

## MATERIAL DATASHEET

### Alloy 304L Stainless Steel

UNS: S30403  
EN-DIN: 1.4306

Industries supplied include: Process equipment in mining, chemical, cryogenic, food, dairy, and pharmaceutical industries. 304 grade stainless has excellent welding and formability characteristics and is one of the most utilized stainless steels. 304L is an extra low carbon grade with a 0.03% max carbon content that eliminates carbide precipitation due to welding.

#### Nominal Composition

	C	Mn	P	S	Si	Cr	Ni	N	Fe		
min	-	-	-	-	-	17.5	8.0	-	-		
max	.030	2.0	0.045	0.030	0.75	19.5	12.0	0.10	BAL		

#### Physical Properties

	At 70°F	At 20°C
Density	0.29 lb./in <sup>3</sup>	8.03 g/cm <sup>3</sup>
Modulus of Elasticity (E)	28.0 x 10 <sup>3</sup> ksi	193 x 10 <sup>3</sup> MPa
Coefficient of Expansion	9.4 x 10 <sup>-6</sup> microinches/in.-°F (70-600°F)	16.9 μm/m-°C (20-300°C)
Electrical Resistivity	28.4 μ ohm.in	72 μ ohm.cm
Thermal Conductivity	9.4 Btu-in./ft. <sup>2</sup> hr.-°F	16.2 W/m-K

#### Applicable Specifications

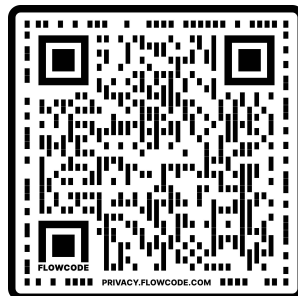
AMS 5513, ASTM A313, ASTM A240, ASTM A580, ASTM A 666, AMS 5511

#### Typical Mechanical Properties – Typical Room Temperature Mechanical Properties

Condition	Tensile Strength (UTS)	0.2% YS	Elongation% in 2" (50.8 mm)	Hardness Rockwell
Annealed	95 ksi ( 655 MPa)	40 ksi ( 276 MPa)	55	82 HRBW

Typical mechanical properties are based on AK source, ASTM A240

\*Tempered Properties available upon request\*



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