

## Material - ASTM A732 3A

**Standard Specification for Castings, Investment, Carbon and Low Alloy Steel for General Application, and Cobalt Alloy for High Strength at Elevated Temperatures**

**Group - Ferrous Mild Steel Alloys**

**Sub Group - ASTM A732 / A7323M Casting, Investment, Carbon and Low Alloy Steel for General Application**

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

**Grade Belongs to the Industry - Casting**

| Chemical Composition |      |               | Heat Treatment                                    |          |
|----------------------|------|---------------|---------------------------------------------------|----------|
| Carbon               | C %  | 0.350 - 0.450 | Annealing or Normalising or Hardening + Tempering |          |
| Silicon              | Si % | 0.200 - 1.000 |                                                   |          |
| Manganese            | Mn % | 0.700 - 1.000 |                                                   |          |
| Phosphorus           | P %  | 0.040 max.    |                                                   |          |
| Sulphur              | S %  | 0.045 max.    |                                                   |          |
| Chromium             | Cr % | 0.350 max.    |                                                   |          |
| Nickel               | Ni % | 0.500 max.    |                                                   |          |
| Copper               | Cu % | 0.500 max.    | <b>Mechanical Properties</b>                      |          |
| Tungsten             | W %  | 0.100 max.    |                                                   |          |
| Other                | Ot % | 1.000 max.    |                                                   |          |
| Iron                 | Fe % | Balance       |                                                   |          |
| -                    | -    | -             |                                                   |          |
| -                    | -    | -             |                                                   |          |
| -                    | -    | -             |                                                   |          |
| -                    | -    | -             |                                                   |          |
| -                    | -    | -             |                                                   |          |
|                      |      |               | Tensile Strength in Mpa                           | 517 min. |
|                      |      |               | Yield Strength in Mpa                             | 331 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  |
| 1040                  | AISI     | USA     | Forging, Bar, Wire, and Shape |
| J04002                | UNS      | USA     | Casting                       |
| 1.119                 | WN       | Germany | Steel                         |
| A3                    | BS       | British | Casting                       |
| 42 CD 4 M             | AFNOR NF | France  | Casting                       |
| A732 1Q               | ASTM     | USA     | Casting                       |
| A732 3Q               | ASTM     | USA     | Casting                       |

**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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