

# Copper 101 Product Guide

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## Overview

A commercially pure high conductivity grade of copper that has no oxygen, giving it excellent electrical and thermal conductivity. The lack of oxygen gives 101 immunity to hydrogen embrittlement at elevated temperatures. It is excellent for hot working, cold working, and forging. 101 can also be soldered, brazed, and welded easily. It's typically used in conductors and particle accelerators.

## Common Trade Names

UNS C10100, CDA 101, C101, ISO Cu-FRTP, ISO Cu-OFE, Certified OFHC, Oxygen-Free-Electronic Copper

## Other Resources

[Safety Data Sheet](#) | [Weight Calculator](#) | [Mill Test Reports](#)

## Products

[101 Square Bar](#) | [101 Plate](#) | [101 Round Bar](#) | [101 Round Tube](#) | [101 Sheet](#)

## Applications

- Conductors
- Automotive
- Particle Accelerators

## Specifications

ASTM  
F68

### Mechanical Information

	Density	Ultimate Tensile Strength	Yield Tensile Strength
Imperial	0.323 lb/in <sup>3</sup>	66,000 psi	52,900 psi
Metric	8.93 g/cc	455 MPa	365 MPa

### Mechanical Information

	<b>Modulus of Elasticity</b>	<b>Shear Modulus</b>	<b>Melting Point</b>
Imperial	16,700 ksi	6,380 ksi	1,981 F
Metric	115 GPa	44 GPa	1,083 C

### Mechanical Information

<b>Hardness Rockwell</b>	<b>Elongation at break percentage</b>	<b>Poissons Ratio</b>	<b>Machinability Percentage</b>
F83	55	0.31	20

### Chemistry Information

<b>Element</b>	<b>Percentage</b>
Cu	99.99 min
O	0.0005 max