



**Stainless 420**

Types 420 (S4200) is a martensitic stainless steel that is magnetic in both the annealed and hardened conditions. 420 stainless steel is ideal in applications requiring good corrosion resistance and high hardness. The alloy is not normally used at temperatures exceeding 800°F (427°C) due to rapid softening and loss of corrosion resistance.

**Specifications** AMS: 5506  
 ASTM: A 176  
 UNS: S42000

**Features**

- Corrosion resistant when hardened
- Ideal for a polished finish

**Applications**

- Surgical and dental instruments
- Straight edges
- Cutlery and hand tools

**Chemical Composition, %**

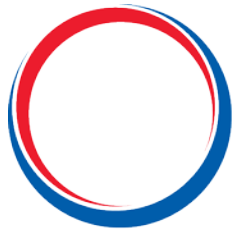
Element	Maximum Unless Range is Specified	
Carbon	0.15 min.	
Manganese		1
Phosphorus		0.040
Sulfur		0.030
Silicon		1
Chromium	12.00	14.00

**Mechanical Properties**

Annealed	ASTM A276 UNS S42000
Yield Strength, 0.2% Proof (Mpa)	345
Tensile Strength (Mpa)	655
Elongation (% in 50mm)	25
Hardness (HB)	241 max

**Physical Properties**

Density	7750
Thermal conductivity at 100°C	24.9
Electrical Resistivity	550
Elastic Modulus (Gpa)	200



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