

METAL SOLUTIONS

EOS Copper CuCP

Material Data Sheet

EOS COPPER CUCP

Commercially pure copper designed to reach excellent conductivity properties. Suitable for a wide variety of applications.

MAIN CHARACTERISTICS

- Commercially pure copper (> 99.95 % purity)
- Excellent electrical and heat conductivity

TYPICAL APPLICATIONS

- Electrical motors
- Inductors
- Variety of industry applications requiring excellent conductivity properties

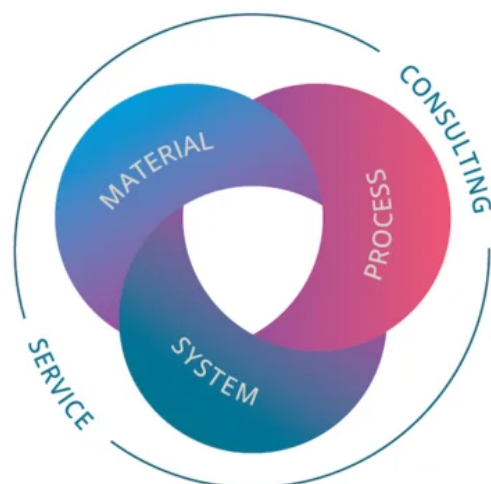
The EOS Quality Triangle

EOS uses an approach that is unique in the AM industry, taking each of the three central technical elements of the production process into account: the system, the material and the process. The data resulting from each combination is assigned a Technology Readiness Level (TRL) which makes the expected performance and production capability of the solution transparent.

EOS incorporates these TRLs into the following two categories:

- Premium products (TRL 7-9): offer highly validated data, proven capability and reproducible part properties.
- Core products (TRL 3 and 5): enable early customer access to newest technology still under development and are therefore less mature with less data.

All of the data stated in this material data sheet is produced according to EOS Quality Management System and international standards



POWDER PROPERTIES

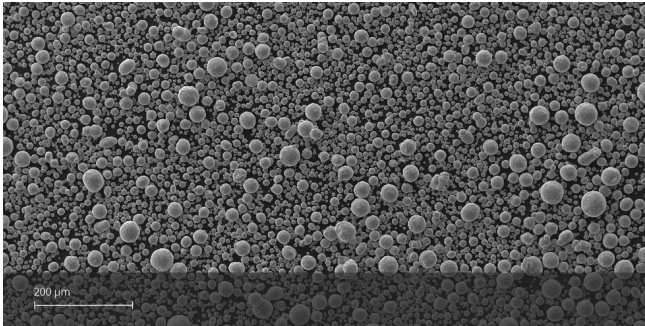
Powder Chemical Composition (wt.-%)

Element	Min.	Max.
Cu		Balance
O	-	0.04

Powder Particle Size

GENERIC PARTICLE SIZE DISTRIBUTION

15 - 53 μm



SEM micrograph of EOS Copper CuCp powder

HEAT TREATMENT

Description

Heat treatment of parts built with EOS Copper CuCP is only optional, but can ensure maximum conductivity and uniform structure.

Steps

Hold 1 h at $\sim 1000\text{ }^{\circ}\text{C}$, slow cooling. Treatment done in heavy argon flow or in vacuum furnace

HEADQUARTERS

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The achievement of certain part properties as well as the assessment of the suitability of this material for a specific purpose is the sole responsibility of the user. Any information given herein is subject to change without notice.

Status as of 03.09.2024. Subject to technical modifications. EOS is certified according to ISO 9001.

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