

UNS S30100 Grade 301 Stainless Steel

**DESCRIPTION**

301 stainless steel provides high strength and good ductility when cold worked. 301 stainless steel is non-magnetic when annealed, but becomes slightly more magnetic than other standard austenitic stainless steels when cold worked.

**FEATURES**

- Non-magnetic when annealed
- High strength and good ductility when cold worked

**CHEMICAL COMPOSITION**

- Carbon (C): 0.1500%
- Chromium (Cr): 16.0000 - 18.0000%
- Iron (Fe): 70.9250 - 78.0000%
- Manganese (Mn): 2.0000%
- Nickel (Ni): 6.0000 - 8.0000%
- Nitrogen (N): 0.1000%
- Phosphorus (P): 0.0450%
- Silicon (Si): 0.7500%
- Sulfur (Sulphur) (S): 0.0300%

**SPECIFICATIONS**

- ASTM A666

**PHYSICAL PROPERTIES**

- Density: 0.285 (Lbs. per cubic inch @ 68°F (annealed))
- Modulus: 28.000 (Elastic modulus in tension x 10<sup>6</sup> P.S.I.)
- Electrical Conductivity: 2.500 (% IACS at 68°F (annealed))
- Thermal Conductivity: 9.400 (BTU per foot per hour per °F at 68°F (annealed))
- Thermal Expansion: 9.500 (Inches per inch x 10<sup>-6</sup> from 68°F to 572°F)

**MECHANICAL PROPERTIES**

Temper		Tensile Strength	Yield Offset	Elongation	Hardness
		<i>x 1000 P.S.I.</i>	<i>0.2% offset x 1000 P.S.I.</i>	<i>% in 2 Inches</i>	<i>.020 Gauge and Above</i>
1/4H H01		125 Min.	75 Min.	25 Min.	-
Ann 060		75 Min.	30 Min.	40 Min.	B 95 Max
1/2H H02		150 Min.	110 Min.	15 Min.	-
3/4H H03		175 Min.	135 Min.	10 Min.	-
Hard H04		185 Min.	140 Min.	8 Min.	-

Hardness Legend B : Rockwell (100 kgf Steel Sphere)

NOTE: The information contained herein are intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. It is given without obligation or liability. Contact us for the complete material property datasheets

Santa Fe Springs Office  
 10634 Shoemaker Avenue  
 Santa Fe Springs, CA 90670  
 Phone: 562.968.2100  
 FAX: 562.968.2110

For more information, for a quote or to place an order please call 800.326.3376, visit [www.wieland-brookes.com](http://www.wieland-brookes.com) or email us at [sales.sfe.sv@wieland.com](mailto:sales.sfe.sv@wieland.com)