

440C Stainless Steel

440C STAINLESS STEEL DATASHEET

440C stainless steel is a high carbon Martensitic stainless steel. It has a moderate corrosive resistant with good strength. 440C stainless steel can be heat treated to achieve a hardness at or above 60HRC, and develops the highest hardness of all stainless steels. 440C stainless steel is magnetic in all conditions and has great wear resistance. 440C stainless steel can be cold worked and also responds to heat treat practices.

Common industry/applications for 440C stainless steel include: Bearings & Bushings, Valves, Knives and Cutlery, and Tooling.

Product forms include round bar, square and rectangle bar, and forgings.



Standards

- UNS S44004

Physical Properties

- Density: 0.289LB/in³ (8.0g/cm³)
- Melting Point: 2701°F (1483°C)
- Modulus of Elasticity: 29.6x10⁶psi (204 GPa)
- Magnetic Permeability: 1.02 Max @ 200 H (Annealed)

Characteristics

- Good machinability in annealed condition.
- Good corrosion resistance.
- Good wear resistance.

Chemical Composition

	C	Mn	S	P	Si	Cr	Ni	N
MIN	0.95	-	-	-	-	16.0	-	-
MAX	1.20	1.00	0.03	0.040	1.00	18.0	-	-

Mechanical Properties

Tensile (min) KSI (Mpa)	Yield (min) KSI (Mpa)	Elongation (min) %	Reduction of Area (min) %	Hardness HRC (BHN)
110 (758)	65 (458)	14%	24%	22 (237)

Mechanical properties are typical and are not required to be reported in the Annealed, condition. Typically, 440C is purchased in an annealed condition and then machined prior to heat treating as material can be hardened to 50-60HRC.

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