Tinned Copper Wire.

Tinned copper wire finding many uses including board repair, shorting links on PCBs, and Fuse Wire.

Unlike Enamelled Copper Wire, Tinned Copper Wire cannot be used for Motor, Solenoid or Coil winding as it has no insulation.

Tin is a useful plating for copper because it not only helps to boost copper's properties, it also helps the wire to last much longer than it would normally. In fact, a 12 gauge tin coated copper wire can last up to ten times longer than a similar 12 gauge bare copper wire.

As tin resists corrosion and doesn't oxidize the plating helps to protect the copper underneath. This wards off additional wear and tear that would detract years off the life of a bare copper cable. This is especially so in instances where the operating temperatures of the wire exceed 100 degrees Celsius. At higher temperatures, the corrosion resistance of copper declines, making a tin coating valuable for protecting the wire in this state. It is also highly desirable for any marine electronics, and tinned copper is infamous for its uses in marine technologies.

Tinned wires are also desirable for soldering as they make connections and soldering an easy task given tin is a primary component in solder. Tin also helps to strengthen the copper wire underneath, making it more resilient to breakage or lost connections while also boosting coppers conductivity.

So while tinned copper wire is more expensive than bare copper wire, it is often considered to be a much more prudent expenditure in the long run. Given that simple tin plating can drastically increase the life of copper, as well as ensure its effectiveness in high humidity areas, it pays for itself with strong performance and a lot less maintenance.

Tinned copper wire is sold in 500g & 250g rolls & by the metre.

Calculate Fuse Ratings

P (Power in Watts) = V (voltage) x I (current in Amps)

The fuse rating can be calculated by dividing the power used by the appliance by the voltage going into the appliance

I (Amps) = P (Watts) ÷ V (Voltage)

To calculate the fuse rating for a 1KW (1000 watts) appliance, divide the wattage (1000) by the voltage (230).

I (Amps) = P (Watts) 1000 ÷ V (Voltage) 230

I (Amps) = 4.35

A five amp fuse would be required.

Part No	SWG	Conductor Area	Conductor Make up	Current Rating	External Diameter	Weight	Roll Length	Resistance Ohm / Km
CB900	14	3.24mm²	1/2.032mm	139 Amps	2.032mm	500g	17m	5.32Ω
CB901	16	2.075mm²	1/1.62mm	99 Amps	1.62mm	500g	27m	8.39Ω
CB902	18	1.167mm²	1/1.219mm	60 Amps	1.219mm	500g	48mm	14.92Ω
CB903	20	0.656mm²	1/0.914mm	41 Amps	0.914mm	500g	86m	27.04Ω
CB904	21	0.518mm²	1/0.812mm	31 Amps	0.812mm	250g	54m	34.99Ω
CB905	22	0.319mm²	1/0.711mm	25 Amps	0.711mm	500g	140m	44.42Ω
CB906	24	0.245mm²	1/0.559mm	17 Amps	0.559mm	500g	230m	85.90Ω
CB907	25	0.193mm²	1/0.496mm	15 Amps	0.496mm	250g	138m	89.55Ω
CB908	26	0.162mm²	1/0.450mm	14 Amps	0.450mm	500g	340m	105.00Ω