

## Material: ASTM F688 R30035

## Standard Specification for Cobalt-35Nickel-20Chromium-10Molybdenum Alloy Plate, **Sheet and Foil for Surgical Implants**

**Group:** Non-Ferrous Cobalt Alloys

Sub Group: ASTM F688 R30035 Cobalt-35Nickel-20Chromium-10Molybdenum Alloy Plate, Sheet and Foil for

**Surgical Implants** 

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

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

| Chemical Composition |      |                 | Heat Treatment          |          |
|----------------------|------|-----------------|-------------------------|----------|
| Carbon               | C %  | 0.025 max.      |                         |          |
| Chromium             | Cr % | 19.000 - 21.000 |                         |          |
| Molybdenum           | Mo % | 9.000 - 10.500  |                         |          |
| Nickel               | Ni % | 33.000 - 37.000 | As-Cast or Annealing    |          |
| Iron                 | Fe % | 1.000 max.      |                         |          |
| Silicon              | Si % | 0.150 max.      |                         |          |
| Manganese            | Mn % | 0.150 max.      |                         |          |
| Phosphorus           | P %  | 0.015 max.      |                         |          |
| Sulphur              | S %  | 0.010 max.      | Mechanical Properties   |          |
| Titanium             | Ti % | 1.000 max.      | Tensile Strength in Mpa | 792 min. |
| Boron                | В%   | 0.015 max.      | Yield Strength in Mpa   | 310 min. |
| Cobalt               | Co % | Balance         | Elongation in %         | 3 min.   |
| -                    | -    |                 | Reduction of Area in %  | -        |
| -                    | -    | -               | Hardness in HRB         | 43 min.  |
| -                    | -    | -               | Impact in Joule         | -        |

| Cross Reference Table |          |         |                              |  |
|-----------------------|----------|---------|------------------------------|--|
| Material              | Standard | Country | Grade Belong to the Industry |  |
| MP35N                 | Gravity  | India   | Plate and Sheet              |  |
|                       | -        | -       | -                            |  |
| -                     | - )      | -       | -                            |  |
| -                     |          | -       | -                            |  |
| -                     | -        | -       | -                            |  |
| -                     | -        | -       | -                            |  |
|                       | -        | -       | -                            |  |

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