

# Material: AISI 1042

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

**Group:** Ferrous Mild Steel Alloys

**Sub Group:** AISI 1042 Carbon Steel Compositions For Forging To Hot-Rolled And Cold-Finished Bar

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

**Grade Belongs to the Industry:** Bar

Chemical Composition		
Carbon	C %	0.400 - 0.470
Manganese	Mn %	0.600 - 0.900
Phosphorus	P %	0.040 max.
Sulphur	S %	0.050 max.
Boron	B %	0.0005 - 0.003
Aluminium	Al %	0.020 max.
Copper	Cu %	0.200 max.
Niobium	Nb %	0.015 max.
Silicon	Si %	0.100 max.
Vanadium	V %	0.020 max.
Iron	Fe %	Balance
-	-	-
-	-	-
-	-	-
-	-	-

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

Mechanical Properties	
Tensile Strength in Mpa	550 - 610
Yield Strength in Mpa	300 min.
Elongation in %	12 min.
Reduction of Area in %	35 - 45
Hardness in HB	163 - 179
Impact in Joule	-

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
G10420	UNS	USA	Bars, Wire Rods, Plates, Strip, Sheets and Tubing
1042	SAE	USA	Steel
A 1040 1042	ASTM	USA	Steel
A 29 1042	ASTM	USA	Bar
A 510 1042	ASTM	USA	Wire Rod
A 576 10L42	ASTM	USA	Steel and Bar
A 830 1042	ASTM	USA	Plate and Steel

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