

## Material: ASTM A 576 10L46

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

**Group:** Ferrous Mild Steel Alloys

**Sub Group:** ASTM A 576 10L46 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			Heat Treatment	
Carbon	C %	0.430 - 0.500	As Raw or Annealing or Normalizing or Hardening and Tempering	
Manganese	Mn %	0.700 - 1.000		
Phosphorus	P %	0.040 max.		
Sulphur	S %	0.050 max.		
Silicon	Si %	0.100 max.		
Boron	B %	0.0005 - 0.003		
Copper	Cu %	0.200 max.		
Lead	Pb %	0.150 - 0.350		
Iron	Fe %	Balance		
-	-	-	Mechanical Properties	
-	-	-	Tensile Strength in Mpa	590 - 650
-	-	-	Yield Strength in Mpa	320 min.
-	-	-	Elongation in %	12 min.
-	-	-	Reduction of Area in %	35 - 45
-	-	-	Hardness in HB	170 - 187
-	-	-	Impact in Joule	-

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
G10460	UNS	USA	Bars, Wire Rods, Plates, Strip, Sheets and Tubing
1046	SAE	USA	Steel
1046	AISI	USA	Steel and Bar
A 830 G10460	ASTM	USA	Plate and Steel
A 830 1046	ASTM	USA	Plate and Steel
A 510 1046	ASTM	USA	Wire Rod
A 29 1046	ASTM	USA	Steel and Bar

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