

METAL SOLUTIONS

EOS Titanium Ti64ELI

Material Data Sheet

EOS TITANIUM Ti64ELI

EOS Titanium Ti64ELI has a chemical composition and corresponding to ASTM F136 and ASTM F3001. Ti64ELI is well-known light alloy, characterized by having excellent mechanical properties and corrosion resistance combined with low specific weight and biocompatibility. This material is ideal for many high-performance applications. Parts built with EOS Titanium Ti64ELI powder can be machined, shot-peened and polished in asbuilt and heat treated states. Due to the layerwise building method, the parts have a certain anisotropy.

MAIN CHARACTERISTICS

- Excellent mechanical properties and corrosion resistance
- Low weight and biocompatibility

TYPICAL APPLICATIONS

- Parts for medical industry

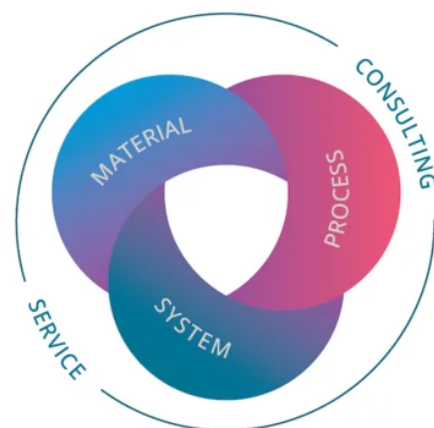
The EOS Quality Triangle

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.
Al	5.5	6.5
V	3.5	4.5
O	-	0.13
N	-	0.05
C	-	0.08
H	-	0.015
Fe	-	0.25
Y	-	0.005
Other Elements Each	-	0.1
Other Elements Total	-	0.4
Ti	Balance	

Powder Particle Size

GENERIC PARTICLE SIZE DISTRIBUTION	25 - 55 µm
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HEAT TREATMENT

Steps

800 °C for 2 hours in argon inert atmosphere

HEADQUARTERS

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Status as of 18.05.2024. Subject to technical modifications. EOS is certified according to ISO 9001.

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