

## Material - ASTM A 753 Type 1

### Standard Specification for Nickel-Iron Soft Magnetic Alloys

Group - Non-Ferrous Nickel Alloys

Sub Group - ASTM A 753 Type 1 Nickel-Iron Soft Magnetic Alloys

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

Grade Belongs to the Industry - Forging, Billet, Hot rolled plate, Strip, Bar and Wire

| Chemical Composition |      |                 | Heat Treatment                                                                                                                                                                                             |  |
|----------------------|------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Carbon               | C %  | 0.050 max.      | As-Cast or Annealing or Age Hardning                                                                                                                                                                       |  |
| Silicon              | Si % | 0.500 max.      |                                                                                                                                                                                                            |  |
| Manganese            | Mn % | 0.800 max.      |                                                                                                                                                                                                            |  |
| Chromium             | Cr % | 0.300 max.      |                                                                                                                                                                                                            |  |
| Sulphur              | S %  | 0.010 max.      |                                                                                                                                                                                                            |  |
| Molybdenum           | Mo % | 0.300 max.      |                                                                                                                                                                                                            |  |
| Phosphorus           | P %  | 0.030 max.      |                                                                                                                                                                                                            |  |
| Cobalt               | Co % | 0.500 max.      |                                                                                                                                                                                                            |  |
| Copper               | Cu % | 0.300 max.      |                                                                                                                                                                                                            |  |
| Nickel               | Ni % | 43.500 - 46.500 |                                                                                                                                                                                                            |  |
| Iron                 | Fe % | Balance         | <b>Mechanical Properties</b><br>Tensile Strength in Mpa 490 - 827<br>Yield Strength in Mpa 220 - 793<br>Elongation in % 2 - 38<br>Reduction of Area in % -<br>Hardness in HRC 74 - 82<br>Impact in Joule - |  |
| -                    | -    | -               |                                                                                                                                                                                                            |  |
| -                    | -    | -               |                                                                                                                                                                                                            |  |
| -                    | -    | -               |                                                                                                                                                                                                            |  |
| -                    | -    | -               |                                                                                                                                                                                                            |  |
| -                    | -    | -               |                                                                                                                                                                                                            |  |

| Cross Reference Table |          |         |                                                        |
|-----------------------|----------|---------|--------------------------------------------------------|
| Material              | Standard | Country | Grade Belong to the Industry                           |
| K94490                | UNS      | USA     | Forging, Billet, Hot rolled plate, Strip, Bar and Wire |
| -                     | -        | -       | -                                                      |
| -                     | -        | -       | -                                                      |
| -                     | -        | -       | -                                                      |
| -                     | -        | -       | -                                                      |
| -                     | -        | -       | -                                                      |
| -                     | -        | -       | -                                                      |

For any further inquiries, please do not hesitate to contact us. You may visit our website at [AMTECH TECHNOCAST PVT. LTD.](http://AMTECH TECHNOCAST PVT. LTD.), call us at [+91 9879817994](tel:+919879817994), or email us at [manish@amtechtechnocast.com](mailto:manish@amtechtechnocast.com)

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