ALLOY 440C

AMS 5630 (Chem Only)

Type 440C (UNS S44004) is a martensitic stainless steel with high carbon and chromium content. Molybdenum improves the steel's deep hardening and toughness. It also enhances wear resistance. After heat treatment, it is capable of attaining the highest strength, hardness and wear resistance of all stainless alloys. 440C stainless steel derives its corrosion resistance from the inclusion of chromium and is comparable to grade 304. This material is commonly used in the medical industry for surgical instruments and is used for household utensils such as cutlery and measuring instruments. Other applications for this grade include nozzles, valve parts, hardened steel balls and seats for oil well pumps, separating screens and strainers, springs, shears, and wear surfaces.

Products & Sizes
Plate
0.1875" - 2.500"

440C Chemical Composition

	Element	Min	Max
C	Carbon	-	1.20
Cr	Chromium	-	18.0
Mn	Manganese	-	1.0
Mo	Molybdenum	-	0.75
P	Phosphorus	-	0.04
Si	Silicon	-	1.0
S	Sulfur	-	0.030

Industry Standards

- DFARS Compliant

Industry Applications

- Cutting Instruments
- Knife Blades
- Surgical Instruments
- Chisels
- Measuring instruments
- Ball Bearings and Valves

Related Industries

Physical Properties

- Density: 7650 kg/cm^3
- Thermal Conductivity at 212°F (100°C): 24.2
- Electrical Resistivity: 600
- Elastic Modulus: 200 GPa

Mechanical Properties

- Yield Strength 0.2% Proof: 448 Mpa
- Tensile Strength: 75 Mpa
- Elongation % in 50mm: 14
- Hardness (HB): 269 max