

# Material: AS 1020

## Standard Specification for Carbon Steels and Carbon Manganese Steels - Hot Rolled Bars and Semi Finished Products

**Group:** Ferrous Mild Steel Alloys

**Sub Group:** AS 1020 Carbon Steels and Carbon Manganese Steels - Hot Rolled Bars and Semi Finished Products

**Application:** Intended for Valve, Pump, General Engineering, Automotive and Other Industries

**Grade Belongs to the Industry:** Bar, Wire, Tube and Forging

Chemical Composition			Heat Treatment	
Carbon	C %	0.180 - 0.230	As- Cast or Normalizing or Annealing or Hardening + Tempering	
Silicon	Si %	0.100 - 0.350		
Manganese	Mn %	0.300 - 0.600		
Phosphorus	P %	0.040 max.		
Sulphur	S %	0.040 max.		
Chromium	Cr %	0.300 max.		
Molybdenum	Mo %	0.100 max.		
Nickel	Ni %	0.350 max.		
Copper	Cu %	0.350 max.		
Iron	Fe %	Balance		
-	-	-	<b>Mechanical Properties</b> Tensile Strength in Mpa 330 - 690 Yield Strength in Mpa 195 min. Elongation in % 5 min. Reduction of Area in % 40 - 50 Hardness in HB 111 - 121 Impact in Joule 47.6 - 69.7 J @ RT	
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Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
A915 Grade SC 1020	ASTM	USA	Bar, War, Tube and Forging
J02003	UNS	USA	Casting
1020	AISI	USA	Bar, War, Tube and Forging
1020	SAE	USA	Bar, War, Tube and Forging
1020	AMS	USA	Bar, War, Tube and Forging
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