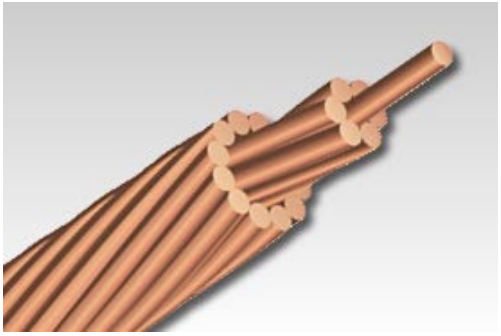
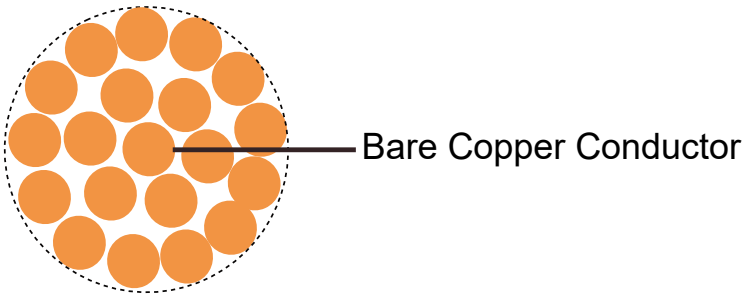
Caledonian

Bare Copper Conductor

CCL-BC-R(Cu Class2)





APPLICATION

Stranded Class 2 bare copper wire to BS EN 60228 / IEC 60228 cables are non insulated and non sheathed soft drawn copper to BS6360/81. Stranded bare soft or annealed copper conductors are recommended for use as neutrals, in circuit ground connections as well as machinery and equipment grounding systems. Soft copper may be used for transformer drop leads or other non-tension hook-up jumpers.

STANDARD

Basic design to BS 6360 and BS EN 60228 / IEC 60228

FEATURES AND BENEFITES

Stranded bare soft or annealed copper conductors are suitable for direct burial and do not suffer from the inherent corrosion problems that an aluminum conductor would. Copper is almost twice as conductive as aluminum. Copper is easier than aluminum to terminate and join at splices and joints

CONSTRUCTION

Bare copper conductors are compressed concentric-lay-stranded consisting of one or more layers of wire wrapped helically around a straight round central wire. Each successive layer has six wires more than the layer immediately beneath. Greater flexibility is afforded by using Class 2 stranding. The direction of lay for the outer layer is left hand lay. In 7,19 and 37 wire constructions, the direction of lay of each successive layer is reversed.

TECHNICAL INFORMATION

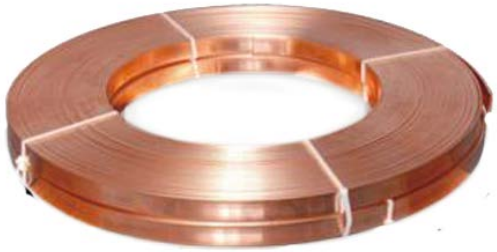
Construction characteristics	
Conductor material	Electrolytic, stranded and bare copper
Conductor class	Class 2 according to BS EN60228
Usage characteristics	
Minimum Installation Temperature	0°C
Maximum Installation Temperature	60°C
Minimum Operating Temperature	-15°C
Maximum Operating Temperature	70°C
Maximum conductor temperature	90°C
Linear resistance @20°C	According to BS EN60228 / IEC 60228
Short-circuit max. conductor temperature	370°C
Mechanical characteristics	
Min. Bending Radius	35mm^2 up to 400mm^2 = 6 x OD

CONSTRUCTION PARAMETERS

Part No.	Cross Section	No./Nominal Diameter of Strands	Conductor Nominal Diameter	Approx. Weight	Max. DC Resistance at 20°C
	mm²	No./mm	mm	kg/km	Ω/km
CCL-BC-R 50	50 mm^2	19/1.78	8.90	430	0.387
CCL-BC-R 70	70 mm^2	19/2.14	10.70	625	0.268
CCL-BC-R 95	95 mm^2	19/2.52	12.60	866	0.193
CCL-BC-R 120	120 mm^2	37/2.03	14.25	1090	0.153
CCL-BC-R 185	185 mm^2	37/2.52	17.64	1680	0.099
CCL-BC-R 240	240 mm^2	61/2.25	20.30	2220	0.075
CCL-BC-R 300	300 mm^2	61/2.52	22.68	2780	0.060

Flat Copper Tape / Bar

CCL-BCT



APPLICATION

Bare Copper Tape / Bar is used for both lightning and earthing protection - Our copper earth tapes / bars are annealed for ease of use with radiuses edges. These high conductivity bare copper tapes / bars are used on both lightning protection and earthing applications.

STANDARD

BS EN 13601(previously BS 1432-C101)

CONSTRUCTION

Raw Material: Pure copper
Appearance and surface quality: The surface shall be smooth and free from imperfection.
Width: 25~140mm
Thickness: 3~30mm
Copper Layer Purity : Minimum 99.9% pure
Glancing Flatness : 4mm/m

TECHNICAL INFORMATION

Melting Point	1083°C
Density	8.94 g/cm³
Specific heat	385 J/Kg °K
Thermal conductivity	399 W/m°C
Thermal expansion coefficient (20-200°C)	17.3 x 10-6
Electrical conductivity	101.5 % IACS
Electrical resistivity	0.017 microhm m
Modulus of elasticity	118000 N/mm²

CONSTRUCTION PARAMETERS

Part NO.	SIZE(mm)	Cross Section(mm²)
CCL-BCT-5x30	30mm x 5mm	150 mm²
CCL-BCT-5x50	50mm x 5mm	250 mm²