

Material: SAE 1078

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

Group: Ferrous Mild Steel Alloys

Sub Group: SAE 1078 Carbon Steel Compositions For Forging To Hot-Rolled Steel

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

Grade Belongs to the Industry: Steel

| Chemical Composition | | |
|----------------------|------|----------------|
| Carbon | C % | 0.700 - 0.850 |
| Manganese | Mn % | 0.300 - 0.600 |
| Phosphorus | P % | 0.030 max. |
| Sulphur | S % | 0.035 max. |
| Boron | B % | 0.0005 - 0.003 |
| Chromium | Cr % | 0.150 max. |
| Copper | Cu % | 0.200 min. |
| Molybdenum | Mo % | 0.060 max. |
| Nickel | Ni % | 0.200 max. |
| Lead | Pb % | 0.150 - 0.350 |
| Iron | Fe % | Balance |
| - | - | - |
| - | - | - |
| - | - | - |
| - | - | - |

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

| Mechanical Properties | |
|-------------------------|-----------|
| Tensile Strength in Mpa | 650 - 690 |
| Yield Strength in Mpa | 380 min. |
| Elongation in % | 10 min. |
| Reduction of Area in % | 30 - 40 |
| Hardness in HB | 192 - 207 |
| Impact in Joule | - |

| Cross Reference Table | | | |
|-----------------------|----------|---------|---|
| Material | Standard | Country | Grade Belong to the Industry |
| G10780 | UNS | USA | Bars, Wire Rods, Plates, Strip, Sheets and Tubing |
| 1078 | AISI | USA | Steel and Bar |
| A 830 G10780 | ASTM | USA | Plate and Steel |
| A 713 G10780 | ASTM | USA | Steel and Wire |
| A 576 10L78 | ASTM | USA | Steel and Bar |
| A 830 1078 | ASTM | USA | Plate and Steel |
| A 713 Grade 1078 | ASTM | USA | Steel and Wire |

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