

- Low Loss Microwave Interconnect
- Wireless Base Station Interconnect

### Features & Benefits

- Lower Loss than Flexible Cables
- Superior Shielding Effectiveness
- Low Passive Intermod (PIM)
- Stable Loss & VSWR vs Flexing
- Readily Available Connectors



**Coppersol** employs a thin tubular copper outer conductor and solid PTFE dielectric which provides the lowest attenuation and highest shielding giving it significant performance advantages over flexible coax of similar size.

**Coppersol** was developed 30-40 years ago and was subsequently adopted by the military and MIL-C-17 specification sheets and QPL status were achieved.

### Some of the key characteristics of Coppersol are:

**Shielding Effectiveness** – the highest achievable for any cable and is estimated at >165 db, well below measurable limits..

**Small/Lightweight** – much smaller and therefore lighter weight than flexible coax having similar electrical performance.

**Phase Stable** – the solid outer conductor minimizes electrical length change with temperature to substan-

tially lower levels than flexible coax cables.

**Low Loss** – can achieve up to 50% less loss than flexible cable of the same size.

**Attenuation Stability** – impervious outer conductor prevents oxidation of the conductors thereby minimizing attenuation change vs. time.

**Electrical Performance** – has lowest VSWR and pulse reflection coefficient and exhibits very uniform characteristics to >20 GHz.

**Corrosion Resistance** – jacketing of the bare copper tube or plating with tin or silver is recommended when cable is deployed in a corrosive environment.

**Formability** – the solid copper tube enables the cable to be bent to any 3 dimensional configuration and have it retain its shape.

**Connectors** – standard inexpensive solder-on connectors are available from a variety of connector sources.

### Coppersol Semirigid Coaxial Cables

TMS Number	Conductor inches (mm)	Dielectric inches (mm)	Shields inches (mm)	Weight lbs/foot (kg/m)	Impedance ohms Vp(%)	Capacitance pF/foot (pF/m)	DC Resistance ohms/1kft (/km)		Oper. Voltage kvrms	Temp. Range F (C)	Min. Bend Radius in. (mm)	Test Freq.
							Cent. Cond	Shield (s)				
CL-50086 M17/133-RG405	SCCS 0.0201 (0.51)	PTFE 0.066 (1.68)	BC Tube 0.0865 (2.20)	0.0153 (0.023)	50+/-1.5 69.5	29.4 (96.5)	64.8 (212.6)	2.68 (8.86)	1.5	-40+194 (-40+125)	0.125 (3.2)	0.5- 20 GHz
CL-50141 M17/130-RG402	SCCS 0.0362 (0.92)	PTFE 0.1175 (2.98)	BC Tube 0.141 (3.58)	0.0344 (0.051)	50+/-1 69.5	29.4 (96.5)	20.0 (65.6)	1.32 (4.3)	1.9	-40+194 (-40+125)	0.250 (6.4)	0.5- 20 GHz
CL-50250 M17/129-RG401	SC 0.0641 (1.63)	PTFE 0.209 (5.31)	BC Tube 0.250 (6.35)	0.105 (0.156)	50+/-0.5 69.5	29.4 (96.5)	2.6 (8.4)	0.45 (1.5)	3.0	-40+194 (-40+125)	0.375 (9.5)	0.5- 20 GHz