

Data Sheet: Scalmalloy® (AlMgSc)ⁱ

Chemical Composition

Element	Al	Mg	Sc	Zr	Mn	Si	Fe	Zn	Ti	V	O
Percentage	Bal.	4.00 - 4.90	0.60 - 0.80	0.20 - 0.50	0.30 - 0.80	0.00 - 0.40	0.00 - 0.40	0.00 - 0.25	0.00 - 0.15	0.00 - 0.05	0.00 - 0.05

Properties heat treated

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	Density [g/cm ³]
Value	459-479	490-500	>10	65-75	2.7

Tolerances as built

Property	Value as built	Unit
Achievable Part Accuracyⁱⁱⁱ	+/- 0.3 mm for parts up to 100 mm +/- 0.3 % for parts beyond 100 mm	mm/%
Min. Wall thickness	1.0	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.