

Material: AISI 1090

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

Group: Ferrous Mild Steel Alloys

Sub Group: AISI 1090 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 | | | Heat Treatment | |
|----------------------|------|----------------|---|-----------|
| Carbon | C % | 0.850 - 0.980 | As Raw or Annealing or Normalizing or Hardening and Tempering | |
| Manganese | Mn % | 0.600 - 0.900 | | |
| Phosphorus | P % | 0.040 max. | | |
| Sulphur | S % | 0.050 max. | | |
| Silicon | Si % | 0.100 - 0.300 | | |
| Aluminium | Al % | 0.020 max. | | |
| Boron | B % | 0.0005 - 0.003 | | |
| Copper | Cu % | 0.200 max. | | |
| Niobium | Nb % | 0.015 max. | | |
| Vanadium | V % | 0.020 max. | | |
| Iron | Fe % | Balance | Mechanical Properties | |
| - | - | - | Tensile Strength in Mpa | 700 - 840 |
| - | - | - | 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 | SAE | 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 |

Disclaimer: All information displayed in our data sheets are for reference purpose only and are sole property of their respective owners. Information and or material are used for educational purposes only. Data at actual may vary at actual and case to case basis. ICAST Alloys LLP does not guarantee validity of these parameters. Warranties and liabilities are exclusive to our terms and conditions of business.

Customer Care: +91-99090 45075 Email: info@icastllp.com