

Key Features

- High strength
- High hardenability
- Good wear resistance
- Good corrosion resistance

Common Applications

- Valve Components
- Ball bearings
- Surgical instruments

Material Description

Stainless Steel 440C is a high-carbon martensitic stainless steel alloy known for its exceptional hardness, wear resistance, and corrosion resistance. It offers superior mechanical properties compared to other stainless steel grades, making it suitable for applications such as knife blades, bearings, and surgical instruments where high hardness and wear resistance are essential. Stainless Steel 440C can be heat-treated to achieve even greater hardness and strength, making it ideal for demanding applications subjected to heavy loads and abrasive environments.

Chemical Composition (%)

	C	Cr	Fe	Mn	Mo	P	Si	S			
Min.	0.60	16	78.4								
Max.	0.75	18	83.4	1.0	0.75	0.040	1.0	0.030			

Mechanical Properties

Ultimate Tensile Strength	254,000 PSI
Tensile Yield Strength	186,000 PSI
Hardness	Rockwell C20
Elongation at Break	2 - 14%

Physical Properties

Density	0.282 lb/in ³ (7.80 g/cm ³)
Thermal Conductivity	24.2W/m.K
Modulus of elasticity	29,000 KSI (200 GPa)
Melting Point	2,700°F (1,483 °C)

Technical Assistance

Our knowledgeable staff, supported by our in-house team of expert metallurgists and engineers, is ready to assist you with any technical inquiries.

InstaVoxel™ - On-Demand Manufacturing Expert

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InstaVoxel's quality control system is ISO-9001 certified, and all our partners hold relevant certifications.



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