

Stainless Steel ASTM-A370

DESCRIPTION

303 stainless steel's corrosion resistance and great machinability make it one of the most popular free machining stainless steels available. It is used in a wide variety of parts from screw to general machining. Grade 303 does not respond to heat treatment, but the toughness is still excellent as with other austenitic grades.

FEATURES

- Most machinable
- Resistant to atmospheric corrosion

CHEMICAL COMPOSITION

- Chromium (Cr): 17.0000 - 19.0000%
- Carbon (C): 0.1500%
- Iron (Fe): 67.0500 - 74.8500%
- Manganese (Mn): 2.0000%
- Molybdenum (Mo): 0.6000%
- Nickel (Ni): 8.0000 - 10.0000%
- Phosphorus (P): 0.2000%
- Silicon (Si): 1.0000%
- Sulfur (Sulphur) (S): 0.1500%

SPECIFICATIONS

- AMS 2241
- ASTM A370

PHYSICAL PROPERTIES

- Density: 0.289 (Lbs. per cubic inch @ 68°F (annealed))
- Modulus: 28.000 (Elastic modulus in tension x 10⁶ P.S.I.)
- Thermal Expansion: 9.900 (Inches per inch x 10⁻⁶ from 68°F to 572°F)
- Electrical Resistivity: 7.200 (microhm-cm)

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>	
Cold Drawn	10	-	40	B 96
Annealed	9	-	50	B 83

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

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