

Data Sheet: Aluminum AlSi10Mgⁱ

Chemical Composition

Element	Al	Si	Fe	Cu	Mn	Mg	Zn	Ti	Ni	Pb	Sn	Other total
Percentage	Balance	9.00-11.00	0-0.55	0-0.05	0-0.45	0.20-0.45	0-0.10	0-0.15	0-0.05	0-0.05	0-0.05	0-0.15

Properties

Property	Yield Strength R_p 0.2 % [MPa] ⁱⁱ	Ultimate Tensile Strength R_m [MPa] ⁱⁱ	Elongation at Break [%] ⁱⁱ	Young's Modulus [GPa] ⁱⁱ	Relative Density [%]
Value	210-270	310-440	2-7	65-91	>99.0%

Tolerances

Property	Value as built	Unit
Achievable Part Accuracyⁱⁱⁱ	+/- 0.3 mm for parts up to 100mm +/- 0.3 % for parts beyond 100mm	mm/ %
Min. Wall thickness	0.8	mm

ⁱ The data from finished parts can deviate from above values depending on the manufacturing process and the component geometry. The data represents our present empirical values. It is incumbent on the person placing the order to examine whether it is suitable for its intended purpose, before using the product. The default postprocessing for this material is support removal and blasting.

ⁱⁱ Depending on build direction

ⁱⁱⁱ As a result of the part's geometry, strong tensions may cause distortion in the part which may lead to greater deviation.