



EOS Aluminium AlSi10Mg for EOS M 290 High Productive Process

EOS Aluminium AlSi10Mg

EOS M 290 | 60 μm

The 60 μm process offers increased productivity with good properties on the EOS M 290.



Main Characteristics

- Good buildability
- Good mechanical properties
- High productivity
- Heat treatment possible to improve ductility

Typical Applications

Higher productivity process can be used where mechanical requirements are less demanding but where cost-efficiency is needed. Heat treatment can be used to affect mechanical properties.

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Test Setup

Current TRL	3
DMLS System	EOS M 290
Material	EOS Aluminium AlSi10Mg
Process	AlSi10Mg_060_CoreM291

Layer thickness 60 μm

Volume rate 10.5 mm³/s

Porosity 0.2%



Further Offices

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Typical Part Properties

Typical Part Properties	Tensile Strength R _m [MPa]	Yield Strength R _{p0.2} [MPa]	Elongation at Break A ₂₅ [%]
Mechanical properties as manufactured	~ 440 MPa	~ 235 MPa	~ 4 %
Mechanical properties heat treated	~ 320 MPa	~ 250 MPa	~ 7 %
Vertical surface roughness	R _a ~ 10 μm		

EOS Short T6 Heat Treatment: Solution annealing of 30 minutes in 530 °C followed by immediate quenching to water. Artificial aging of 6 hours in 165 °C followed by cooling in air.

Please contact EOS for detailed information on performing heat treatment.

Status 04/2020

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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.

