

EOS NickelAlloy IN625 for EOS M 300-4

EOS NickelAlloy IN625

EOS M 300-4 | 40 μm



EOS NickelAlloy IN625 is a heat and corrosion resistant nickel alloy powder which has been optimized especially for processing on DMLS systems.

Project Partner Materials Solutions, EOS

Main Characteristics

- High tensile, creep and rupture strength
- Heat and corrosion resistant
- Chemical composition corresponding to UNS N06625, AMS 5666F, AMS 5599G, W.Nr 2.4856, DIN NiCr22Mo9Nb.

Typical Applications

- Racing applications
- Gas turbines in aerospace and energy
- Ship building industry

Headquarters

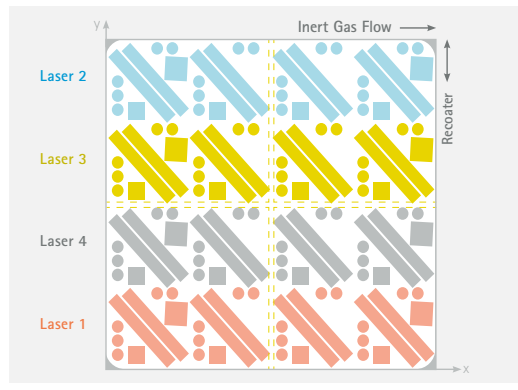
EOS GmbH
Electro Optical Systems
Robert-Stirling-Ring 1
D-82152 Krailling/Munich
Germany
Phone +49 89 893 36-0
info@eos.info

Product Information

DMLS System	EOS M 300-4
Material	EOS NickelAlloy IN625
Process	40 μm layer thickness
Inert Gas	Argon
Recoater blade	HSS, two-sided recoating
Volume rate	up to 4 x 4.2 mm ³ /s

Layout of test job

Part properties based on 2 test jobs each for as manufactured and heat treated data.



www.eos.info

in EOS
EOS GmbH
EOS.global
EOS GmbH
#ShapingFuture
#ResponsibleManufacturing

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 & 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

Typical part properties

	Yield strength R _{p0.2} [MPa]	Tensile strength R _m [MPa]	Elongation at break A [%]	Number of samples
As manufactured vertical	611	852	48.2	160
As manufactured horizontal	750	1030	32.9	64
Heat treated vertical	606	862	52.1	160
Heat treated horizontal	692	1041	35.6	64
Max. pore size	50 μm			64
Porosity	0.006 %			64

Mechanical properties tested according to EN ISO 6892-1 B10. The values in the table are average values and dependent on the thermal load of the job layout as well as the position on the build plate.

Heat treatment procedure: anneal at 870 °C (1600 °F) for 1 hour, rapid cooling

Status 02/2022

EOS is certified according to ISO 9001. EOS®, DMLS® and EOSPRINT® are registered trademarks of EOS GmbH Electro Optical Systems in some countries. For more information visit www.eos.info/trademarks.

Part properties stated above are provided for information purposes only and EOS makes no representation or warranty whatsoever, and disclaims any liability, with respect to actual part properties achieved with this material. Part properties are subject to variation and dependent on factors such as system parameters, process and test geometries. Therefore actual part properties may deviate and users of this material are exclusively responsible to determine its suitability for the intended use. The part properties stated above have been determined by testing this material with above specified type of EOS Laser Powder Bed Fusion 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.

Important Note

This data sheet specifies the powder properties of the EOS powder type referenced above. If you purchase powder from EOS, EOS will deliver such powder in conformity with the version of this data sheet prevailing at the time of your order. If you purchase powder from any source other than EOS, EOS makes no warranties or representations with respect to powder properties to you whatsoever, and claims with respect to the quality or properties of EOS powder are available only against the seller of such powder in accordance with your agreement with the seller, not against EOS. EOS data sheets are subject to change without notice. This data sheet does not constitute a warranty or warranty of properties or fitness for a specific purpose and may not be relied upon as such.

