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Copper C101 data sheet.

Besides acting as a base for all brasses and bronzes, copper is an engineering material in its own right. C101 harnesses high electrical and thermal conductivity and along with having a high ductility and impact strength, it can be a very useful material.

A restriction of C101 is poor weldability and as a result welding is not recommended.

As mentioned above, the versatility of C101 leads to lots of potential different uses...

- It can be used in countless electrical and domestic appliances.
- It features in many different components used in the automotive industry.
- General engineering.
- Cold-formed parts.

C101 is available from us in rods, bars, squares and flats.

Rods and bars from 3/16" dia – 6" dia

Flats from 1/2 x 1/8 – 4" x 2"

Squares from 6mm sq – 3" Sq

Chemical and Physical Properties

Typical chemical composition

<i>Elements</i>	<i>Min %</i>	<i>Max %</i>
Bi		0.001
Cu	99.90	
Pb		0.005

Typical mechanical Properties

O= Annealed

M= As manufactured

1/2H= Cold Rolled, half hard

H= Cold Rolled, full hard

Property/unit	Condition	Min	Max
Tensile Strength (N/mm ²)	O	210	
Elongation in 50mm %	O	35	
Vickers Hardness (HV)	O		55
Tensile Strength (N/mm ²)	M	210	
Elongation in 50mm %	M	35	
Vickers Hardness (HV)	M		65
Tensile Strength (N/mm ²)	1/2H	240	
Elongation in 50mm %	1/2H	10	
Vickers Hardness (HV)	1/2H	70	95
Tensile Strength (n/mm ²)	H	290	



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Tolerances

Round bars: Above 2.5mm – 3mm + 0-0.04mm

Above 3mm – 6mm + 0-0.05mm

Above 6mm – 10mm + 0-0.06mm

Above 10mm – 18mm + 0-0.07mm

Above 18mm – 20mm + 0-0.052mm

Above 20mm – 30mm + 0-0.08mm

Square: Above 3mm – 6mm + 0-0.08mm

Above 6mm – 10mm + 0-0.09mm

Above 10mm – 18mm + 0-0.11mm

Above 18mm – 30mm + 0-0.13mm

Above 30mm – 50mm + 0-0.16mm

Above 50mm – 60mm + 0-0.19mm

The information above is based on our current knowledge and is given in good faith; however the company will accept no liability in respect of any third party reliance thereon.