# Material: EN 1.8920

## Standard Specification for Plates and Wide Flats Made of High Yield Strength Structural Steels

**Group:** *Ferrous Mild Steel Alloys*
**Sub Group:** *EN 1.8920 Plates and Wide Flats Made of High Yield Strength Structural Steels*
**Application:** *Intended for Valve, Pump, General Engineering, Automotive and Other Industries*
**Grade Belongs to the Industry:** *Steel*

| Chemical Composition | | |
|---|---|---|
| Carbon | C % | 0.100 - 0.200 |
| Silicon | Si % | 0.150 - 0.350 |
| Manganese | Mn % | 0.600 - 1.000 |
| Phosphorus | P % | 0.025 max. |
| Sulphur | S % | 0.250 max. |
| Chromium | Cr % | 0.400 - 0.650 |
| Nickel | Ni % | 0.700 - 1.000 |
| Molybdenum | Mo % | 0.400 - 0.600 |
| Copper | Cu % | 0.150 - 0.500 |
| Vanadium | V % | 0.030 - 0.080 |
| Boron | B % | 0.0005 min. |
| Iron | Fe % | Balance |
| - | - | - |
| - | - | - |
| - | - | - |

| Heat Treatment |
|---|
| Annealing or Normalizing or Hardening + Tempering |

| Mechanical Properties | |
|---|---|
| Tensile Strength in Mpa | 795 min. |
| Yield Strength in Mpa | 690 min. |
| Elongation in % | 15 min. |
| Reduction of Area in % | 30 min. |
| Hardness in BHN | - |
| Impact in Joule | - |

| Cross Reference Table | | | |
|---|---|---|---|
| **Material** | **Standard** | **Country** | **Grade Belong to the Industry** |
| 1.8719 | DIN | Germany | Steel |
| J12084 | UNS | USA | Casting |
| 6386 Type 12 | AMS | USA | Steel |
| K11576 | UNS | USA | Casting |
| SA-487 Grade 7A | ASME | USA | Casting |
| SA-592 Grade F | ASME | USA | Forging |
| A487 7A | ASTM | USA | Casting |


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