

416 is a martensitic, hardenable chromium steel. After heat treatment, it is capable of attaining the highest strength, hardness and wear resistance of all stainless alloys.

Specifications

- AMS: 5610
- ASTM: A895
- UNS: S41600

Chemical Composition, %

Element	Maximum Unless Range is Specified
Carbon	.15
Chromium	14
Manganese	1.25
Molybdenum	0.6
Phosphorus	0.06
Silicon	1
Sulphur	0.15 min

Features

- Free machining stainless steel
- Excellent machinability and non-galling characteristics
- Magnetic in all conditions
- High Sulfur

Applications

- Machine Parts
- Fasteners & fittings

Corrosion Resistance

Maximum corrosion resistance is developed in the hardened condition but the surface must be free from scale and foreign matter to prevent galvanic corrosion.

Physical Properties

Properties	
Density lb/m ³	7750
Thermal Conductivity 212°F, 100°C	24.9
Thermal Conductivity at 932°F, 500°C	28.7
Electrical Resistivity	570

Mechanical Properties

Yield Strength, psi	39,900
Ultimate Tensile Strength, psi	74,700
Elongation	30%
Hardness	B82

Machinability

Speed and feeds comparable with other free machining carbon steels. Good chip breakage.