

Steel grade

Material No.	PREMIUM 316L / 316
AISI	316L / 316
Search for alternatives in the ABRAMS STEEL GUIDE	www.abrams-steelguide.com/alternatives/316L

Shapes



**Smart Flat Stock [Smart]
Standardized Precision Blanks**
L: 12"
L: 24"



**Smart Flat Stock Metric [SmartM]
Standardized Precision Blanks Metric**
L: 300 mm
L: 600 mm



**Cold Finished Rounds [CF]
Precision Round Bars**
L: 18"
L: 36"



**Cold Finished Rounds Metric [CFM]
Precision Round Bars Metric**
L: 914 mm (36")

Chemical composition AISI 316L (reference value %)

C	Si	Mn	P	S	Cr	Mo	Ni	N
0 - 0.03	0 - 1.0	0 - 2.0	0 - 0.04	0.015 - 0.03	16.5 - 18.5	2.0 - 2.5	10.0 - 13.0	0 - 0.1

Physical properties

Hardness (delivery condition)	max. 215 HB, annealed				
Tensile strength R_m (as received condition)	approx. 100.0 KSI				
Working hardness	max. <20HRC				
Thermal expansion coefficient $10^{-6}m/(m \cdot K)$	68 - 212°F	68 - 392°F	68 - 572°F	68 - 752°F	68 - 932°F
	16.0	16.5	17.0	17.5	18.0
Thermal conductivity $W/(m \cdot K)$	68°F				
	15.0				

Technical properties

Stainless, austenitic chromium-nickel-molybdenum steel. Polishable, suitable for low temperatures, high resistance with regards to non-oxidizing acids e.g. nitric acid, sulphuric acid and formic acid, easy to process and good weldability. Can also be used at high temperatures of up to 932°F, non-magnetisable.

Applications

Chemical industry, pharmaceutical industry, food industry, valve and plant construction, building industry, automotive industry, aviation industry, mechanical engineering, offshore, petrochemical industry, electrical equipment, decorative uses and kitchen equipment.

Heat treatment

	Temperature	Cooling	Hardness
Soft annealing	1868 - 2048°F	Air, water	max. 215HB



Hardening diagram

