

EOS Copper CuCP
for AMCM M 290 1kW

EOS Copper CuCP

EOS M 290 with 1 kW laser | 40 μm

Commercially pure copper for the EOS M 290 with 1 kW – customized by AMCM – designed to reach excellent conductivity properties. Suitable for a wide variety of applications.



Project Partner Delva Oy

Main Characteristics

- Commercially pure copper (> 99.95% purity)
- Excellent electrical and heat conductivity
- Designed for an EOS M 290 with a 1 kW laser which is the AMCM M 290 1kW sold by AMCM GmbH

Typical Applications

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

Headquarters

EOS GmbH
Electro Optical Systems
Robert-Stirling-Ring 1
D-82152 Krailling/Munich
Germany
Phone +49 89 893 36-0
info@eos.info

www.eos.info

in EOS
 EOSGmbH
 EOS.global
 EOSGmbH
 #ShapingFuture

Further Offices

EOS France
Phone +33 437 497 676

EOS Greater China
Phone +86 21 602 307 00

EOS India
Phone +91 443 964 8000

EOS Italy
Phone +39 023 340 1659

EOS Japan
Phone +81 45 670 0250

EOS Korea
Phone +82 2 6330 5800

EOS Nordic Et Baltic
Phone +46 31 760 4640

EOS North America
Phone +1 877 388 7916

EOS Singapore
Phone +65 6430 0463

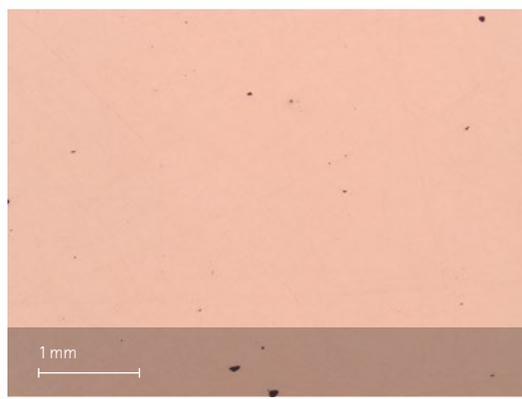
EOS UK
Phone +44 1926 675 110

Product Information

DMLS System	EOS M 290 with 1 kW laser
Recoater type	HSS blade or brush
Protective gas	Argon
Material	EOS Copper CuCP
Process	CuCP_040_CoreM291_1kW_100

Layer thickness 40 μm
Volume rate 5.4 mm³/s

Porosity < 0.5%



Typical part properties

	Yield strength R _{p0.2} [MPa]	Tensile strength R _m [MPa]	Elongation at break A [%]
Mechanical properties as manufactured	~ 165	~ 235	~ 45
Mechanical properties heat treated	~ 110	~ 220	~ 50
Conductivity as manufactured Et heat treated	up to 100% IACS (ASTM E1004-17)		

CuCP parts can be heat treated to reach more homogenous properties. Properties in the table have been achieved with the following heat-treatment: Hold 1 h at ~ 1000 °C, slow cooling by taking the samples out of the furnace and cooling with continued Argon input.

Status 06/2020.

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The quoted values refer to the use of this material with above specified type of EOS DMLS system, EOSYSTEM and EOSPRINT software version, parameter set and operation in compliance with parameter sheet and operating instructions. Part properties are measured with specified measurement methods using defined test geometries and procedures. Further details of the test procedures used by EOS are available on request. Any deviation from these standard settings may affect the measured properties. The data correspond to EOS knowledge and experience at the time of publication and they are subject to change without notice as part of EOS' continuous development and improvement processes. EOS does not warrant any properties or fitness for a specific purpose, unless explicitly agreed upon. This also applies regarding any rights of protection as well as laws and regulations.

