

## Material: ASTM A 830 1078

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

**Group:** Ferrous Mild Steel Alloys

**Sub Group:** ASTM A 830 1078 Carbon Steel Compositions For Forging To Hot-Rolled Plate and Steel

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

**Grade Belongs to the Industry:** Plate and Steel

| Chemical Composition |      |               | Heat Treatment                                                                                                                                                                                                    |  |
|----------------------|------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Carbon               | C %  | 0.720 - 0.850 | As Raw or Annealing or Normalizing or Hardening and Tempering                                                                                                                                                     |  |
| Manganese            | Mn % | 0.300 - 0.600 |                                                                                                                                                                                                                   |  |
| Phosphorus           | P %  | 0.030 max.    |                                                                                                                                                                                                                   |  |
| Sulphur              | S %  | 0.030 max.    |                                                                                                                                                                                                                   |  |
| Silicon              | Si % | 0.150 - 0.400 |                                                                                                                                                                                                                   |  |
| Iron                 | Fe % | Balance       |                                                                                                                                                                                                                   |  |
| -                    | -    | -             | <b>Mechanical Properties</b><br>Tensile Strength in Mpa 650 - 690<br>Yield Strength in Mpa 380 min.<br>Elongation in % 10 min.<br>Reduction of Area in % 30 - 40<br>Hardness in HB 192 - 207<br>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                  | SAE      | USA     | Steel                                             |
| 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 713 Grade 1078      | ASTM     | USA     | Steel and Wire                                    |

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