

## Material: ASTM F961 R30035

## Standard Specification for 35Cobalt-35Nickel-20Chromium-10Molybdenum Alloy Forgings for Surgical Implants

**Group:** Non-Ferrous Cobalt Alloys

**Sub Group:** ASTM F961 R30035 35Cobalt-35Nickel-20Chromium-10Molybdenum Alloy Forgings for Surgical

**Implants** 

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

**Grade Belongs to the Industry:** Forging

| Chemical Composition |      |                 | Heat Treatment          |            |
|----------------------|------|-----------------|-------------------------|------------|
| Carbon               | C %  | 0.025 max.      |                         |            |
| Silicon              | Si % | 0.150 max.      |                         |            |
| Manganese            | Mn % | 0.150 max.      |                         |            |
| Chromium             | Cr % | 19.000 - 21.000 | As-Cast or Annealing    |            |
| Phosphorus           | P %  | 0.015 max.      |                         |            |
| Sulphur              | S %  | 0.010 max.      |                         |            |
| Molybdenum           | Mo % | 9.000 - 10.500  |                         |            |
| Iron                 | Fe % | 1.000 max.      |                         |            |
| Titanium             | Ti % | 1.000 max.      | Mechanical Properties   |            |
| Nickel               | Ni % | 33.000 - 37.000 | Tensile Strength in Mpa | 793 - 2482 |
| Cobalt               | Co % | Balance         | Yield Strength in Mpa   | 241 - 586  |
| -                    | -    | -               | Elongation in %         | 1.80 min.  |
| -                    | -    | -               | Reduction of Area in %  | 35 min.    |
| -                    | -    | -               | Hardness in BHN         | -          |
| -                    | -    | -               | Impact in Joule         | -          |

| Cross Reference Table |          |         |                              |  |  |
|-----------------------|----------|---------|------------------------------|--|--|
| Material              | Standard | Country | Grade Belong to the Industry |  |  |
| MP35N                 | Gravity  | India   | Plate and Sheet              |  |  |
| IS 5347-7             | IS       | India   | Casting                      |  |  |
| -                     | -        | 1       | -                            |  |  |
| -                     |          | 1       | -                            |  |  |
| -                     | -        | -       | -                            |  |  |
| -                     | -        | -       | -                            |  |  |
|                       | -        | -       | -                            |  |  |

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