

## Material: ASTM A 576 1212

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

**Group:** Ferrous Mild Steel Alloys

**Sub Group:** ASTM A 576 1212 Steel Compositions For Forging To Hot-Rolled And Cold-Finished 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 %  | 0.130 max.    | As Raw or Annealing or Normalizing or Hardening and Tempering |           |
| Manganese            | Mn % | 0.700 - 1.000 |   |           |
| Phosphorus           | P %  | 0.070 - 0.120 |   |           |
| Sulphur              | S %  | 0.160 - 0.230 |   |           |
| Iron                 | Fe % | Balance       |   |           |
| -                    | -    | -             |   |           |
| -                    | -    | -             |   |           |
| -                    | -    | -             |   |           |
| -                    | -    | -             |   |           |
| -                    | -    | -             |   |           |
|                      |      |               | Mechanical Properties   |           |
| -                    | -    | -             | Tensile Strength in Mpa                                       | 390 - 540 |
| -                    | -    | -             | Yield Strength in Mpa   | 230 min.  |
| -                    | -    | -             | Elongation in %   | 10 min.   |
| -                    | -    | -             | Reduction of Area in %  | 35 - 45   |
| -                    | -    | -             | Hardness in HB  | 110 - 255 |
| -                    | -    | -             | Impact in Joule   | -         |

| Cross Reference Table |          |         |   |
|-----------------------|----------|---------|---|
| Material              | Standard | Country | Grade Belong to the Industry                      |
| G12120                | UNS      | USA     | Bars, Wire Rods, Plates, Strip, Sheets and Tubing |
| 1212                  | SAE      | USA     | Bars, Wire Rods, Plates, Strip, Sheets and Tubing |
| 1212                  | AISI     | USA     | Steel and Bar                                     |
| A 1040 1212           | ASTM     | USA     | Steel   |
| SA-29 1212            | ASME     | USA     | Steel   |
| A 108 Grade 1212      | ASTM     | USA     | Steel and Bar                                     |
| A 29 1212             | ASTM     | USA     | Steel and Bar                                     |

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