

Stainless Steel (SS316L)

Stainless Steel (SS316L) is a low-carbon stainless steel alloy that offers excellent strength, high corrosion resistance and ductility, and good thermal properties, making it suitable for general prototyping.



Parameter	SS 316L Standard	SS 316L Performance	Unit	Standard
Density	>7.91	>7.95	g/cm ³	WGE-Prod-067EN
Relative Density	>99.0	>99.5	%	WGE-Prod-067EN
Tensile Strength	>510	>530	Mpa	DIN EN ISO 6892-1:2009
Yield Strength	>300	>340	MPa	DIN EN ISO 6892-1:2009
E-Modulus	180	180	GPa	DIN EN ISO 6892-1:2009
Elongation at Break	>45	>50	%	DIN EN ISO 6892-1:2009
Roughness Ra	<20	<15	µm	ISO 4287 / AITM 1-00070
Roughness Rz	<90	<70	µm	ISO 4287 / AITM 1-00070
Hardness	>170	>200	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 with additional stress relief heat treatment. Extra heat treatment steps or aging 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/stainless-steel-316l.

