / 100 M
Capacitance Unbalance Max.	330 pF / 100 M
Characteristic Impedance Ohms	100 ± 15
Attenuation Max. at 100 MHz	22 dB / 100 M
Cross Talk Min. at 100 MHz	32 dB / 100 M
Core Identification	White / Blue, Blue White / Orange, Orange White / Green, Green White / Brown, Brown

* Tested at ETL Laboratory for Frequency upto 350 Mhz, which exceeds the requirements of TIA / EA - 568 A
Above Cables with RPE RETARDANT or LOW SMOKE ZERO HALOGEN Jacket available on request.

PE INSULATED AND PE SHEATHED

TELEPHONE CABLES

(CCP-LAP & CCP-LAP-SS)



Size of Conductor	No. of Pairs	Insulation Thickness	Nominal Dia. Over Insulation	CCP-LAP			Self Supporting Type CCP-LAP-SS					Standard Packing Length	CCP-LAP		Self Supporting Type CCP-LAP-SS	
				Nominal Thickness of LAP Sheath (including Aluminium Tape)	Max. Overall Diameter of Cable	Approx. Cable Weight	Nominal Thickness of LAP Sheath (including Aluminium Tape)	Approx. Overall Diameter of Cable	Self Supporting Strand	Approx. Cable Height	Approx. Cable Weight		Drum Size	Approx. Gross Weight	Drum Size	Approx. Gross Weight
mm	No.	mm	mm	mm	mm	Kg/Km	mm	mm	No./mm	mm	Kg/Km	Metre ± 10%		Kg		Kg
0.4	10	0.165	0.73	1.7	11	100	1.7	11	7/1.6	23	280	1000	D-9	160	D-14	420
	20			1.7	13	135	1.7	13	7/1.6	25	315	1000	D-10	200	D-14	460
	30			1.7	14.5	180	1.7	14.5	7/1.6	26.5	365	1000	D-10	240	D-16	570
	50			1.7	17	260	1.7	17	7/1.6	29	450	1000	D-11	360	D-16	660
	100			1.7	21	445	1.7	21	7/1.6	34	625	1000	D-12	560	D-19	950
	200			1.8	27.5	835	1.8	27.5	7/2.0	41.5	1155	1000	D-16	1050	D-22	1620
0.5	10	0.205	0.91	1.7	12	125	1.7	12	7/1.6	24	295	1000	D-9	190	D-14	440
	20			1.7	14.5	185	1.7	14.5	7/1.6	26.5	330	1000	D-10	250	D-16	540
	30			1.7	16	240	1.7	16	7/1.6	28	490	1000	D-11	340	D-16	700
	50			1.7	19	365	1.7	19	7/1.6	33.5	550	1000	D-12	480	D-19	870
	100			1.7	24	640	1.7	24	7/2.0	38	930	1000	D-14	790	D-19	1250
	200			1.8	32	1190	1.8	32	7/2.0	46	1575	1000	D-19	1510	D-22	2040
0.65	10	0.255	1.16	1.7	14	160	1.7	14	7/1.6	26	310	1000	D-10	220	D-14	460
	20			1.7	16	255	1.7	16	7/1.6	28	420	1000	D-11	360	D-16	630
	30			1.7	19	360	1.7	19	7/1.6	31	550	1000	D-12	470	D-19	870
	50			1.7	22	550	1.7	22	7/2.0	36	810	1000	D-14	700	D-19	1130
	100			1.8	30	985	1.8	30	7/2.0	45	1365	1000	D-18	1220	D-22	1830
	200			2.1	39	1850	-	-	-	-	-	500	D-16	1140	-	-
0.9	10	0.305	1.51	1.7	16	245	1.7	16	7/1.6	28	430	1000	D-11	350	D-16	640
	20			1.7	21	420	1.7	21	7/2.0	35	700	1000	D-12	530	D-19	1020
	30			1.7	24	590	1.7	24	7/2.0	38	865	1000	D-14	740	D-19	1190
	50			1.8	29	935	1.8	29	7/2.0	44	1290	1000	D-18	1170	D-22	1760
	100			2.0	37	1705	-	-	-	-	-	500	D-16	1060	-	-
	200			2.3	52	3395	-	-	-	-	-	500	D-22	2170	-	-

Cables conform to Ministry of Communication, Kuwait, Specification for CCP-LAP & CCP-LAP-SS Cables.

PE INSULATED STEEL WIRE

ARM OURED AND PE SHEATHED TELEPHONE CABLES

(CCP-LAP-A)



Size of Conductor	No. of Pairs	Insulation Thickness	Nominal Diameter Over Insulation	Nominal Thickness of LAP Sheath (including Aluminium Tape)	Diameter of Steel Wire Armour	Nominal Thickness of Outer Sheath	Max. Overall Diameter of Cable	Approx. Cable Weight	Standard Packing Length	Drum Size	Approx. Gross Weight
mm	No.	mm	mm	mm	mm	mm	mm	Kg/Km	Metre \pm 10%		Kg
0.4	10	0.165	0.73	1.7	1.25	2.5	19	430	1000	D-12	540
	20			1.7	1.25	2.5	21	540	1000	D-12	650
	30			1.7	1.25	2.5	22.5	620	1000	D-14	770
	50			1.7	1.6	2.5	26	870	1000	D-14	1020
	100			1.7	1.6	2.5	30	1180	1000	D-18	1420
	200			1.8	2.0	2.5	37.5	1960	1000	D-19	2280
0.5	10	0.205	0.91	1.7	1.25	2.5	20	500	1000	D-12	610
	20			1.7	1.25	2.5	22.5	620	1000	D-14	770
	30			1.7	1.6	2.5	25	860	1000	D-14	1010
	50			1.7	1.6	2.5	28	1060	1000	D-16	1270
	100			1.7	1.6	2.5	33	1480	1000	D-19	1800
	200			1.8	2.0	2.5	42	2550	1000	D-22	3020
0.65	10	0.255	1.16	1.7	1.25	2.5	21	610	1000	D-12	720
	20			1.7	1.6	2.5	25	880	1000	D-14	1030
	30			1.7	1.6	2.5	28	1020	1000	D-16	1230
	50			1.7	1.6	2.5	31	1330	1000	D-19	1650
	100			1.8	2.0	2.5	40	2200	1000	D-22	2670
	200			2.1	2.0	2.5	49	3460	500	D-19	2050
0.9	10	0.305	1.51	1.7	1.6	2.5	25	850	1000	D-14	1000
	20			1.7	1.6	2.5	30	1110	1000	D-18	1350
	30			1.7	1.6	2.5	33	1370	1000	D-19	1690
	50			1.8	2.0	2.5	39	2090	1000	D-19	2410
	100			2.0	2.0	2.5	47	3220	500	D-19	1930
	200			2.3	2.5	2.5	62	5830	500	D-22	3380

Cables conform to Ministry of Communication, Kuwait, Specification for CCP-LAP-A Cables.

INTERNAL NETWORK CABLES

TINNED COPPER CONDUCTOR, PVC INSULATED,

PVC SHEATHED

ATC/PVC/PVC: SIZE 0.5MM SOLID



No. of Pairs	Thickness of Insulation	Thickness of Sheath	Approx. Overall Diameter	Approx. Cable Weight	Standard Packing Length	Approx. Coil Weight	Core Identification
No.	mm	mm	mm	Kg/Km	Yards	Kg	Colour
1	0.2	0.6	3.6	16	100Y Coil	1.5	W/B
1.5	0.2	0.6	3.8	20	100Y Coil	1.8	W/B/G
2*	0.2	0.6	4.0	23	100Y Coil	2.1	B/W,Br/Bl
3	0.2	0.6	5.0	32	100Y Coil	2.9	W/B,WY,W/G
4	0.2	0.6	5.5	39	100Y Coil	3.6	Above + W/R
5	0.2	0.6	6.0	47	100Y Coil	4.3	Above + W/V
6	0.2	0.6	6.4	52	100Y Coil	4.8	Above + Br/B
7	0.2	0.6	6.8	60	100Y Coil	5.5	Above + Br/Y
8	0.2	0.6	7.1	67	100Y Coil	6.1	Above + Br/G
9	0.2	0.6	7.5	74	100Y Coil	6.8	Above + Br/R
10	0.2	0.6	7.8	78	100Y Coil	7.1	Above + Br/V

* Quad Construction.

Colours: W-White, B-Blue, Y-Yellow, G-Green, R-Red, V-Violet, Br-Brown, Bl-Black.

Colour of sheath - Grey.

Electrical Characteristics

Max Conductor D.C Resistance at 20°C- 95.3 Ohm/Km.

Min. Insulation Resistance at 20°C - 500 M-Ohm-Km.

Max - Average mutual Capacitance - 0.077 micro farad/Km

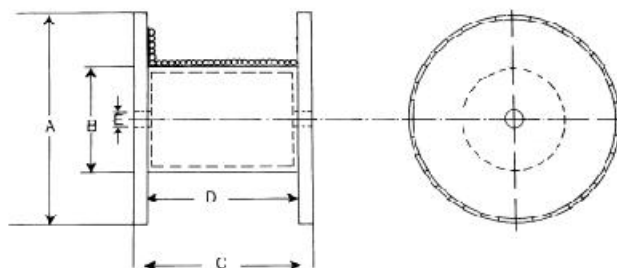
Max. pair to pair Capacitance unbalance at 800 Hz - 300 picofarads/200 Mts.

Cables conforms generally to MOC Kuwait specification.

DRUMS SIZES AND DIMENSIONS

- A - Flange diameter (excluding lagging), mm
B - Barrel diameter, mm
C - Overall width, mm
D - Traverse width, mm
E - Minimum spindle hole diameter, mm

7



DIMENSIONS

Drum Size D-No	A	B	C	D	E
D-6	600	250	470	400	110
D-7	700	325	570	500	110
D-8	800	375	570	500	110
D-9	900	425	620	550	110
D-10	1000	500	690	600	110
D-11	1100	575	740	650	110
D-12	1200	675	950	850	110
D-14	1400	800	950	850	110
D-16	1600	950	970	850	110
D-18	1800	1100	1220	1100	110
D-19	1900	1100	1230	1100	110
D-20	2000	1300	1235	1100	110
D-21	2100	1150	1290	1100	110
D-22	2200	1400	1390	1250	110
D-23	2340	1200	1795	1625	110
D-24	2400	1200	1795	1625	110
D-25-S	2540	1200	1825	1625	110
D-25	2540	1400	1800	1625	110
D-26	2600	1400	1970	1800	110

Drum dimensions in actual deliveries are subject to change without notice.