

# Material: AISI 1086

## Standard Specification For Carbon Steel Compositions For Forging To Hot-Rolled Steel and Bar

**Group:** Ferrous Mild Steel Alloys

**Sub Group:** AISI 1086 Carbon Steel Compositions For Forging To Hot-Rolled Steel and Bar

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

**Grade Belongs to the Industry:** Steel and Bar

Chemical Composition		
Carbon	C %	0.800 - 0.930
Manganese	Mn %	0.300 - 0.500
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	670 - 770
Yield Strength in Mpa	420 min.
Elongation in %	10 min.
Reduction of Area in %	25 - 40
Hardness in HB	192 - 229
Impact in Joule	-

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
G10860	UNS	USA	Bars, Wire Rods, Plates, Strip, Sheets and Tubing
1086	SAE	USA	Steel
A 713 G10860	ASTM	USA	Steel and Wire
A 682 G10860	ASTM	USA	Steel and Strip
A 1040 1086	ASTM	USA	Steel
A 682 Grade 1086	ASTM	USA	Steel and Strip
A 684 Grade 1086	ASTM	USA	Steel and Strip

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