

Aluminum (AlSi₁₀Mg)

The strength, thermal properties, low weight, and flexible post-processing of this aluminum alloy, AlSi₁₀Mg, make it ideal for prototyping and manufacturing in industries such as automotive and aerospace.



Parameter	AlSi10Mg Standard	AlSi10Mg Performance	Unit	Standard
Density	>2.59	>2.65	g/cm ³	WGE-Prod-067EN
Relative Density	>97.0	>99.0	%	WGE-Prod-067EN
Tensile Strength	>250	>300	Mpa	DIN EN ISO 6892-1:2009
Yield Strength	>180	>190	MPa	DIN EN ISO 6892-1:2009
E-Modulus	70	70	GPa	DIN EN ISO 6892-1:2009
Elongation at Break	>1.0	>2.0	%	DIN EN ISO 6892-1:2009
Roughness Ra	<20	<16	µm	ISO 4287 / AITM 1-00070
Roughness Rz	<80	<70	µm	ISO 4287 / AITM 1-00070
Hardness	>80	>100	HV	ISO 6597-1:03-2006

Actual values may vary with build conditions.

Strong tensions due to part geometry may distort parts, potentially leading to greater deviation in values. Values for surface roughness depend on the orientation of the surface; downward-facing surfaces and surfaces with support will be rougher. These values show the material characteristics without additional stress relief heat treatment. Extra heat treatment steps for even higher mechanical properties may be possible, e.g. for serial produced parts. Please [get in touch with our team](#) for more information.

For more information on this material, please visit mtls.am/aluminum.

