

# Material: ASTM A 494 CW6MC

## Standard Specification for Castings, Nickel and Nickel Alloy

**Group:** Non-Ferrous Nickel Alloys

**Sub Group:** ASTM A 494 CW6MC Castings, Nickel and Nickel Alloy

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

**Grade Belongs to the Industry:** Casting

| Chemical Composition |      |                 | Heat Treatment                       |          |
|----------------------|------|-----------------|--------------------------------------|----------|
| Carbon               | C %  | 0.060 max.      | As-Cast or Annealing or Age Hardning |          |
| Silicon              | Si % | 1.000 max.      |                                      |          |
| Manganese            | Mn % | 1.000 max.      |                                      |          |
| Phosphorus           | P %  | 0.015 max.      |                                      |          |
| Sulphur              | S %  | 0.015 max.      |                                      |          |
| Chromium             | Cr % | 20.000 - 23.000 |                                      |          |
| Niobium              | Nb % | 3.150 - 4.500   |                                      |          |
| Molybdenum           | Mo % | 8.000 - 10.000  |                                      |          |
| Iron                 | Fe % | 5.000 max.      | Mechanical Properties                |          |
| Nickel               | Ni % | Balance         | Tensile Strength in Mpa              | 485 min. |
| -                    | -    | -               | Yield Strength in Mpa                | 275 min. |
| -                    | -    | -               | Elongation in %                      | 25 min.  |
| -                    | -    | -               | Reduction of Area in %               | -        |
| -                    | -    | -               | Hardness in BHN                      | -        |
| -                    | -    | -               | Impact in Joule                      | -        |

| Cross Reference Table |          |         |                              |
|-----------------------|----------|---------|------------------------------|
| Material              | Standard | Country | Grade Belong to the Industry |
| SA-494 CW6MC          | ASME     | USA     | Casting                      |
| C-NiCr22Mo9Nb4        | AFNOR NF | France  | Casting                      |
| NC22D9Nb4-M           | AFNOR NF | France  | Casting                      |
| NC6625                | AFNOR NF | France  | Casting                      |
| N26625                | UNS      | USA     | Casting                      |
| -                     | -        | -       | -                            |
| -                     | -        | -       | -                            |

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