

# Material: SAE 1040

## Standard Specification For Carbon Steel Compositions For Forging To Hot-Rolled And Cold-Finished Steel

**Group:** Ferrous Mild Steel Alloys

**Sub Group:** SAE 1040 Carbon Steel Compositions For Forging To Hot-Rolled And Cold-Finished Steel

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

**Grade Belongs to the Industry:** Steel

Chemical Composition		
Carbon	C %	0.370 - 0.440
Manganese	Mn %	0.600 - 0.900
Phosphorus	P %	0.030 max.
Sulphur	S %	0.035 max.
Boron	B %	0.0005 - 0.003
Chromium	Cr %	0.150 max.
Copper	Cu %	0.200 max.
Molybdenum	Mo %	0.060 max.
Nickel	Ni %	0.200 max.
Lead	Pb %	0.150 - 0.350
Iron	Fe %	Balance
-	-	-
-	-	-
-	-	-
-	-	-

Heat Treatment	
As Raw or Annealing or Normalizing or Hardening and Tempering	

Mechanical Properties	
Tensile Strength in Mpa	418 - 590
Yield Strength in Mpa	290 min.
Elongation in %	12 min.
Reduction of Area in %	35 - 40
Hardness in HB	149 - 170
Impact in Joule	-

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
G10400	UNS	USA	Bars, Wire Rods, Plates, Strip, Sheets and Tubing
1040	AISI	USA	Tubing
A 1040 1040	ASTM	USA	Steel
A 108 Grade 1040	ASTM	USA	Bar
A 29 1040	ASTM	USA	Steel
A 513 Grade 1040	ASTM	USA	Tubing
A 510 1040	ASTM	USA	Wire Rod and Round Wire

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