

Key Features

- High machinability
- High ductility
- Good weldability
- LESS heat resistant
- Less strong and durable

Common Applications

- Shafts
- Lightly stressed gears
- Hard wearing surfaces

Material Description

Steel 1020 is a low-carbon steel known for its good balance of strength, ductility, and toughness. It has better machinability and weldability compared to higher carbon steels, making it suitable for a wide range of applications. Steel 1020 is commonly used in automotive components, structural parts, and machinery where moderate strength and good formability are required. It can be easily cold-formed and is often used in the manufacturing of bolts, shafts, and light-duty gears.

Chemical Composition (%)

	C	Fe	Mn	P	S						
Min.	0.17	99.08	0.30								
Max.	0.23	99.53	0.60	0.040	0.050						

Mechanical Properties

Ultimate Tensile Strength	60,900 PSI
Tensile Yield Strength	50,800 PSI
Hardness	Rockwell B68
Elongation at Break	15 %

Physical Properties

Density	0.284 lb/in ³ (7.87 g/cm ³)
Thermal Conductivity	51.9W/m.K
Modulus of Elasticity	27,000 KSI (186 GPa)
Melting Point	2760°F (1516 °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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