

## Material: ASTM A747 Grade CB7Cu-1 (H925)

### Standard Specification for Steel Castings, Stainless, Precipitation Hardening

**Group:** Ferrous Stainless Steel Alloys

**Sub Group:** ASTM A747 / A747M Steel Castings, Stainless, Precipitation Hardening

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

**Belongs to the Industry:** Casting

| Chemical Composition |      |               | Heat Treatment                                                                                                                                                                                              |  |
|----------------------|------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Carbon               | C %  | 0.070 max.    | Normalising or Annealing or Hardening + Tempering                                                                                                                                                           |  |
| Silicon              | Si % | 1.000 max.    |                                                                                                                                                                                                             |  |
| Manganese            | Mn % | 0.700 max.    |                                                                                                                                                                                                             |  |
| Phosphorus           | P %  | 0.035 max.    |                                                                                                                                                                                                             |  |
| Sulphur              | S %  | 0.030 max.    |                                                                                                                                                                                                             |  |
| Chromium             | Cr % | 15.500 17.700 |                                                                                                                                                                                                             |  |
| Nickel               | Ni % | 3.600 - 4.600 |                                                                                                                                                                                                             |  |
| Copper               | Cu % | 2.500 - 3.200 |                                                                                                                                                                                                             |  |
| Niobium              | Nb % | 0.150 - 0.350 |                                                                                                                                                                                                             |  |
| Nitrogen             | N %  | 0.050 max.    |                                                                                                                                                                                                             |  |
| Iron                 | Fe % | Balance       | <b>Mechanical Properties</b><br>Tensile Strength in Mpa 1205 min.<br>Yield Strength in Mpa 1035 min.<br>Elongation in % 5 min.<br>Reduction of Area in % -<br>Hardness in BHN 375 min.<br>Impact in Joule - |  |
| -                    | -    | -             |                                                                                                                                                                                                             |  |
| -                    | -    | -             |                                                                                                                                                                                                             |  |
| -                    | -    | -             |                                                                                                                                                                                                             |  |
| -                    | -    | -             |                                                                                                                                                                                                             |  |
| -                    | -    | -             |                                                                                                                                                                                                             |  |
| -                    | -    | -             |                                                                                                                                                                                                             |  |

| Cross Reference Table |          |                |                              |
|-----------------------|----------|----------------|------------------------------|
| Material              | Standard | Country        | Grade Belong to the Industry |
| J92180                | UNS      | USA            | Casting                      |
| SA-747 CB7Cu-1        | ASME     | USA            | Casting                      |
| 17-4PH                | SAE      | USA            | Steel                        |
| Z 7 CNU 17-04         | AFNOR NF | France         | Steel                        |
| 5622                  | AMS      | USA            | Bar, Wire, Tube and Forging  |
| X 5 CrNiCuNb 16-4     | DIN      | Germany        | Steel                        |
| X 5 CrNiCuNb 16-4     | EN       | European Union | Forging                      |

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