

### Key Features

- Easy to weld
- High corrosion, wear
- Abrasion resistance Good hardenability
- Dimensionally stable at high temperatures
- High strength-to-weight ratio
- EXPENSIVE
- CANNOT be aged

### Common Applications

- Cutting and milling tools
- Fasteners
- Aircraft landing gears
- Resistance welding

### Material Description

Steel 4130 is a low-alloy steel containing chromium and molybdenum as strengthening agents, known for its excellent strength-to-weight ratio, toughness, and hardenability. It offers good weldability and machinability, making it suitable for a wide range of applications, including aerospace, automotive, and construction. Common uses of Steel 4130 include aircraft tubing, roll cages, and bicycle frames. It can be heat-treated to enhance its mechanical properties, providing high strength and toughness while maintaining good fatigue resistance.

### Chemical Composition (%)

	C	Fe	Mn	P	S						
Min.		98.42	0.75	0.040	0.26						
Max.	0.090	98.95	1.05	0.090	0.35						

### Mechanical Properties

Ultimate Tensile Strength	78,300 PSI
Tensile Yield Strength	60,200 PSI
Hardness	Rockwell B85
Elongation at Break	10%

### Physical Properties

Density	0.284 lb/in <sup>3</sup> (7.87 g/cm <sup>3</sup> )
Thermal Conductivity	51.9W/m.K
Modulus of Elasticity	29,000 KSI (200 GPa)
Melting Point	2,610°F (1,432 °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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