

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

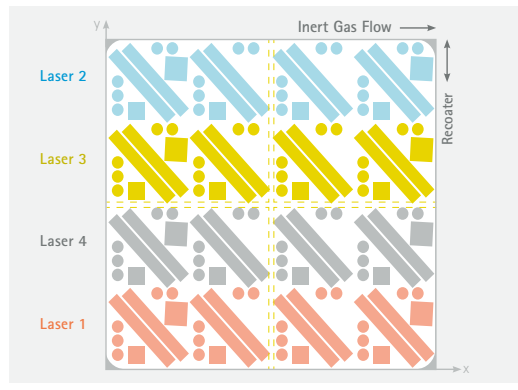
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Product Information

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.



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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

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Important Note

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