

# Technical Data Sheet

## AISI10Mg

For the Metal Additive Manufacturing process



### Features, benefits and applications

- Lightweight metal
- Displays good electrical conductivity
- Produces high strength components and high dynamic loadability

### Machines

- Available on SLM 500 machine

Physical and Chemical Properties	
Material Density	2.7 g/cm <sup>3</sup>
Chemical Composition, 20-63 μm, nominal, %	
Element	
Al	Bal.
Si	9.00 – 11.00
Fe	0.55
Cu	0.05
Mn	0.45
Mg	0.20 – 0.45
Zn	0.10
Ti	0.15
Ni	0.05
Pb	0.05
Sn	0.05
Others	0.05
Total Others	0.15

Mechanical Data <sup>*, 1*</sup>		
	Formula Symbol and Unit	
Tensile Strength	R <sub>m</sub> [MPa]	397 ± 11
Offset Yield Stress	R <sub>p0.2</sub> [MPa]	227 ± 11
Break Strain	A [%]	6 ± 1
Reduction of Area	Z [%]	8 ± 1
E-Modul	E [GPa]	64 ± 10
Hardness by Vickers	[HV10]	117 ± 1
Surface Roughness	R <sub>a</sub> [μm]	7 ± 1
Surface Roughness	R <sub>z</sub> [μm]	46 ± 8

\* Process conditions and parameters according to SLM Solutions standards.

1\* As built, layer thickness 50μm.



Got a question? Need more technical data?

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