

STAINLESS STEEL SS316L

Description

Stainless Steel SS316L is a renowned material for 3D metal printing and offers outstanding corrosion resistance, high mechanical strength, and biocompatibility. With low carbon content, this is suitable for medical and dental applications, including surgical instruments and implants. The ability to withstand elevated temperatures makes it perfect for high-temperature components, while 3D printing enables intricate designs. SS316L is cost-effective due to reduced material waste and shorter lead times. Ideal for a range of industries, it meets the demands of structural and functional parts, combining strength and durability in a wide variety of applications.

Benefits

- Superior Corrosion Resistance
- High Mechanical Strength
- Biocompatibility
- Heat Resistance
- Design Flexibility
- Cost-Effectiveness

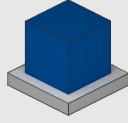
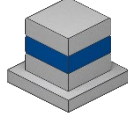
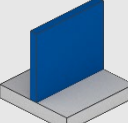
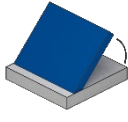
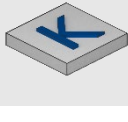
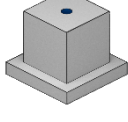
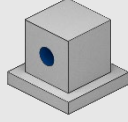

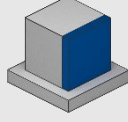
Application

- Aerospace
- Medical
- Automotive
- Energy
- Marine
- Chemical Processing

Data sheet

	Units	Stainless steel SS316L	
		Performance	Speed
DIN	-	1.4404	-
Layer thickness	[μm]	50	60
Density	g/cm^3	7.9	7.9
	%	>99.5	>99.0
Ultimate tensile Strength	MPa	540	510
Yield strength	MPa	440	350
Elongation at break	%	45	40
Youngs Modulus	GPa	190	170
Hardness			
Rockwell	HRC	20	20
Vickers	HV	220	220
Roughness			
As printed	Ra	10	15
After shot peening	Ra	3-6	4-10
After tumbling	Ra	1-3	2-4
Postprocessed	Ra	<0.5	<1

Technical specifications

	Description		Performance	Speed
Maximum dimensions	Largest printable size		420 x 420 x 400 mm ³	420 x 420 x 400 mm ³
Min feature size in z-direction	Print layer height		0.03 or 0.05 mm	0.06 mm
Minimum Wall Thickness	Smallest wall thickness available for printing		0.2 mm (smaller possible on request)	0.5 mm
Unsupported Overhang	Minimum angle at which a wall can be printed without requiring support		>45° (smaller possible on request)	>45°
Text embossment/engraving	Size of text; Embossment height or engraving depth		4mm (size) 0,5 mm (depth) Font: Arial Black	4mm (size) 0,5 mm (depth) Font: Arial Black
Holes	Minimum diameter available for printing holes		0.2 mm	0.5 mm
Horizontal holes	Maximum diameter of a horizontal hole without support		9 mm	9 mm
Thread	Available thread size		M2 – M60	M2 – M60
General Tolerances	Expected tolerance (dimensional accuracy)		± 0.2% With a minimum of 0.2 mm (smaller possible on request)	± 0.3% With a minimum of 0.3 mm (smaller possible on request)