



316L Stainless Steel

1.4404 (AISI 316L)

1.4404 is a stainless austenitic chromium-nickel-molybdenum stainless steel with low carbon content. This versatile stainless steel is used in numerous industries. These include:

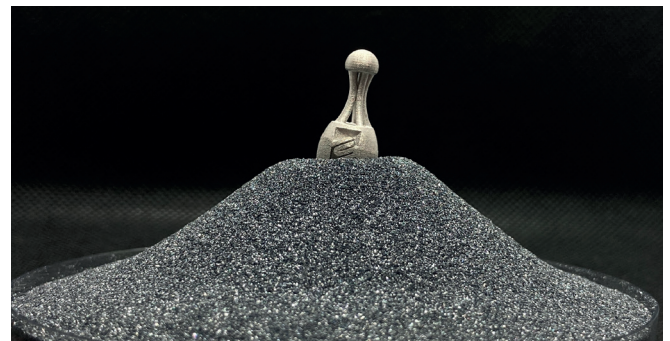
- medical devices and tools
- food and chemical industry
- jewellery and lifestyle industries
- automotive industry
- aerospace

316L is one of the standard materials in almost all metallic additive manufacturing processes and can be processed and machined particularly well. In contrast to welding AM processes (e.g. LPBF), components produced by LMM have a stress-free, annealed microstructure due to the sintering process.

With the LMM technology a surface quality of up to Ra 2 μm can be achieved.

Properties

- high corrosion resistance
- high strength
- food grade
- weldability



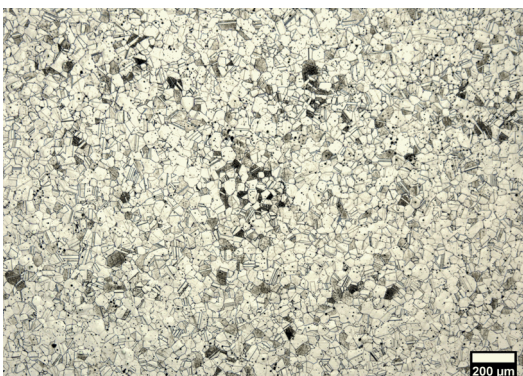
Chemical composition

	Cr	Ni	Mo	Mn	Si	P	C	S	Fe
Minimum	16,0	10,0	2,0	0,00	0,00	0,00	0,000	0,000	BALANCE
Actual value	16,6	10,5	2,2	1,55	0,63	0,02	0,020	0,006	
Maximum	18,0	14,0	3,0	2,00	1,00	0,04	0,030	0,030	

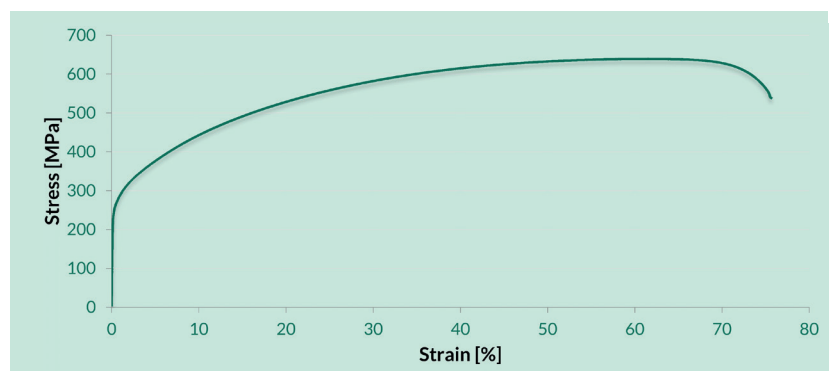
Values in %

Mechanical data

	Tensile strength R_m [MPa]	Yield strength $R_{p0,2}$ [MPa]	Young's Modulus [GPa]	Fracture Elongation A [%]	Relative density [%]
Values	664	257	176	75	> 97
Standard Deviation	47	26	48	4	-



Microstructure 316L



Stress Strain Diagram