

## MATERIAL DATASHEET

### Alloy 304 Stainless Steel

UNS: S30400  
EN-DIN: 1.4301

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.

#### Nominal Composition

	C	Mn	P	S	Si	Cr	Ni	N	Fe		
min	-	-	-	-	-	17.5	8.0	-	-		
max	.07	2.0	0.045	0.030	0.75	19.5	10.5	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

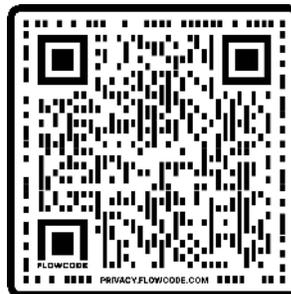
AMS 5513, ASTM A313, ASTM A240, ASTM A580, ASTM A 666

#### 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)	42 ksi ( 290 MPa)	55	84 HRBW

Typical mechanical properties are based on ASTM A240

\*Tempered Properties available upon request\*



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