



► Copper (AMCopper-100)

Product Information

Copper is one of the most versatile materials available and is used for applications in every type of industry. Commercially pure copper has excellent thermal and electrical conductivity, good ductility and low magnetic permeability. Applications include heat exchangers, induction coils and complex bus bars.

Physical and Chemical Properties (stress relieved)

Density: 8.9 g/cc

Relative density: >95%+

Ultimate tensile strength: Approx. 30 ksi (210 MPa)*

Yield strength: Approx. 22 ksi (155 MPa)*

Elongation: ~8%

Hardness: 21 ±2 HRB

Modulus of elasticity: Approx. ~119 GPa**

Thermal conductivity: 349 W/mK***

Electrical conductivity: 84% (~90%^[1]) IACS****

Surface roughness as built:

Upskin - Ra 18.0 µm, Ra 0.71 x 10⁻³ inch

Downskin - Ra 11.1 µm, Ra 0.44 x 10⁻³ inch



Please contact us at jacob@elementum3d.com for additional information.

All stated values are approximate values. All details given above are our current knowledge and experience, and are dependent on the equipment, parameters and operating conditions. The data provided in this document is subject to change and only intended as general information on a material set that is continually improving and developing. The data does not provide a sufficient basis for engineering parts. All samples were produced on an EOS M290.

*ASTM E8, **ASTM E494-15, ***ASTM E1461 and ASTM E1269 (perpendicular and parallel to build plane), ****ASTM E1004-17 (parallel to build plane)

****Data reflects properties annealed at 650°C for 3-hours/furnace cooled, [1] AMCopper-XC parameters