

## Material: UNS N07718

### Standard Specification for Nickel Alloy, Corrosion and Heat-Resistant, Seamless Tubing

**Group:** Non-Ferrous Nickel Alloys

**Sub Group:** UNS N07718 Nickel Alloy, Corrosion and Heat-Resistant, Seamless Tubing

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

**Grade Belongs to the Industry:** Tube

| Chemical Composition |             |                 | Heat Treatment                       |           |
|----------------------|-------------|-----------------|--------------------------------------|-----------|
| Carbon               | C %         | 0.080 max.      | As-Cast or Annealing or Age Hardning |           |
| Silicon              | Si %        | 0.350 max.      |                                      |           |
| Manganese            | Mn %        | 0.350 max.      |                                      |           |
| Chromium             | Cr %        | 17.000 - 21.000 |                                      |           |
| Molybdenum           | Mo %        | 2.800 - 3.300   |                                      |           |
| Titanium             | Ti %        | 0.650 - 1.150   |                                      |           |
| Aluminium            | Al %        | 0.400 - 0.800   |                                      |           |
| Niobium              | Nb %        | 4.750 - 5.500   |                                      |           |
| Phosphorus           | P %         | 0.015 max.      |                                      |           |
| Sulphur              | S %         | 0.015 max.      | Mechanical Properties                |           |
| Boron                | B %         | 0.006 max.      | Tensile Strength in Mpa              | 1365 min. |
| Cobalt               | Co %        | 1.000 max.      | Yield Strength in Mpa                | 1125 min. |
| Al + Ti              | Al % + Ti % | 1.750 max.      | Elongation in %                      | 21 min.   |
| Nickel               | Ni %        | 50.000 - 55.000 | Reduction of Area in %               | -         |
| Iron                 | Fe %        | Balance         | Hardness in BHN                      | -         |
|                      |             |                 | Impact in Joule                      | -         |

| Cross Reference Table |          |         |                                    |
|-----------------------|----------|---------|------------------------------------|
| Material              | Standard | Country | Grade Belong to the Industry       |
| Inconel 718           | SAE      | USA     | Tube                               |
| B983 N07718           | ASTM     | USA     | Pipe and Tube                      |
| WL 2.4668             | DIN      | Germany | Bars and Wire for Screws and Bolts |
| B670 N07718           | ASTM     | USA     | Plate, Sheet and Strip             |
| B834 N07718           | ASTM     | USA     | Pipe Flange, Fitting and Valve     |
| B637 N07718           | ASTM     | USA     | Bar and Forging                    |
| SB-637 N07718         | ASME     | USA     | Bar and Forging                    |

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