

**MULTI-BAND (30 -2400 MHz) COAXIAL RADIATING CABLES
1/2", 7/8", 1"1/4 & 1"5/8 FOR RADIO APPLICATIONS**

Standard reference : IEC 61196-4



Application / Features

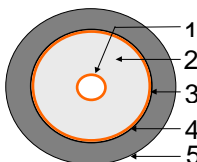
The fast development of mobile communications, data exchange and TETRA security communications (for police, firemen, ...) requires improving the extent of radio coverage, in particular in confined areas such as subways, railways, road tunnels, car parks, malls, buildings,
Silec Cable offers multi-band coaxial radiating cables for long length radio coverage, mainly in big infra-structures (tunnels, ...) and complying to the most severe standards concerning fire hazards.

Design

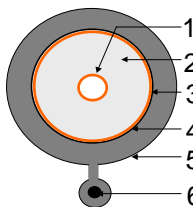
1. Inner conductor (copper tube or copper-coated aluminium tube)
2. Cellular polyethylene insulation.
3. Outer slotted copper conductor
4. Tape
5. LSZH outer sheath
6. Steel messenger for figure 8 self-supported cables.



Cylindrical



Self-supported



Transmission performance

Cable type	1/2"	7/8"	1"1/4	1" 5/8
Impedance Ω	50	50	50	50
Attenuation ⁽¹⁾	dB/km			
30 MHz	12	6,2	5	-
100 MHz	22	12,5	9	
150 MHz	26	15	11	5
450 MHz	48	27	21	8
900 MHz	73	42,5	34	19
1710 MHz	122	75	65	
1880 MHz	137	85	75	48
2400 MHz	340	145	115	96
Coupling loss ⁽¹⁾ at 2m	dB		dB	
30 MHz	50	60	50	60
100 MHz	60	71	60	70
150 MHz	63	74	62	74
450 MHz	65	75	67	75
900 MHz	65	75	64	74
1710 MHz	62	72	62	72
1880MHz	62	72	62	72
2400 MHz	58	70	60	70
Return loss	dB			
	From 30 MHz to 2500 MHz : < -14 dB (3)			

Electrical characteristics @ 20°C

Capacity	72	nF/km
Nominal Velocity of Propagation	87	%
Insulation resistance	10000	MΩ.km
Dielectric strength - 1 min	1500	V d.c.

(4) C = cylindrical cable – F8 = figure 8 self-supported cable

Weight & dimensions

Cable	Weight kg/km	Ext. Diam. mm
	C / F8 (4)	C / F8 (4)
1/2"	270/360	17,2/21,6x17,2
7/8"	660/760	29,1/38,8x29,1
1"1/4	980/1100	39,2/49,3x39,2
1"5/8	1350/1500	49,1/60x49,1

Other characteristics

Storage temperature	-15°C to +70°C
Service temperature	0°C to +60°C
Laying temperature	-5°C to +40°C (between -5°C & +5°C, a prior storage 24 h at 20 °C is recommended)
Fire behaviour	No fire propagation (several options depending on the sheathing material type) according to the following standards : NF C 32 070 Cat. C1 and/or K20 RATP and/or IEC 60 332-3 Category A or Category C. Very low smoke density, toxicity and corrosivity according to the following standards : NF C 20 902, CEI 1034, NF C 20 454 and IEC 60 754-2.

(1) Characteristics depending on environment and on cable position. Please contact us for more information.

(2) C50, C95 : 50% and 95% coupling loss probability.

(3) Excepted for rejection frequencies : 280 MHz and multiples (740 MHz and multiples for 1"5/8 cable).

Note : Coaxial radiating cables are not suitable for low impedance applications as : heating, lighting, etc... Their packing is marked according to the European Low Voltage Directive (73/23/CEE) 19 February 1973 modified by the directive 93/68/CEE (22 July 1993).

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