

## Material: SAE 1090

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

## **Group: Ferrous Mild Steel Alloys**

## **Sub Group: SAE 1090 Carbon Steel Compositions For Forging To Hot-Rolled Steel and Wire**

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

## **Grade Belongs to the Industry: Steel and Wire**

Chemical Composition			Heat Treatment
Carbon	C %	0.700 - 1.000	As Raw or Annealing or Normalizing or Hardening and Tempering
Manganese	Mn %	0.200 - 0.600	
Phosphorus	P %	0.025 max.	
Sulphur	S %	0.030 max.	
Silicon	Si %	0.100 - 0.300	
Iron	Fe %	Balance	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
Mechanical Properties			
Tensile Strength in Mpa			700 - 3344
Yield Strength in Mpa			460 min.
Elongation in %			10 min.
Reduction of Area in %			25 - 40
Hardness in HB			197 - 248
Impact in Joule			-

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
G10900	UNS	USA	Bars, Wire Rods, Plates, Strip, Sheets and Tubing
1090	AISI	USA	Steel and Wire
A 1040 1090	ASTM	USA	Steel
A 29 1090	ASTM	USA	Steel and Bar
A 510 1090	ASTM	USA	Wire Rod, Round Wire and Steel
A 576 10L90	ASTM	USA	Steel and Bar
A 713 G10900	ASTM	USA	Steel and Wire

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Customer Care: +91-99090 45075 Email: [info@icastllp.com](mailto:info@icastllp.com)