



# HSM Wire International, Inc

Ph: 330-244-8501 Fax: 330-244-8561

www.hsmwire.com



## Alloy 317L Stainless Steel

**Description:** Alloy 317 is a molybdenum-bearing austenitic stainless steel with greatly increased resistance to chemical attack. Alloy 317 offers higher creep, stress-to-rupture, and tensile strength at elevated temperatures. It is a low carbon grade.

**Applications:** Intended for severe service conditions such as flue gas desulfurization systems.

Nominal Composition:	C	Mn	Si	Cr	Ni	Mo	P
	0.03	2.00	0.75	18 - 20	11 - 15	3 - 4	0.04 max
	S	N	Fe				
	0.03 max	0.10 max	Balance				

### Minimum Mechanical Properties

Ultimate Tensile Strength ksi (MPa)	Yield Strength .2% offset ksi (MPa)	Elongation in 2 in. (%)	Hardness Maximum
75 (515)	30 (205)	40	217 BHN

### Typical Physical Properties at Room Temperature

Density	8.0 g/cu cm.	0.29 lb/cu in.
Modulus of elasticity in tension	29 x 10 psi	200 GPa

### Coefficient of Linear Thermal Expansion

Temp. Range		10 / °F (10 / °C)
°F	°C	
77 - 212	25 - 100	9.2 (16.5)
77 - 932	25 - 500	10.1 (18.2)
77 - 1832	25 - 1000	10.8 (19.5)

### Thermal Conductivity

Temp. Range		W/m·K	Btu·in/hr·ft <sup>2</sup> ·°F
°F	°C		
68 - 212	20 - 100	14.6	100.8

### Specific Heat

J/g·°K	0.11
Btu/lb·°F	0.46

### Electrical Resistivity

μ - ohm - in	31.1 / 0.79
--------------	-------------

### Melting Range

°F	°C
2410 - 2550	1320 - 1400

